Decolonising British Higher Education: Underrepresentation of Women Academics of Colour (WAC) in Science, Technology, Engineering and Mathematics (STEM) Faculties

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Abstract

This study explores the underrepresentation of women academics of colour (WAC hereafter) in British STEM academia, building upon a substantial body of research highlighting the glaring and seemingly intractable lack of diversity within UK STEM faculties (Advance HE, 2024a; HESA, 2025a; Royal Society, 2024; WISE, 2023) and across global STEM academia that reflects a broader pattern of exclusion as documented in international reports (for e.g., UNESCO, 2023b, 2024a). Situated within the context of numerical inequity and epistemological otherness, the study explores how the career experiences of WAC are shaped by particular power relations and dynamics reflected in academic cultures and institutional practices. In particular, I sought to unpack the extent to which gendered and racial identities intersect to influence and constrain the career experiences of WAC, particularly in relation to their progression and retention in STEM. Simultaneously, I explored how WAC subvert the power of dominant discourses through micro-practices of resistance and the 'technologies of self' - to exercise power, negotiate and sometimes reproduce the very hegemonic cultures that serve to marginalise them. In search for answers around the underlying processes that pose barriers towards equitable representation for these women, I drew majorly on Saidian post-colonial (including other post-colonial scholars and feminist) and Foucauldian poststructuralist feminist lens to conceptualise knowledge/power relations both as a discursive force that produces epistemological binaries of East (the orientalised Other) and West (the civilisational other) and as fluid, discursively constructed, and temporally relational. This allowed for an analysis that shifts subjective narratives to a structural understanding of how broader institutional cultures and practices serve to perpetuate inequities along gender and 'race' lines, informing an analysis of the ways in which discursive practices, potentially linked to epistemologically orientalist power dynamics, shape and influence the conduct of WAC in STEM spaces, and how they are constituted as subjects of knowledge. Methodologically, the study is grounded in an interpretivist onto-epistemology, employing a qualitative research approach through 17 semi-structured online interviews (15 with WAC and two with senior faculty members) facilitated through timeline maps designed to foreground participants' agency in shaping the trajectory of the research focus as well as enabling a nuanced understanding of pivotal moments, institutional dynamics, and identity negotiations that shaped their career trajectories. Drawing on a mix of thematic and discourse analysis, the findings of the study are underpinned by four overarching themes that revolve around intersecting discourses that shape the marginalisation of WAC in STEM, including dynamics of tokenistic visibility, the masculinisation of scientific identity, institutional penalties linked to care and partnership, and the tension of negotiation of belonging. Together, these findings foreground how gendered and racialised structures constrain career progression while also producing ambivalent forms of resistance that both challenge and, at times, inadvertently reproduce exclusionary norms.

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Author's Declaration

I declare that, except where explicit reference is made to the contribution of others, that this thesis 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.

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Chapter One - Introduction

Introduction

The intersection of gender, race/ethnicity, and career trajectory constitutes a nuanced yet well-established area of inquiry, particularly within STEM[1] research. Despite pressing and ongoing national advocacy and global initiatives—most prominently articulated through international frameworks such as the United Nations' Sustainable Development Goal 5.b, aimed at fostering diversity and inclusion, especially for women and certain minoritised groups in science and technology—progress towards equitable representation remains frustratingly slow, and in many cases, seemingly intractable. Research has consistently revealed that Women Academics of Colour (WAC)[2] remain disproportionately underrepresented, particularly in senior academic positions within STEM faculties. When present at all, they are disproportionately concentrated in precarious, junior, or contingent roles where access to decision-making power, research funding, and institutional influence is markedly limited (APPG, 2021; Casad et al., 2021; Dekelaita-Mullet, Rinn, and Kettler, 2021).

Yet, as Inyang and Wright (2022) and ElMorally, Wong, and Copsey-Blake (2022) compellingly argue, the recognition of WAC as equally credible contributors within the traditionally white- and male-dominated STEM academy remains subject to epistemological contestation. This contestation arises from dominant assumptions, widely held among both staff and students, about who is deemed a legitimate and credible producer of scientific knowledge. This lack of recognition and the resulting patterns of disparity are not simply reducible to numerical underrepresentation; rather, they are structural issues sustained through processes of exclusion, marginalisation, and the regulation of what counts as valid knowledge and who counts as a legitimate knower - processes that can be referred to as the 'policing' of epistemic boundaries. These dynamics are further reinforced by broader institutionalised norms that continue to privilege whiteness and masculinity as the default markers of scientific authority and academic legitimacy.

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[1] STEM is used to broadly refer to disciplines, including Medicine and dentistry; Subjects allied to medicine; Biological sciences; Veterinary science; Agriculture and related subjects; Physical sciences; Mathematical sciences; Computer science; Engineering and technology; Architecture, building & planning subjects.
[2] See sub-section 'On Terminology' for clarification of the term WAC.

Within STEM, where objectivity, neutrality, and rationality are valorised as core disciplinary ideals, the ideology of meritocracy interlinked with a rhetoric of colour-blindness (understood as the belief that racial difference is either irrelevant or inconsequential) also problematises issues of retention and equitable representation. In this context, meritocracy operates less as an empirical reality than as a powerful organising myth (Castilla and Benard, 2010; Slaton, 2015), one that renders structural inequities invisible by reframing them as individual shortcomings or a lack of excellence.

As I will discuss in this thesis, such institutional cultures and practices uphold science as a meritocratic enterprise, and academic labour as untainted by the social hierarchies that govern the wider society (Downey et al., 2024; King, Russo-Tait, and Andrews, 2023; McCoy, Winkle-Wagner, and Luedke, 2020). Under such assumptions, the pursuit of knowledge transcends identity, and STEM academics are imagined as disembodied intellectuals (Castilla and Bernard, 2010; Gillborn, 2015; Kozlowski et al., 2024; Slaton, 2015; Vincent-Ruz, 2025)

As a consequence of the continuing gendered and racial disparities among other intersecting axes of social marginalisation, there is a continuing proliferation of research on women's underrepresentation in STEM with increasing focus on the intersecting consequences of gendered and racial disparities within STEM academic disciplines (see for e.g., Bhopal and Henderson, 2021; Breen, 2021; Casad et al., 2021; Johnson, Thomas and Brown, 2017; Nkrumah and Scott, 2022; Ong, Smith and Ko, 2018; Stockfelt, 2018; Wilkins-Yel, 2023; – most of which are still contextualised in North America, highlighting the need for more UK-specific research on racial and gender inequities).

The Numbers

Amidst these troubling dynamics, a paradox is discernible: women, including those of colour, are attaining STEM postgraduate qualifications in growing numbers. Data from Advance HE (2022b, 2023b) and the Higher Education Statistics Agency (HESA, 2022a, 2022b, 2024a, 2024b) confirm this upward trend in doctoral research completion, with the proportion of Black and Other ethnicity female students qualifying in STEM-related degrees increasing to 25% in the 2022/23 academic year (see also Women in Science and Engineering - WISE, 2023).

Yet, this progress has not translated into proportionate representation within staff academic STEM faculties. As it stands, significant attrition persists at multiple stages of academic progression, most notably at the transition from early career research roles into permanent, senior academic positions, where Black and other ethnic minority women remain severely underrepresented, averaging only around 2% across STEM faculties (Advance HE, 2022a; HESA, 2024c; 2025a; 2025b; 2025c). Evidently, this gap between academic attainment and faculty representation, particularly for women of colour, points not to a lack of qualification or expertise, but rather to structural inequities within academia itself.

According to Advance HE's (2023b) student statistical report, female representation among postgraduate researchers in STEM-related disciplines has risen to 47.9%, contributing to a record high of female faculty members holding STEM postgraduate degrees. However, this progress is again tempered by noticeable inequities, especially in the experiences of Black and minoritised ethnic post-graduate research students. There is evidence to suggest that these minoritised postgraduate researchers make up less than 15% of that number, with a lesser likelihood of attending elite Russell Group universities, including reduced chances of securing (full-time) employment six months post-graduation (HESA, 2022a; Royal Society, 2024).

Also, recent statistical reports from HESA (2024a, 2024b) on students' representation in higher education explore transitions from first-degree qualifications to postgraduate study between 2000 and 2023 (see also HESA, 2022b). What is interesting about these reports is the detailed exploration of the pathways graduates take to achieve their highest level of postgraduate qualifications. The findings indicate a gradual increase in transitions to postgraduate taught courses across various subject disciplines, including STEM fields. However, the report again highlights a concerning yet familiar trend: Black and minoritised ethnic students are particularly less likely by 65% to enter into postgraduate research programmes.

One commonly cited explanation for this disparity is the limited availability of funding opportunities for these groups of students, some of whom face additional financial barriers, such as being classed as 'international' students and required to pay exorbitant tuition fees. This is compounded by the scarcity and highly competitive nature of funding and scholarships for postgraduate study. It is, therefore, unsurprising that such financial challenges can have the effect of deterring Black and minoritised ethnic students from pursuing PhD study.

While a growing body of research (see for e.g., Espinosa, 2011; Blackburn, 2017) has partly or specifically explored financial-related transition issues across STEM education to career, there is evidence to suggest that financial constraints are a contributory barrier to progression into post-graduate research, which, in turn, has broader implications for pathways into STEM academia and the STEM industry. These disparities reflect systemic inequities visible throughout the STEM sector. Take, for example, the recent statistics from the UK Government website showing that of the 9.4 million people in STEM employment across all industries, women constitute around a quarter of the broader STEM workforce, representing approximately 25% (Gov.UK, 2024).

This data is consistent with the findings of the HESA (2024c, 2025a) and WISE (2023) reports, which both reveal that only around 1.3 million women (representing 25.3%) work in STEM higher education. When this data is looked at with more granularity, particularly in relation to race/ethnicity, the figures are even disappointingly starker with only around 12% of women in STEM academia having ethnic minority backgrounds, revealing a disproportionate pattern of underrepresentation in relation to particular minoritised groups (see also APPG, 2023). The findings show that there is a comparatively lower percentage of Black women employees (representing 2% within STEM) across all sectors except health. Also, it highlights similar proportions of Bangladeshi and Pakistani academics constituting 2% of the STEM workforce, while women of Indian and other ethnic minority groups each make up 4% of the academic workforce.

On Terminology

It is imperative to foreground these specific and disproportionate patterns of underrepresentation experienced by WAC in STEM academia to avoid the reductive tendency to homogenise the multifaceted experiences of racially minoritised groups as uniformly underrepresented. Such homogenisation risks obscuring the nuanced and intersectional forms of exclusion experienced by individuals who are marginalised at the intersection of race, gender, class and other dimensions of social identity. A granular and disaggregated approach is, therefore, not merely desirable but necessary. Too often, recruitment and retention strategies purporting to promote equity within the broader discourse of who are (or are not) represented in STEM academia are marked by a troubling lack of specificity, relying on generic and overly inclusive terms such as "women of colour" and "BAME women" (Johnson et al., 2020; Miles et al., 2022; Osho, 2025a). These terms, while seemingly inclusive, often mask the differentiated realities and cultural context of individuals who navigate multiple and compounding axes of marginalisation.

In an effort to resist this semantic flattening, I adopt the term "women academics of colour" (WAC)—used interchangeably in this thesis with "racially minoritised women"—to refer specifically to women working and/or studying within STEM academia who self-identify as African, Afro-Caribbean, or South Asian, with particular reference to Indian heritage. This more precise terminology (clearly defined by the socio-demographic identity of each participant in the analysis chapters) serves not only to clarify the scope of my analysis but also to ensure that the lived realities of these women are neither obscured nor subsumed under vague categorical labels. It is both a deliberate and critical attempt at foregrounding difference without disintegration. Later in this sub-section (On Terminology), I also clarify how the category 'women' is understood and applied in this thesis more broadly, particularly in relation to gender identity and the limitations of statistical classifications that still largely rely on binary sex categories.

While it is acknowledged that the term "BAME" has enjoyed wide usage within the UK policy and institutional landscape (The Law Society, 2023; Selvarajah et al., 2020), it has been widely critiqued for its lack of analytical utility. The Commission on Race and Ethnic Disparities (2021) report, for instance, explicitly recommended retiring the term, noting its tendency to misrepresent and homogenise distinct ethnic groups, thus undermining the rigour and credibility of evidence-based research (see also Roche, Cooper and Higgs, 2024). In this regard, the imperative to disaggregate data is not simply methodological but epistemologically crucial for revealing the stratified nature of representation within academic spaces.

Globally, the naming of heterogeneous and historically marginalised communities has been a site of contestation, with terminology evolving in response to shifting socio-political contexts. Yet, some framings are more attentive to historical and structural inequities than others. Terms such as WAC, racially minoritised women, or even Global Ethnic Majority (GEM), serve not only to decentre Eurocentric norms but also to reposition these groups within a global epistemic frame that highlights the relational nature of power (Osho, 2025). These terms foreground the processes by which certain groups are constituted as 'minorities'—not by numbers alone, but in terms of belonging to a "Global Majority" within a systematic framework of racial stratification and dominant practices.

Nevertheless, I acknowledge that no single term - be it WAC, racially minoritised women, or GEM - can fully represent and/or explain the breadth and complexity of diverse identities. Yet, their usage reflects a deliberate and progressive departure from the reductive racial/ethnic categorisation of "BAME," which has increasingly been recognised as inadequate within both academic and policy discourses (Aspinall, 2020; Gill, 2024; Parry et al., 2023). These terms signal a conceptual and ethical shift: one that moves beyond the language of mere inclusion to critically interrogate the structures of power and processes of minoritisation that underlie systemic inequities in higher education. Importantly, the preference for "WAC" or "racially minoritised women academics" is underpinned by a social constructionist orientation, one that recognises that racial categories are not fixed or naturally existing as a minority but produced through social processes that have material consequences (Osho, 2025). This framing acknowledges the role of racial stratification and historic power dynamics in shaping experiences of academic marginalisation.

Within these contexts, I observe that while the term WAC can be operationalised to broadly include underrepresented minoritised women faculty, it is important not to make this assumption universally. Underrepresentation in STEM is not solely determined by race/ethnicity; white and other women, regardless of race, can also experience minority status based on their lack of representation within specific STEM disciplines. For example, numerical data highlight considerable variations in women's representation across fields. In life sciences, women make up around 54% of the workforce, yet their presence drops sharply in areas like engineering and computer science, where they represent only 16% and 21%, respectively (APPG, 2023). As such, I adopt the term WAC in a broad sense, not solely to denote "underrepresented," "minority," or any other constructs that indicate numerical representation, but also to avoid perpetuating within-group marginalisation. Instead, I define the term appropriately to provide a nuanced understanding of the racialised and gendered dynamics represented in these numerical data.

It is also important to clarify how this thesis employs the terms 'women' and 'female', particularly given the diverse and sometimes inconsistent ways in which these categories are defined in higher education reporting. Throughout this thesis, the term 'women' is used as a gendered identity category and is intended to be inclusive of both cisgender and transgender women, unless otherwise stated. By contrast, the term 'female' is retained only when directly citing statistical reports, datasets, or institutional documents (e.g., Advance HE, HESA), which frequently rely on binary sex markers or self-reported gender categories without detailed clarification. In such instances, the thesis acknowledges the limitations and potential exclusions embedded in those datasets.

Statistical agencies, including Advance HE and HESA, vary in how they classify students and staff. Some reports explicitly group trans women together with cis women, while others conflate or separate categories such as "female," "non-binary," and "other." In many cases, there is either insufficient disaggregation of data or a lack of transparency in how categories are defined. This raises interpretive challenges: while quantitative figures are useful for mapping broad patterns of access and representation, they do not always capture the lived complexities of gender diversity within higher education. Thus, when citing such statistics, this thesis reflects the terminology of the source while also situating it within a broader awareness of how gender and 'race' categories are socially constructed and institutionally operationalised.

This clarification is not only a matter of terminological or political correctness but also an ethical consideration. Discussions of gender equity in STEM postgraduate education risk inadvertently erasing the experiences of trans and non-binary students and faculty staff when relying on datasets that assume binary sex categories. At the same time, foregrounding these limitations is crucial to understanding the subjective nature of available data and the ways in which institutional classifications shape what can and cannot be seen in equity analyses. By making this explicit, this thesis seeks to balance the need to work with available statistical evidence while remaining attentive to the gendered complexities that such data may obscure.

The Gaps

A growing body of scholarship, particularly within the British context, has sought to chart racial and gendered inequities experienced by minoritised faculty in STEM academia. Much of these works have approached these dynamics through the lens of either racialisation or gendered marginalisation in isolation, with only relatively few studies engaging substantively with intersectional frameworks that foreground the simultaneity of race and gender in shaping lived academic experiences (see Breen, 2021; Inyang and Wright, 2022; Royal Society, 2021, 2024; Stockfelt, 2018; Wong and Copsey-Blake, 2023; Yaqoob, 2020, for example). Yet, even where intersectionality is explicitly engaged, notable gaps remain. In particular, there has been insufficient attention to the ways in which the very cultures, norms, and everyday practices within STEM spaces are themselves gendered and racialised—operating not merely as neutral terrains of scientific inquiry, but as socio-epistemic sites where inequalities are produced, legitimised, and sustained (see ElMorally, Wong and Copsey-Blake, 2022; McGee and Bentley, 2017; Robinson et al., 2016; Wong and Copsey-Blake, 2023; Yaqoob, 2020). The underrepresentation of women academics of colour in STEM cannot, therefore, be understood solely in terms of access and representational-focused analyses, but must also be interrogated in relation to how epistemic cultures, disciplinary norms, and institutional practices within STEM serve to marginalise and exclude.

The Research Aim

It is against this backdrop that my research seeks to contribute to and extend understandings of the underrepresentation of WAC in British STEM academia by moving beyond representational or 'pipeline' analyses to interrogate the epistemic, cultural, and institutional foundations of inequality. Specifically, I engage analytical lenses grounded in a mix of postcolonial and poststructuralist feminist theories, frameworks that are often underutilised in exploring inequities within STEM, to analyse how hegemonic STEM cultures and disciplinary practices can be understood as maintaining unequal power relations, regulating legitimacy, and constraining belonging, particularly for women faculty of colour.

While quantitative data and statistical mapping can offer valuable insights into patterns of inequities, they are often mobilised within what is termed the 'politics of enumeration', where there is a narrow focus on statistical data as a proxy for equity. This, according to Torres (2012), runs the risk of becoming 'lost in the numbers, ' that is, misconceiving a detailed engagement with statistical evidence for a transformative attempt at addressing disproportionate patterns of underrepresentation. Or even more problematic, being absorbed into what Hall (2000, p. 210) describes as a mode of 'multicultural drift', reflecting attempts at advancing inclusion through increased representation but not necessarily dismantling structural inequities and exclusionary practices that serve to numerically and epistemologically marginalise people of colour and women.

My aim, therefore, is not simply to document the lived experiences of WAC in STEM but to critically explore how these experiences are shaped, constrained, and regulated by complex regimes of power, knowledge, and institutionalised norms of legitimacy. In doing so, it contributes to an overarching decolonial agenda: one that moves beyond surface-level engagement with discussions and reforms of diversity and inclusion to unpack and unsettle the epistemological and cultural foundations through which inequities in STEM academia are normalised, reproduced, and sustained.

The Research Questions

I aim to unpack the complex intersecting dynamics of power, identity, and resistance exercised through a multitude of practices in everyday academic life and in ways that inform and constrain the academic trajectories of WAC in STEM disciplines. As such, my inquiry is structured around three interrelated research questions, each framed towards seeking greater understanding of the extent to which WAC's experiences are constituted through and contested within particular dynamics of power relations. At the heart of this exploration lies a central concern: how established academic cultures, disciplinary practices, and epistemic hierarchies work to constitute the positioning of WAC as (il)legitimate knowers.

Research Question 1 (RQ1): *To what extent do dominant academic cultures and practices—particularly those embedded in discursive construction of 'otherness'—intersect with gendered, racialised and classed dynamics to influence and constrain the career experiences of WAC within STEM academia?*

Research Question 2 (RQ2): *What are the implications of navigating gendered and racialised academic terrains for WAC's career trajectory in relation to their progression and retention in STEM faculties?*

Research Question 3 (RQ3): *How far are WAC mobilising technologies of resistance—whether they are discursive, embodied, or institutional—to subvert marginalising experiences in their STEM faculties?*

Taken together, these questions seek to unpack the complexities surrounding the experience of WAC and the normative discourses and power/knowledge regimes that continue to perpetuate and/or exacerbate their exclusion within STEM faculties. They give an opportunity to look at how far, and (if identifiable), in what ways, colonial legacies and gendered structures intersect to produce WAC as racialised and gendered subjects within dominant epistemological understandings. Yet, rather than framing these women solely as passive subjects of structural constraints, the RQ 3 especially allows for the potential to explore WACs' agentic practices of negotiation and meaning-making within these shifting terrains of power, potentially fostering a nuanced understanding of the underlying processes that pose obstacles towards equitable representation for WAC.

Why this Research?

In explaining why I have undertaken this research, I find it necessary to situate my motivations not from a place of detached academic interest or isolated intellectual curiosity, but as emerging from and within a broader socio-historical and structural context. The underrepresentation of women in STEM disciplines across many societies is not necessarily a new area of inquiry, as I have earlier noted; it is a historical pattern of exclusion, shaped by longstanding gendered power/knowledge relations that have positioned scientific spaces as masculinised, racialised, technocratic, and hierarchically structured.

More specifically, the direction of this inquiry is closely tied to the intersection of my personal experiences, educational trajectory, and emerging research identity. As a Black male PhD student from Nigeria, I bring to this work a standpoint shaped by first-hand encounters with systemic inequities, alongside a commitment to advancing social justice and equity within educational spaces. My interpretive lens is theoretically grounded in postcolonial and poststructuralist feminist frames - perspectives that compel a critical interrogation of dominant discourses, the deconstruction of binary categories, and a centring of the fluidity of power/knowledge relations. It is through this multi-positional lens—what I call a scholar's gaze—that I approach this complex research on STEM inequities informed by intersecting histories, observed realities, and embodied knowledge.

Also, my commitment to this area of inquiry is rooted in my educational background and more than a decade of professional practice. Prior to my master's programme, I completed a bachelor's degree in Integrated Science Education and taught for over ten years at the junior and senior secondary school levels in Nigeria. Those years were formative; not only in engaging with science courses and subjects but also in witnessing the gendered dynamics within classrooms, where female students and educators were routinely underrepresented, marginalised and often socialised away from pursuing science-related pathways. These lived observations raised critical questions about structural access and inclusion, all of which remained with me as I transitioned into postgraduate study.

In 2019, I commenced a master's programme in Education, Public Policy and Equity at the University of Glasgow. The programme introduced me to critical social theories—particularly those concerned with race, gender, and institutional power—and provided the analytical resources to understand how inequalities are both historically rooted and institutionally rationalised. My master's dissertation, which explored gender disparities in science education, laid the empirical and conceptual groundwork upon which my doctoral research now builds.

During that period, I began to draw parallels between the inequities I had witnessed in Nigeria and those within British STEM higher education as I wrote up my dissertation. As revealed earlier in the introduction, the data in this area are consistently and disappointingly stark. Women of colour remain disproportionately underrepresented in academic STEM fields, often relegated to the precarious margins of institutional visibility, leadership, and recognition. These disproportionate patterns are not incidental but a structural reflection of enduring systems of what Bhopal (2018) describes as the ongoing hegemony of white institutional spaces (see also Mirza, 2015).

Yet I also recognise that this research is incomplete without the accompanying complexity of my positionality. As a Black man engaging with the lived experiences of women of colour in academia, I am aware that I occupy what Ogunyankin (2019) describes as a position of "in-betweenness"—a liminal space wherein I negotiate the duality of being simultaneously an insider and an outsider. My racial identity and professional experiences connect me to the broader narratives of marginalisation within STEM and academia. Yet, my gender somewhat situates me outside the lived experiences of my participants, necessitating a careful, reflexive engagement throughout the research process.

This positional ambiguity influenced everything from participant recruitment to data interpretation. Gaining the trust of participants, maintaining rapport, and ethically interpreting the nuanced dimensions of their lived realities required more than shared racial identity; as Jackson (2022, p. 47) puts it, "identity is beyond skin colour". Instead, it demanded humility, ethical engagement, and an intentional commitment to reflexive praxis. As I discuss extensively in my methodology chapter, this dual positionality raised both ethical and epistemological questions about authority, representation, and the politics of knowledge production.

I am reflexively aware that gender cannot be simplistically intertwined with broader experiences of racialisation. My positionality as a man (although carrying with it experiences of what it means to navigate academic spaces as a racialised subject) brings with it privileges that could easily be misconstrued as authority, or more problematically, as an attempt to 'speak for' women of colour. Spivak's (1988) inquiry—*Can the subaltern speak?*—articulates this type of danger as the risk of reproducing a saviour complex, wherein men, including those from marginalised racial backgrounds, assume the position of an 'expert' and seek to 'rescue' women from marginalisation and oppression (see also Ladson-Billings, 2003a). Against this backdrop, I must be unequivocal that this research is not a paternalistic project. It is not about 'saving' women of colour, but rather, about conducting research *with* and *for* women of colour, grounded in solidarity rather than saviourism.

In fact, I argue that the project of 'decolonising' British STEM academia cannot (and should not) rest on the shoulders of women or people of colour alone. It necessarily requires the participation of white scholars, men and non-binary individuals, including those from minoritised backgrounds, who, like their women colleagues, are positioned within the unequal power dynamics of higher education. Whether as allies, advocates, or research activists, scholars across gender categories and positionalities have a responsibility to contribute to dismantling exclusionary structures and fostering cultures of belonging in STEM.

In summary, this research is not merely a scholarly exercise but a personal undertaking shaped by my lived experiences, professional background, and theoretical commitments. The underrepresentation of women academics of colour in British STEM is not just a statistical problem; it is an established epistemic and institutional issue that speaks to the coloniality of knowledge and the enduring architectures of exclusion. Through this work, I seek to amplify marginalised epistemologies (Collins, 2022), challenge the institutional complacency that so often accompanies diversity rhetoric, and contribute to a broader (re)imagining of decolonial futures within STEM and higher education more broadly (Subedi and Daza, 2008).

Structure of the Thesis

I now turn to outline the structure of the thesis, which is composed of nine substantive chapters, including this introduction. Each chapter builds on the last, offering a layered and critical engagement with the underrepresentation of WAC in STEM academic faculties. My aim here is to offer readers a concise snapshot of the conceptual and analytical journey undertaken in this research.

In **Chapter Two,** I thematically review relevant literature, exploring key debates, empirical insights, and conceptual gaps relating to the exclusion and marginalisation of WAC in STEM disciplines. This chapter not only maps the current scholarly debates but also identifies the knowledge and analytical gaps which my research seeks to address. It brings together relevant literature to underscore how race, gender, and academic culture intersect in ways that remain insufficiently explored.

Chapter Three presents the theoretical groundwork for understanding the structural and discursive forces that inform WAC's experiences in these spaces. Here, I draw on postcolonial and poststructuralist lenses to explore the nuanced and intersecting dynamics that underpin women's underrepresentation in academia broadly, and in STEM fields more specifically. This chapter situates the inquiry within feminist traditions that foreground the politics of power, knowledge production, and institutional normativity, offering a conceptual lens through which the subsequent empirical chapters are interpreted.

Chapter Four outlines the methodological framework of the research. I elaborate on the qualitative approach adopted, detailing the rationale for participant recruitment, data production, and analytical processes. Importantly, this chapter includes a reflexive account of my positionality and discusses the ethical and onto-epistemological considerations that underpin the research process. Attention is paid to the politics of representation and the responsibilities entailed in researching with, rather than merely about, marginalised communities.

In **Chapter Five**, I present the first empirical theme: *Checking a Colour Box,* which critically explores institutional diversity initiatives, highlighting how such efforts, while rhetorically committed to inclusion, often operate at a symbolic level. I problematise how WAC are both hyper-visible and structurally marginalised; celebrated as 'evidence' of diversity but also as subjects of a troubling paradox of (in)visibility within the limits of tokenistic and performative inclusion.

Chapter Six continues the analysis with a focus on the theme: *The Masculinity of Science Identity*. This chapter analyses the gendered and racialised dimensions of how 'science identity' is constructed and policed within STEM cultures. Drawing on participants' experiences, I discuss how the normative image of the scientist implicitly privileges masculinity and whiteness, rendering WAC as 'outsiders-within', necessitating heightened surveillance, questioned competence, and implicit pressure to be (re)socialised into the 'science culture.'

Chapter Seven deepens understanding of the structural and sociocultural dynamics that underpin career-life tensions for Women Academics of Colour in STEM. It takes as its central focus the theme of the *Partnership and Motherhood Penalty*, situated within gendered expectations in relation to the demands of partnership, motherhood, and wider domestic responsibilities, and how these dynamics intersect with the normative expectations of the ideal academic—one who is presumed to be singularly devoted to scientific work, unencumbered by caregiving or familial obligations. Through the lens of participants' narratives, I explore the tension between the biological clock, career clock, and partner's career trajectory, and how these overlapping temporalities shape the professional and personal lives of WAC in STEM.

Chapter Eight explores the final analytical theme: *Out of place yet unrelated to gender or race identities*, unpacking the complex and often contradictory ways WAC made sense of their experiences within their STEM faculties. Participants' narratives reflect a tension between recognising the cultural and structural dynamics that shape their marginalisation, and simultaneously engaging with dominant meritocratic discourses that define academic success as a function of individual talent. I analyse this tension as both an internalised discourse and a potential form of mobilised agency—a way to resist essentialised identity positioning and

navigate institutional cultures and practices. These accounts are read within the broader socio-cultural discourses of hegemonic meritocracy that continue to sustain unequal power relations in academia and beyond.

Finally, in **Chapter Nine**, I conclude the thesis by synthesising the key findings and reflecting on the broader contributions of the study to feminist, postcolonial, and STEM equity scholarship. I also outline the practical and theoretical implications of this research for policy, institutional practice, and future directions for inquiry, particularly in relation to reimagining inclusive and transformative academic spaces.

Conclusion

Having set out the contextual background from which the underrepresentation of WAC in STEM academia is explored, the thesis focus, my motivation to pursue this research, and the overall structure, the discussion now turns to the literature review. It situates these conceptual insights within available statistical evidence across global contexts to unpack the structural absences that persist within STEM. Additionally, it critically explores key policy frameworks seeking to address inequality and synthesises the major scholarly debates that speak to the complex interplay of race, gender, and disciplinary culture. Together, these serve to provide the analytical grounding from which the subsequent theoretical and analytical chapters build on.

Chapter Two - Literature Review

Introduction

In this chapter, I begin by laying an empirical foundation, exploring statistical data of WAC's representation in academia across global contexts, including Europe, the US, and the UK. This data is not presented as an end in itself (as I have briefly noted in the introductory chapter), but rather as a point of departure—a necessary but inexhaustive attempt toward understanding the structural absences that define the academic landscape within STEM. I engage with demographic data that speak to the intersections of race, gender, and disciplinary boundaries at both undergraduate and postgraduate levels, situating WAC's underrepresentation within a broader cartography of systemic marginality. Here, numbers serve as both evidence and indictment, offering a greater understanding of the disproportionate patterns of exclusion that define institutional participation for these women.

Following this, I critically explore key policy frameworks, most notably the Athena SWAN Charter, as part of the UK's institutional equity code of good practice. While such initiatives are often heralded as progressive instruments of change, I interrogate the progress of this framework and the discursive practice underpinning them, particularly the ways in which gender-first orientation still implicitly seems to marginalise the specificities of racialised and intersectional experiences. Drawing on critiques from within post-colonial and post-structuralist feminist literature, I explore how these equality, diversity, and inclusion (EDI) frameworks are sometimes mobilised more as symbolic performances than as transformative interventions.

Building upon this contextual and policy mapping, I then present a thematic review of the relevant literature - foregrounding the key debates, empirical findings, and discursive interventions that engage the structural, epistemological, and affective dimensions of WAC's marginalisation in STEM. This review is not simply descriptive; it is a critical synthesis that seeks to trace the tensions and identify the epistemic gaps within the current scholarship. In doing so, I explore how existing bodies of work engage the complex intersection of race, gender, and disciplinary culture in relation to inequitable patterns of representation in STEM.

WAC in Academia: A 'Global' Statistical Context

Across the globe, the challenge of increasing representation and retaining women in academia remains not only persistent but particularly noticeable in spatially and mathematically intensive fields such as geosciences, engineering, economics, computer science, and the physical sciences, including chemistry and physics. These domains—historically coded as masculinised, technocratic, and hierarchically ordered—continue to reflect not only a gendered pattern of exclusion but also racialised patterns, as well as patterns reflecting inequalities in relation to other social identities. According to UNESCO's (2022) Global Education Monitoring Report on Gender, while women constitute 94% of pre-primary and primary teachers, they hold only 43% of tertiary education faculty positions across all fields. This gap becomes even more noticeable at senior leadership levels, where women account for only 10% of vice-chancellorships and university presidencies worldwide (UNESCO, 2024b).

Worse still, UNESCO's (2024a) recent report on the role of education in shaping the future of technological development underscores that girls and women continue to encounter significant barriers to pursuing STEM-related subjects and careers. These barriers often emerge at an early age in the form of mathematics-related anxiety and are reinforced by gender stereotypes, biased curricula, and a lack of visible role models, which collectively contribute to a reluctance to engage with STEM subjects. Over time, these intersecting challenges compound into the persistent and disproportionate underrepresentation of women within the global science and technology workforce. UNESCO's recent statistics demonstrate that women account for only 35% of STEM graduates—a figure that has remained relatively stagnant over the past decade—and remain concentrated in a quarter of jobs across science, engineering, and ICT fields (UNESCO, 2023a, 2023b).

Yet, when the figures are disaggregated by race and ethnicity, the situation becomes even more revealing. For WAC, the issue is not simply one of numerical scarcity, but of structural marginalisation—wherein their experiences are intersectingly constrained by gendered-race dynamics, colonial histories, institutional geopolitics, and disciplinary cultures, structurally positing them at the margins (Ahmed, 2012; Bhopal, 2018; Mohanty, 2003). According to the 2023 Global Gender Gap Report by the World Economic Forum, women from Black, Indigenous, and other minority ethnic backgrounds make up less than 5% of full professors in most higher education systems globally, with rates below 2% in some Western countries, such as the UK and the US (World Economic Forum, 2023). These figures suggest that academic institutions, while increasingly attuned to gender equality, have not adequately addressed the compounded effects of race and ethnicity that place WAC at a greater disadvantage than their white or male colleagues.

The structure of academia itself often reinforces these disparities. As highlighted in UNESCO's (2024a, 2024b) follow-up report on inclusive education systems, institutional cultures of academic hiring and promotion are frequently embedded within Eurocentric frameworks of merit, productivity, and authority—criteria that systematically undervalue the contributions of WAC, particularly in interdisciplinary and community-engaged research. As in western societies, WAC in global south contexts are often concentrated in teaching-focused roles with little access to research funding, while in the global north, they frequently navigate spaces marked by implicit bias, tokenisation, and epistemic surveillance—what Connell (2019) refer to as 'epistemic gatekeeping'—where scholarly legitimacy is measured against Eurocentric standards of rigour, objectivity, and citation capital.

As Connell (2019) contends, the architecture of the global academy continues to be disproportionately shaped by Northern epistemologies, which structurally relegate Southern knowledges to the periphery unless reformulated within the language and logics of Western academic capital. Inclusion of scholars from or located in the Global South, therefore, often functions less as genuine epistemic exchange and more as a form of neo-colonial incorporation that sustains hierarchical knowledge orders. This dynamic is further reinforced by the mobility regimes that structure global academia. Burawoy (2020) notes that success in contemporary academic capitalism is increasingly indexed through hypermobility, visibility, and intensified productivity—metrics that privilege those with access to Northern institutional networks and resources. The gendered dimensions of these expectations were starkly revealed during and post-COVID-19 period, when men within the academy disproportionately increased their publication outputs, exacerbating existing inequities in academic recognition and advancement (see, for e.g., Dunn et al., 2022).

Yet for many women of colour and scholars from historically marginalised backgrounds, this model is inherently exclusionary despite evidence supporting the fast expansion of global academic networks (International Association of Universities - IAU, 2023). Structural constraints such as limited access to fellowships, sabbaticals, and leadership development programmes, restrictive and fast-changing visa policies, racialised immigration systems, familial care responsibilities, and the precarity of fixed-term contracts render the hyper-mobile academic an almost unattainable pursuit.

In the context of the United Kingdom, persistent patterns of racial marginalisation in higher education are starkly illuminated through a growing body of empirical research. Notably, the series of equality reports produced by Advance HE (2022a, 2023a, 2024a), alongside Rollock's Staying Power Report (2019), foregrounds the enduring structural inequities experienced by racially minoritised academics. While the most recent data from Advance HE (2024a) reveals that the number of Black, Asian, and Minority Ethnic (BAME) staff in UK higher education has more than tripled over the past two decades, from 24,045 in 2003/04 to 76,095 in 2022/23. Scholars such as Arday (2022) urge caution in interpreting these quantitative gains as indicative of systemic progress, arguing that such headline statistics mask the deeply embedded, and often nuanced, inequalities that continue to shape the lived experiences of staff of colour. Indeed, BAME staff remain significantly underrepresented overall, accounting for just 19.1% of the higher education workforce as of 2022/23 (Advance HE, 2024a).

Disaggregated data further highlights the complexity of this landscape. The Advance HE report published in November 2024 shows that among both UK-domiciled and international academic staff, those from minority ethnic backgrounds are disproportionately concentrated on fixed-term contracts. 29% for UK BAME staff and a striking 46.6% for their international counterparts, compared to 23.3% and 31.7% for White staff, respectively (see also HESA, 2024c; 2025a; 2025c). These contractual disparities point to enduring precarity and a stratified academic labour market.

Perhaps more tellingly, representation at the professorial level reveals a racial hierarchy. While there has been a gradual increase in the ethnic diversity of professorial appointments over recent years, significant disparities persist across different ethnic groups. Of the more than 23,000 professors with known ethnicity in UK higher education, only 2,625 or approximately 12% are from ethnic minority backgrounds. Within this already small cohort, Black professors remain the most underrepresented, with just 165 individuals constituting less than 1% of all professors. Notably, this figure has remained consistently static over the past decade, despite widespread institutional commitments to equity, diversity, and inclusion.

Given the already stark underrepresentation of Black and other racially minoritised groups in UK academia, it is perhaps unsurprising - though no less troubling - that the figures become even more disappointingly starker when viewed through the intersectional lens of race and gender. As of April 2024, only 66 Black women held professorships, in stark contrast to the over 12,500 White male professors recorded, equating to 0.15 % of all UK professors and making them the smallest numerically represented group at that level (Osho, 2025; Osho and Alormele, 2025; Women's Higher Education Network - WHEN, 2022). More broadly, just 3.6% of professors are women from BAME backgrounds, compared to 9.1% of BAME men and 89.1% of white professors. These comparatively lower figures reflect the cumulative weight of systemic barriers that hinder the progression of racially minoritised women in STEM fields.

Within this context, the challenge for Black women academics is not simply about metaphorically attaining "seats at the table" as Ogbe's (2022, p. 679) provocation points out. Rather, the problem is complexly layered and structurally entrenched. First, as self-evident as it may read, many Black and other racially minoritised women are excluded from the metaphorical table altogether. These institutional spaces—constructed and long dominated by more privileged, predominantly White and male subjectivities—often lack the will to include those who fall outside the normative bounds of power and influence.

Secondly, even where 'seats' appear to be available, the conspicuous absence of women of colour points to persistent structural and cultural barriers to both access and retention. This is not a matter of individual choice or merit, but a reflection of systemic gatekeeping that undermines equity at every stage of the academic pipeline. Finally, when women of colour do manage to enter these spaces, they are too often positioned in marginalised roles that lack the institutional authority, 'voice', or influence of their White male peers. Such positioning undermines their ability to meaningfully advocate for change or to challenge the very power structures that perpetuate their marginalisation.

Thus, I echo and indeed amplify Ogbe's critical assertion: securing a seat at the table is not enough. Representation, while important, is insufficient in the absence of power, influence, and institutional legitimacy. What is required is a paradigmatic shift from symbolic inclusion to transformative equity—an approach that centres structural change, not assimilation. Women of colour in academia must be placed in positions where they are empowered to shape agendas, influence decision-making processes, and disrupt long-standing patterns of exclusion and inequality.

In this regard, targeted and intentional initiatives such as the "100 Black Women Professors NOW" programme—spearheaded by WHEN—represent a critical intervention. Launched in 2021, the initiative aims not only to increase the number of Black women professors in the UK but also to empower them through sustained professional development, mentorship, and leadership pathways. Although progress has been gradual, the programme signals a much-needed commitment to systemic change. However, it must be supported by broader institutional transformation to establish a meaningful shift in both numbers and experience for Black women in academia.

Higher Education Statistics in the US

The issue of underrepresentation within academia is not unique to the United Kingdom; it is a systemic reality that pervades academic institutions across the Global North, including the United States and other Western nations as well as societies within the Global South. While cross-national comparisons are often complicated by inconsistencies in data collection, classification, and reporting methods across global and regional data sources, the weight of existing evidence reveals a persistent pattern: racially and ethnically minoritised groups remain starkly underrepresented within the academic workforce, as well in the US.

For instance, the 2024 U.S. Government Accountability Office's (GAO) analytical report draws attention to the disproportionate racial and ethnic composition of faculty in higher education, revealing that despite incremental gains between fiscal years 2003 and 2021, individuals identifying as Black or African American and Hispanic or Latino collectively occupy only 5% to 15% of academic faculty roles (GAO, 2024). The vast majority of academic positions continue to be held by White and Asian scholars, a demographic imbalance that raises serious questions about equity, access, and structural barriers within the academic pipeline.

These findings are corroborated by data from the National Center for Education Statistics (2024), which show that within the most senior academic ranks, representation remains even more stark: Black and Hispanic faculty each comprise a mere 4% of full professorial roles, while White faculty constitute an overwhelming 75%. Despite comprising approximately 12.5% of the U.S. population, the report shows that racially minoritised women hold only 2.3% of tenure-track or tenured faculty positions, and an alarming 1.2% of full professorships. Masters-Waage et al. (2024), adopting the concept of underrepresented minority women, found that this group continues to experience compounded disadvantages in the form of institutional 'double standards' that constitute barriers particularly in promotion, securing tenureship, and career progression (see also Gaughan, 2023).

Despite growing numbers of Black and Hispanic individuals attaining advanced degrees and entering professional fields, their representation within the professoriate remains disproportionately low. The GAO (2024) highlights this disparity: while Black professionals account for approximately 9.1% of the workforce in fields such as law and engineering, they constitute only 7.1% of the college faculty. Similarly, Hispanic professionals represent 8.3% of the professional workforce but just 6.3% of faculty appointments. This underrepresentation is further underscored when comparing faculty demographics with student populations. In fiscal year 2021, for instance, 8% of faculty were Black compared to 12% of students, and 7% of faculty were Hispanic compared to 19% of students (GAO, 2024). Such figures point to both a misalignment between the diversity of the student body and that of the teaching faculty, and to systemic barriers that continue to constrain equitable access to academic careers for racially minoritised groups.

Even more, minoritised women, including Black, Hispanic or Latina, Pacific Islander, and American Indian/Alaska native, remain disproportionately underrepresented in academia relative to their representation in the U.S. population and when compared to White and Asian American/Pacific Islander women (National Science Foundation - NSF, 2023; National Center for Educational Statistics - NCES, 2024). According to these statistics, racially and ethnically minoritised women account for only 12.9% of full-time faculty positions across all disciplines, despite comprising 32.6% of the U.S. population aged 24 to 64. Within this group, the representation of Black and Latina women is notably low at only around 5% (see also American Association of University Professors - AAUP, 2020).

To further contextualise these disparities, the statistics drawn from the NCES provide a detailed breakdown of post-secondary faculty across the United States. As of fall 2022, the NCES (2024) shows that White faculty members constituted a significant majority of the academic workforce, making up 72% of those employed at degree-awarding postsecondary institutions. This included 35% White women and 37% White men. Asian faculty accounted for 13% of the total, with a relatively balanced gender distribution of 6% Asian women and 7% Asian men. Black faculty, however, represented only 7%, split between 4% Black women and 3% Black men. Similarly, Hispanic faculty made up 6% of the total, evenly distributed at 3% Hispanic women and 3% Hispanic men.

Representation among other racial and ethnic groups was markedly lower. Faculty identifying as belonging to two or more races constituted 1% of the total, while American Indian/Alaska Native faculty and Pacific Islander faculty each accounted for less than one-half of 1% of the workforce (NCES, 2024). These statistics are not just numbers; they represent systemic inequities that impact people and their opportunities to participate in shaping the academic landscape. The significant underrepresentation of racial and ethnic minorities—particularly women—reflects longstanding barriers to entry and advancement in academia.

Although the racial, ethnic, and gender distribution of full-time faculty varied by academic rank at degree-awarding postsecondary institutions in fall 2022, notable patterns of stratification emerge. White men and Asian men were disproportionately represented at the higher professorial ranks compared to non-professorial positions. Specifically, White men accounted for 39% of faculty at the professor level but only 33% at the non-professorial level, while Asian men comprised 8% of professors compared to 5% of non-professorial faculty (NCES, 2024). Other demographic groups made up similar or lower percentages of faculty in the professor ranks compared with the non-professorial ranks. For example, Hispanic women made up 3% of faculty in professor ranks and 4% in non-professorial ranks. This supports the ongoing contextualised argument of disproportionate patterns of underrepresentation across minoritised faculties as well as unequal power dynamics, as evidenced by statistics showing that although women in the US now account for 47% of full-time faculty members, they are overrepresented in non-tenure-track positions (AAUP, 2020).

Higher Education Statistics across Europe

Statistical evidence from Europe mirrors the global trend of a disproportionate pattern of representation across enrolment, graduation, and faculty employment in higher education. According to the European Commission's *She Figures* (2021, p. 24) report on gender in research and innovation, the last decade has seen significant progress in narrowing the gender gap among doctoral graduates within the European Union, with women making up 54 % of bachelor's and master's level students, and 59 % of graduates at those levels combined. At the doctoral level, women represent about 48 % of students *and* graduates, indicating that the EU has nearly reached gender parity in this overall pool of doctoral degree holders (see also Eurostat Statistics*, 2024 on *Research and Development Personnel*).

However, despite the progress towards achieving close to gender parity, significant gender gaps persist in specific disciplines and among certain racial/ethnic minoritised groups who are particularly vulnerable to precarious work conditions (European Parliament, 2020). For example, the European Parliament (2020) report shows that women constitute only around 22 % of doctoral graduates in ICT, while in Health and Welfare and in Education, women earn approximately between 60 % and 67 % of doctoral degrees, respectively.

On the employment axis, both the European Union Agency for Fundamental Rights' (2024) report (titled - *Being Black in the EU)* and the European Parliament's (2022) resolution on intersectional discrimination in the EU give a comprehensive account of the experiences of women of African descent and other racially minoritised groups within the workforce broadly. According to these reports, almost two-thirds (66%) of women of African and other minoritised descent are concentrated in elementary occupations—jobs typically involving manual or menial labour—compared with only 8% of the general population. National variations are particularly stark, with the proportions highest in Spain (68%) and Italy (46%) and lowest in Poland (9%). Across the EU, despite 91% of Black and other minoritised women being overqualified for their jobs—compared to 48% of white women—these women remain disproportionately overrepresented in precarious and low-paid sectors that offer limited prospects for progression (see also European Parliament, 2022).

These disparities are not merely a matter of gender inequities but are exacerbated by the intersection of multiple factors, including race or ethnicity, religion or belief, disability, age, and sexual orientation. Such intersecting forms of marginalisation have significant social and economic consequences, particularly in relation to accessing and remaining in high-skilled and well-paid employment. One of which is that overqualified women of colour end up being excluded from opportunities to advance into roles that reflect their qualifications and skills, leading to income inequality, job insecurity, and limited professional growth. This is in addition to consistently having to deal with micro-aggressions, resulting in higher rates of burnout, including issues of recognition of diplomas acquired abroad, presenting a significant challenge, as the 2024 *Being Black in the EU Report* reveals.

This context is crucial for understanding the disproportionate patterns of representation for women of colour in academia within the EU. At both European and national levels, available data reveal clear patterns of gendered distribution across fields of study. Women graduates remain consistently overrepresented in traditionally feminised disciplines such as education, while continuing to be significantly underrepresented in high-demand, male-dominated disciplines, including information and communication technology, engineering, manufacturing, and construction (European Commission, *She Figures*, 2021; Eurostat, *Research and Development Personnel Explained*, 2024). Such patterns reinforce the structural barriers that limit women's participation in strategically important sectors of the knowledge economy.

Particularly, Eurostat's (2024) *Research and Development Personnel Explained* further illustrates these dynamics. In 2021, women accounted for 48.1% of doctoral graduates across the 27 EU Member States and Associated Countries (EU-27), a notable increase from 47.5% in 2010. This gradual progress towards gender balance at the highest levels of education suggests a narrowing of disparities in advanced academic attainment. However, when disaggregated by discipline, women's near parity in doctoral graduation masks persistent inequalities in subject choice, with their presence concentrated in feminised fields and markedly diminished in STEM-related areas. This uneven representation underscores the structural and cultural constraints that continue to shape women's academic trajectories and professional opportunities in the EU.

Yet, across the EU-27, the proportion of women among doctoral graduates typically ranged between 40% and 60%, although notable outliers exist. For example, Albania (62.3%) and Georgia (60.8%) recorded the highest proportions of women doctoral graduates, while Luxembourg reported the lowest, at 35.6%. Among the EU Member States, Lithuania (57.9%) and Poland (56.3%) stand out with the highest representation, in contrast to Luxembourg (35.6%) and Czechia (43.7%), which fall markedly below the regional average. Encouragingly, approximately two-thirds of the EU-27 experienced an increase in the proportion of women among doctoral graduates between 2010 and 2020. This suggests that targeted efforts to address gender imbalances in higher education and research are beginning to yield tangible results.

These successes may be attributed to the implementation of legal and institutional frameworks designed to address discriminatory practices in academia. For example, *Sweden's Discrimination Act* mandates universities to undertake continuous proactive measures to prevent discrimination and to give an annual Equality Report, which is monitored by the Swedish Equality Ombudsman (League of European Research Universities - LERU, 2018). Similarly, other European countries have enacted binding regulations: the 2019 French *Law on the Transformation of Public Service* (French Government, 2019, Article 80) obliges higher education institutions (HEIs) to actively address discrimination, while Ireland's 2020 *Framework for Consent in Higher Education Institutions* mandates higher education institutions to implement policies addressing gender-based violence, harassment, and sexist behaviour (Government of Ireland, 2020).

Another contributing factor may be the adoption of measures to systematically integrate a gender perspective into teaching across several European countries. This is significant because teaching and learning cultures are often shaped by entrenched gender stereotypes, which can constitute barriers to women's progression in academia, particularly in historically male-dominated disciplines (Thege, Schmeck and van Elsacker, 2020). A notable example is Germany, where gender studies have been embedded in a subject-specific manner across 55-degree programmes, spanning the Humanities, Social Sciences, Mathematics, Natural Sciences, Medicine, Engineering, Sport, Arts, and Agricultural Studies, under the coordination of the Women's and Gender Research Network. At the transnational level, initiatives such as the EU-funded *Baltic Gender Project*—involving partners from eight scientific institutions in Germany, Estonia, Lithuania, Sweden, and Finland—have sought to develop strategies for gender-sensitive teaching in Marine Sciences and Technology, with broader applications for STEM education and research. This project emphasises both the integration of gender into curricula and the cultivation of gender-sensitive pedagogical practices within teaching spaces (European Commission, 2021 – *She Figures Report*).

However, as research across global contexts consistently demonstrates, women of colour in higher education, particularly within STEM, continue to face significant structural and cultural barriers. At senior levels in particular, women academics of colour experience what has been described as the 'double bind'—the compounded challenges of racial and gendered marginalisation. This phenomenon, often characterised by discrimination, internalised feelings of inadequacy, and the necessity of adopting ways of being and doing that align with dominant, middle-class norms of academic success, has been widely documented (Johnson et al., 2020; Malcom and Malcom, 2011; Ong et al., 2011). Such practices, as Ong, Smith and Ko (2018) argue, are less about meritocratic inclusion and more about conforming to hegemonic cultures in STEM and academia more broadly, which are implicated in (re)producing exclusion, misrecognition, and inequality (see also Seron et al., 2018).

Although there is growing recognition of how race and gender intersect to shape the experiences of women scientists of colour (Charleston et al., 2014; Miriti, 2020; Ong, Smith and Ko, 2018; Stockfelt, 2018), counterarguments persist. These often draw on androcentric and 'colourblind' discourses that deny the structural realities of exclusion and reinforce narratives of objectivity and neutrality within the scientific community—understood here as the collective of scientists and their practices, interactions, and institutional relationships. Such discourses obscure systemic inequities by framing marginalisation as either non-existent or incidental, thereby impeding meaningful structural change.

WAC in STEM Academia: A Statistical Review (UK and Global Trends)

The United Kingdom

Within the UK, the underrepresentation of WAC in STEM faculties mirrors wider patterns of structural inequality across higher education. While gender equity and diversity initiatives have led to modest improvements in female participation, particularly at the entry levels into higher education and doctoral study—for example, women now comprise 51.3% of postgraduate research students (HESA, 2024a, 2024b, 2025b, 2025d)—these gains do not translate into proportionate representation in academic appointments, particularly at senior research levels (HESA, 2024c, 2025c; Royal Society, 2024, 2025). The persistence of this attrition suggests that barriers lie not in the supply of qualified candidates but in the structural and cultural practices of academic institutions.

National monitoring and sector analyses consistently reveal clear patterns of ethnic and gender disparities within the UK's STEM academic staffing. The Royal Society's analysis of HESA/Jisc[3] data shows that ethnic minority staff are concentrated lower in the academic hierarchy and that Black staff are most severely underrepresented at the professorial level: only around 3% of Black STEM academic staff hold professorships compared with substantially higher proportions of white staff (Royal Society, 2024). The Royal Society also documents marked age and ethnic disparities within STEM academic cohorts (for example, data shows disproportionately higher shares of Asian staff among younger cohorts relative to Black staff STEM academics), a pattern that, if left unaddressed, will likely reproduce current inequities into the next generation of senior academics (cf. Royal Society 2021, 2024).

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[3] Jisc is the UK's digital data and technology agency for tertiary education, research and innovation.

Disaggregation within racially minoritised groups reveals the depth of these disparities. According to the Royal Society (2024), in 2022/23, 15% of STEM academics were Asian (18,060), compared with only 3% Black (3,285), 3% mixed ethnicity (3,285), and 3% other ethnicity (3,600). These proportions differ from non-STEM disciplines, where Asian academics comprise 10% (9,825) and Black academics 4% (3,815). Gendered differences compound these inequalities: between 2007 and 2023, Asian STEM men consistently outnumbered Asian STEM women, while Black, mixed, and 'other' ethnic groups displayed more gender balance, although significantly lower than the proportions of Asian academics along gender lines. In 2022/23, ethnic minority men comprised 26% of male STEM staff (16,660), compared with 21% of female STEM staff (11,515). Among ethnic minority STEM academics, 59% were male and 41% female, while white STEM staff were more evenly distributed (53% male, 47% female) (Royal Society, 2021, 2024).

Advance HE's (2024a) Staff Equality Statistical Report corroborates these patterns, noting that while the overall proportion of female academic staff has increased (female representation across academic roles is at its highest level in recent reports), BAME staff—and particularly BAME women—remain a small fraction of senior and professorial roles. Moreover, Advance HE's series of datasets (2022a, 2023a, 2024a) on staffing consistently shows that these groups are disproportionately more likely to be employed on fixed-term, zero-hour, and atypical[4] contracts, with persistent gaps in pay and promotion to professorship. Such contractual precarity intersects with inequitable workload allocation and service expectations, further constraining progression for WAC in STEM and academia more broadly (Leathwood and Read, 2020; Read, 2023; Wong and Copsey-Blake, 2023).

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[4] Atypical staff are those members of staff whose contracts involve working arrangements that are not permanent, involve complex employment relationships and/or involve work away from the supervision of the normal work provider

HESA's 2022/23 staff statistics also confirm incremental increases in women professorial representation (with around 31% of female professors in 2022/23), yet ethnic disparities in contract type and seniority persist (HESA, 2024c). Together, these data point to two interlinked dynamics: (1) a numerical pipeline that delivers more women and ethnic minority graduates into postgraduate programmes and training, but (2) an institutional gatekeeping system that channels WAC into less secure and teaching-intensive roles, which constrains their progression to senior, research-intensive positions (Osho and Alormele, 2025). The Royal Society and Advance HE statistical reports make clear that credential attainment alone does not overcome structural barriers within hiring, promotion, contract allocation, and work allocation practices (Advance HE, 2024a; Royal Society, 2024).

Research and sector reports identify a range of other mechanisms that reproduce these patterns of underrepresentation, including unequal allocation of teaching and service (including diversity work); weaker mentoring and sponsorship; and hostile departmental climates—factors that reduce access to research time, grant capture, and the outputs used to determine promotion. As subsequent sections of this review will discuss, such structural barriers compound issues of underrepresentation across the academic career trajectory of WAC. Qualitative and mixed-methods studies consistently link these dynamics of precarity to lower promotion rates and higher attrition, particularly among early career WAC in STEM and academia more broadly, highlighting that systemic change—rather than individual resilience—is required to address these entrenched inequities (e.g., Hoskins, Moreau and McHugh, 2023; Leathwood and Read, 2020; UCU, 2016, 2021a, 2023; Wong and Copsey-Blake, 2023).

The United States and Other International Comparisons

Parallel trends in the exclusion of WAC from STEM academia are evident across global higher education systems. In the United States, data drawn from the National Center for Science and Engineering Statistics' (NCSES, 2024) Survey of Earned Doctorates show that while the overall number of science and engineering doctorates has increased substantially—exceeding 48,000 awards in 2022—the proportion awarded to Black (3.3%) and Hispanic women (4.7%) remains disproportionately low relative to need for diversifying the professoriate (see also the NSF, 2023).

This underrepresentation in doctoral attainment translates directly into persistent inequalities in access to academic positions, particularly at senior levels. The NSF (2023) documents that Black and Hispanic women together constitute less than 4% of full-time science and engineering faculty, with representation at the rank of full professor dropping to under 1%. The US Government Accountability Office (GAO, 2024) confirms these findings, noting that while Black and Hispanic students constitute a growing share of enrolments (approximately 20%) of STEM undergraduates, their presence at the faculty level remains disproportionately low, particularly in engineering. This gap—which is substantially larger compared to other professional sectors such as law and medicine—highlights how recruitment and retention practices systematically fail to leverage the existing doctoral pipeline (see also Nkrumah and Scott, 2022; Ong, Smith and Ko, 2018).

Comparable patterns of attrition are visible in Canada. The Council of Canadian Academies (CCA, 2024) highlights that racialised women are significantly underrepresented in leadership and research-intensive academic roles, despite national equity frameworks such as the Tri-Agency Equity, Diversity and Inclusion Action Plan. According to the report of the National Science and Engineering Research Council of Canada (NSERC, 2022), women constitute 30% of STEM faculty overall, but Black, Indigenous, and other racialised women account for less than 2% of full professors in natural sciences and engineering disciplines. Scholars such as Henry et al. (2017) and Mugo and Puplampu (2022) argue that Canadian higher education has been characterised by 'equity talks' rather than equity action, whereby rhetorical commitments to diversity coexist with systemic barriers—including inequitable hiring, racialised bias in research funding allocations, and a scarcity of meaningful mentorship opportunities for women of colour. These findings underscore that symbolic policy commitments alone are insufficient; structural interventions targeting institutional practices and accountability mechanisms are required to dismantle entrenched inequalities.

Australia presents a further case of systemic underrepresentation. The Australian Government, through the Science in Australia Gender Equity (SAGE, 2023) programme, alongside the Australian Universities Accord interim report, documents the acute exclusion of Indigenous and culturally diverse women from senior STEM roles. For example, fewer than 1% of STEM professors identify as Indigenous, and among this group, Indigenous women's representation is statistically negligible. While SAGE's Athena SWAN-inspired accreditation has spurred institutions to develop equity action plans, progress has been uneven, highly contingent on institutional will, and often limited by resource constraints. Moreton-Robinson (2021) further provides a critical lens for understanding why racially and culturally diverse and Indigenous women remain marginalised in Australian higher education. In her book titled - *Talking up to the white woman*, she argues that dominant forms of Australian feminism have historically centred the experiences of middle-class white women, reproducing colonial and racial hierarchies rather than dismantling them. In the STEM academic context, this translates into institutional diversity and gender equity practices that still largely focus on gender in isolation rather than as intersectional inequities that disproportionately affect women of colour. Or even worse, as rhetorical interventions that often celebrate "women's advancement" in general terms, while leaving untouched the specific racialised and colonial legacies that regulate indigenous women's labour and knowledge.

What these trends collectively reveal is a pattern of global convergence in the exclusion of WAC from full participation in STEM academia. While the language of diversity is increasingly visible in institutional policy, structural transformation remains limited. This implies that intersectionality, as theorised by Crenshaw (1989, 2013), has been fully integrated as a guiding principle in most higher education systems, even though it is essential for understanding and addressing the layered and intersecting structural barriers experienced by WAC. The implications of this are particularly salient in the light of the growing scrutiny surrounding Equity, Diversity and Inclusion (EDI) agendas. While EDI, in its broad sense, is framed as ensuring fairness and equitable access, the persistence of exclusion underscores how commitments of EDI initiatives, in practice, have insufficiently addressed systemic inequities in relation to representation patterns, and particularly around knowledge hierarchies (i.e., who is seen as a legitimate STEM academic).

UK Athena SWAN and Global EDI responses

As public institutions, UK universities are legally obligated to uphold equality of opportunity and are subject to oversight by external regulators. Within this context, institutional commitments to equality, diversity, and inclusion (EDI) are typically articulated across eight domains: working practices; teaching and learning; self-development; marketing, imagery, and admissions; decolonisation; equality charters (such as Athena SWAN); accessibility; and academic/professional support (Osho and Alormele, 2025; Watson et al., 2023). Increasing regulatory scrutiny, alongside the growing prominence of racial equality agendas, has driven universities to adopt self-assessment frameworks such as the Race Equality Charter (REC), which seeks to identify and dismantle barriers facing racially minoritised staff and students—including awarding gaps, career progression inequalities, and limited access to leadership roles while offering a framework for institutional accountability and reform (Advance HE, 2024b).

In the UK, one of the most influential policy mechanisms has been the Athena SWAN Charter, established to promote gender equity in STEM by encouraging institutions to interrogate and reform barriers to women's progression in academia. Athena SWAN has achieved notable successes, particularly in raising awareness of gender inequality and prompting changes in recruitment, mentoring, and work–life balance policies. However, critiques highlight the limitations of its transformative potential within current praxis. Bhopal (2021), for example, argues that Athena SWAN's emphasis on gender obscures racialised and other axes of inequities, leaving the intersectional barriers experienced by women of colour unaddressed. These include not only gendered exclusion but also systemic racial discrimination, cultural biases, and the additional issues of hyper (in)visibility within white, male-dominated academic spaces.

In response, parallel initiatives have emerged, including the Race Equality Charter, which was launched by Advance HE in 2016 to help universities systematically identify and address institutional and cultural barriers affecting BAME staff and students through self-assessment frameworks and action plans (Advance HE, 2024b). These targeted efforts have been useful in moving the agenda of closing what is described as the "BAME attainment gap", defined here as both the disparity in representation at senior academic levels and the difference in top degree

outcomes. HESA's (2025a, 2025c) releases show movement in the right direction: the share of academic staff from ethnic minority backgrounds rose to 24% in 2023/24 (up from 22% in 2022/23), with the number of Black professors increasing from 210 to 250 year-on-year—evidence of a slow but gradual narrowing in senior-level representation gaps. On student outcomes, the HESA-based series shows the ethnicity degree-awarding gap fell from 13.2 percentage points for 2018 graduates to 8.8 percentage points for 2021 graduates before recent fluctuations—demonstrating a measurable reduction attributable to sector-wide action (Universities UK, 2022, using HESA's data between 2007 and 2021).

However, while these frameworks have begun to foreground racial inequities, scholars contend that they remain insufficiently intersectional. As Bhopal (2021) and Baltaru (2023) argue, policy often treats race and gender as separate categories, failing to adequately account for their co-constitutive effects. Moreover, as Baltaru (2023) notes, racial equity efforts are frequently undermined by the structural stratification of UK higher education: racially minoritised staff are disproportionately concentrated in teaching-only, fixed-term, or lower-status institutions, while elite universities continue to reproduce patterns of whiteness and privilege. The result is an uneven institutional landscape where inclusion rhetoric outpaces material change.

Comparable initiatives have also emerged globally. In the United States, programmes such as SEA-Change and ADVANCE seek to foster institutional transformation; in Australia, SAGE-Athena adapts the Athena SWAN model to local contexts; in Canada, Dimensions Awards and the Scarborough Charter provide frameworks for racial and gender equity; and in the UK, STEMM-CHANGE supplements existing EDI efforts such as the Athena SWAN. These initiatives have introduced interventions ranging from mentorship schemes to equity audits and inclusive hiring frameworks. While they have promoted greater institutional 'accountability', and in some cases, have foregrounded tokenistic diversity performance, many remain underfunded or lack sustained institutional commitment, raising questions about their long-term transformative potential. Persistent underrepresentation, especially of women of colour, suggests that the challenge extends beyond the "pipeline issues" to entrenched institutional cultures that normalise exclusion.

Even within the revised UK's Transformed Athena Swan Charter, equity efforts in STEM continue to foreground gender as the primary axis of inequality (Advance HE, 2021). Bhopal and Henderson (2021) term this a 'gender-first' approach, whereby gender is treated as the universal marker of disadvantage, obscuring the lived realities of other marginalised groups. As Collins and Bilge (2020) argue, inequities should be approached as an intersectional dimension of social marginalisation that materialises not only as forms of gendered disadvantages but also through racialised, ableist, classed, and heteronormative structures of power. As such, focusing narrowly on gender risks centring the experiences of white, middle-class, cisgender women while marginalising women of colour, disabled women, LGBTQ+ individuals, and women from working-class backgrounds. As a consequence, race and other social identities are too often relegated to "additional characteristics" or "diversity add-ons" rather than being understood as integral dimensions of systemic inequality.

Bhopal and Henderson (2021) describe this dynamic as one of competing inequities, in which institutional discourses position gender and race as if in tension, almost as though progress along one axis detracts from another. This zero-sum framing produces fragmented equity work, with gender and race initiatives running in parallel but rarely intersecting in ways that are transformative enough. Such fragmentation not only limits impact but also renders WAC invisible or seen as divisive to institutional gender agendas. Scholars, including Collins et al. (2021), Mirza (2015), and Rollock (2019), argue that the neglect of race and intersectionality partly reflects institutional 'discomfort' with confronting systemic racism and other axes of inequities directly. As a result, many initiatives, while commendable, fall short of capturing the full spectrum of inequities experienced in STEM, especially those arising at the intersections of race, gender, class, and sexuality.

This backdrop contributes to what shapes a dimension of this study's focus, particularly around the politics of representation (that Torres, 2012 describes as being "lost in the numbers")—where increased patterns of representation are simplistically read and tokenistically celebrated as advancement of equity without necessarily dismantling hegemonic culture and practices that serve to marginalise WAC, including the contested ways in which they are perceived as "legitimate" knowledge producers in historically white, male-dominated fields.

Reviewing STEM Literature

Beyond statistical evidence at both national and international levels documenting the stark underrepresentation of racially minoritised women, particularly within the professoriate, a growing body of research has sought to explain the structural and experiential factors underpinning these inequities in STEM academia. Studies examining the intersection of race and gender highlight the multiple, overlapping barriers faced by women of colour, which often result in premature departure from academic careers. Documented challenges include experiences of social isolation (Nash and Moore, 2024), a lack of belonging in institutional and disciplinary communities (Miriti, 2020; Ong, Smith and Ko, 2018), inadequate access to mentoring and sponsorship (Nkrumah and Scott, 2022; Villanueva et al., 2019), persistent wage disparities (McGee et al., 2024), diminished expectations from colleagues and superiors (Ayre, Mills and Gill, 2013), and strained interpersonal relationships with peers, senior faculty, and line managers (Miles et al., 2022).

The consequences of these barriers extend across multiple stages of academic trajectories. For women of colour aspiring to or holding faculty roles, racialised and gendered stereotypes manifest in restricted entry into the profession, limited access to secure and permanent contracts, and reduced opportunities for career progression. Such dynamics are evidenced in discriminatory hiring practices, heightened susceptibility to "impostor syndrome" and structural barriers to advancement (Casad, Petzel and Ingall, 2019; Hart, 2016; Ong, Smith and Ko, 2018; Robinson et al., 2016). Collectively, these factors contribute to higher attrition, with women in STEM shown to be twice as likely as their male counterparts to leave the academy or transition into alternative roles (Ginther and Kahn, 2013; Kaminski and Geisler, 2012; van den Hurk, Meelissen and van Langen, 2019; Xu, 2008).

Importantly, these inequities are not limited to issues of representation but also manifest in the stratification of academic labour. Evidence demonstrates that women of colour, when present in STEM faculties, are disproportionately clustered in junior, precarious, or contingent positions with little institutional power or decision-making authority relative to their colleagues (APPG, 2021; Casad et al., 2021; Dekelaita-Mullet, Rinn and Kettler, 2021). This concentration in marginal positions signals the influence of deeper institutional power dynamics that extend beyond numerical exclusion.

The marginalisation of women of colour in STEM is further compounded by epistemic inequities. Knowledge systems and epistemologies produced by women and scholars from non-Western cultural traditions are frequently devalued, positioned as "other" in relation to dominant Eurocentric and male-oriented paradigms. This epistemic dismissal—what Ong, Smith and Ko (2018) and Wilkins-Yel et al. (2023) conceptualise as "knowledge otherness"—operates through discursive practices that (consciously or unconsciously) frame non-dominant ways of knowing as illegitimate or inferior. As a consequence, women of colour in STEM encounter a double bind: they are excluded not only through racialised and gendered barriers that challenge their legitimacy as scientists but also through the delegitimisation of the very knowledge they generate.

Problematising Counterspaces

Counter-spaces have emerged in the literature as critical sites through which deficit-oriented stereotypes grounded in racism and sexism can be contested. Within such spaces, women of colour in STEM cultivate collective support, affirm shared identities, and develop strategies to navigate and resist exclusionary academic cultures (Hughes et al., 2024; Ong, Smith and Ko, 2018). Rather than functioning merely as safe havens, counter-spaces operate as both protective and generative environments, enabling the negotiation of identity, belonging, and epistemic legitimacy.

Case and Hunter (2013) identify three defining features of counter-spaces. First, structural disruptions—whether temporary or sustained—including interventions such as culturally responsive mentoring and teaching that disrupt normative hierarchies. Second, community influences emphasising networks of affirmation and solidarity in which Black girls and women are able to see themselves as legitimate STEM practitioners. Third, strategies involving the deployment of counter-stories and stereotype management (see also Hughes et al., 2024; Villanueva et al., 2019) that enable racially minoritised women to contest the pervasive narrative of deficiency and incompetence that undermines their legitimacy in STEM.

The need for such counterspaces arises from the intersecting axes of marginalisation—racial, gendered, and epistemological—that produced what scholars have described as a 'chilly climate' for women, particularly those of colour in STEM (Britton, 2017; Wilkins-Yel et al., 2022, 2023). These conditions make persistence in STEM more difficult, as well as normalise exclusion as an outcome of individual inadequacy rather than structural inequity. Counter-spaces, then, can be understood as forms of resistance to hegemonic STEM cultures, offering alternative discourses, epistemic validation, and communal strategies for survival (Charleston et al., 2014; Ong et al., 2011; Ong, Smith and Ko, 2018). They thus serve not only as a form of mobilised agency in response to racialised and gendered experiences but also as interventions that call into question how academia defines expertise, values particular forms of knowledge, and regulates belonging.

At the same time, critical scholars caution against romanticising counterspaces or framing women of colour primarily as 'victims' who must be perpetually marginalised. Instead, Mirza (2015) warns that the continual storying of women of colour as marginal can reinforce their invisibility and continue to perpetuate a cycle of negative stereotypes, while Crenshaw (2013) observes that merely recognising marginal positions does little to dismantle the systems that produce them. Building on these insights, Ong, Smith and Ko (2018) argue that counterspaces should not be confined to tokenistic multicultural gestures but rather mobilised as sites of reconstruction and empowerment, enabling women of colour in STEM to reframe their marginality as a source of resistance and epistemic agency (see also Wilkins-Yel, 2023).

Yet the operation of counterspaces is complicated by the privileging of Western epistemologies and the centring of whiteness in feminist and academic discourses. Subedi and Daza (2008) and Mirza (2018) argue that feminist scholarship often implicitly validates white women as the primary subjects of gender struggle, thereby marginalising women of colour. Rollock (2019) illustrates how white women academics frequently privilege their male colleagues' perspective (even in citation in scholarly work) while disregarding the intellectual contributions of WAC, a denial that constitutes a form of "epistemic murder" (de Sousa Santos, 2007, 2014). Such dynamics reinforce Eurocentric hierarchies in which Black and racially minoritised women are perceived as less legitimate knowledge producers (Wright, Maylor and Watson, 2018).

The discourse of *persistence* in counterspace scholarship warrants scrutiny. Framing counterspaces primarily as mechanisms for women's persistence risks reproducing deficit discourses that locate responsibility for inequity in individual resilience or adaptability, rather than in institutional structures. Such framings can unintentionally position women of colour as requiring "fixing," implying that attrition results from their inability to withstand hostile environments rather than from systemic barriers that produce exclusion (McGee, 2021). This misdirection diverts attention from the entrenched organisational cultures, discriminatory practices, and epistemic hierarchies that structure inequity within STEM. To avoid reinscribing deficit notions, counterspaces must therefore be understood not simply as compensatory strategies, but as collective political projects aimed at dismantling structural inequalities, expanding epistemic legitimacy, and transforming the very conditions that make persistence an issue in the first place (Wilkins-Yel et al., 2023).

Leaky or permeable pipeline?

A related, yet equally problematic concept, is the pervasive use of the "leaky pipeline" metaphor historically cited to explain and understand attrition among women, particularly women of colour and women with familial responsibilities in STEM fields (Blickenstaff, 2005; Gregor et al., 2023; James-McCarthy et al., 2022; Liu, Brown, and Sabat, 2019). This metaphor, framing individual departures from STEM as 'leaks' or 'losses' from the pipeline, has been described as misleading and largely resting on at least two flawed assumptions: first, it implicitly suggests a linear and unidirectional career path from education to a sustained STEM profession, and secondly, it frames deviations as personal failures or weaknesses. This deficit analytical lens overlooks the diverse, non-linear, and dynamic ways people navigate STEM trajectories (Cannady, Greenwald, and Harris, 2014; Lykkegaard and Ulriksen, 2019), which can be influenced by intersecting factors, including personal choices, evolving interests, family demands and systemic barriers.

Even more, emerging critiques highlight the metaphor's limitations. Cannady, Greenwald and Harris (2014) argue that the pipeline fails to encapsulate nearly half of actual career paths into science or engineering, masking important subfield differences and leading to policy responses that undercut meaningful diversification of the STEM workforce. Lykkegaard and Ulriksen (2019) provide longitudinal evidence showing students move both in and out of STEM disciplines over time, presenting a more fluid understanding that the "leaky" metaphor misrepresents. Scholars such as Gregor et al. (2023) also extend this critique, arguing for a move beyond the 'pipeline' metaphor, discussing that it limits systemic understanding of diversity in STEM and tends to homogenise women's experiences. This often erases the intersectional ways that marginality and underrepresentation are perpetuated across race, class, and institutional context. Figueiredo (2023) similarly argues that the leaky pipeline metaphor is inadequate for capturing the intersecting inequities experienced by women and racially minoritised faculties (see also Liu, Brown and Sabat, 2019). She contends that the framework privileges 'generic fixes' and a narrative of equality—focused narrowly on the numbers of women retained—rather than equity, which would foreground the structural and cultural barriers disproportionately impacting racially minoritised women and racially minoritised faculties

This has led to consideration of a "permeable pipeline" or even "pathway" metaphor, suggesting movement into, out of, and within STEM is multidirectional and responsive to varied issues at individual, structural, and institutional levels. For instance, Skrentny and Lewis (2022) emphasise continuous upskilling and blurred boundaries between education and work for STEM professionals, challenging notions of fixed start and end points. While such a fluid approach might be problematic to implement given the structured nature of academic programmes and contract offers, it would enable a seamless transition from study to work in a way that recognises the iterative, nonlinear, and cyclical nature of careers. This reframing moves beyond conceptualising departures from STEM as irreversible "losses" and instead highlights how individuals may re-enter STEM at different stages, often bringing valuable interdisciplinary, professional, or lived experiences with them (Cannady, Greenwald and Harris, 2014).

Reframing the narrative from a leaky to a permeable pipeline compels reframing the problem: rather than persisting with a deficit-based view of women's STEM trajectories, the emphasis shifts toward enhancing institutional responsiveness, embracing non-linear trajectories, and enabling intersectionally informed structures and cultures. This is crucial given that, apart from individuals' personal circumstances, institutional cultures, practices, and policies often exacerbate these challenges, further contributing to attrition and retention problems. By overlooking the intersectional nature of these issues, these dominant narratives reinforce rather than dismantle the inequitable structures that hinder the full participation of women of colour in STEM. To address these systemic barriers effectively, there needs to be a shift away from framing the problem in terms of individual deficits—whether in 'resilience' or career 'persistence'—and toward addressing the institutional and structural changes needed to support diversity and inclusion in STEM fields.

Meritocracy as Hegemony

Meritocracy has long been widely problematised both within and beyond academia, often described as a "rationalised myth" (Castilla and Bernard, 2010; Downey et al., 2024; Slaton, 2015; Taylor, 2022)—a legitimising discursive practice that sustains colour-blind and gender-neutral narratives, particularly across STEM disciplines. Its enduring appeal is not incidental, nor merely the product of misguided optimism, as Winterton (2022) insightfully argues. Rather, meritocracy persists through its normative pull—one that holds power to reproduce and/or undermine the legitimacy of inequality. This creates the possibility to imagine career success as synonymous with unrelenting performance of productivity, intellectual superiority, strategic detachment, alongside a cultivated resistance to vulnerability (see also Cech and Blair-Loy, 2010).

Such ideals serve to displace critical reflexivity and epistemic humility—the capacity to acknowledge the limits of one's knowledge and authority—while fostering a pervasive culture of individualism and competitiveness. Within such cultures, scholars, particularly those from marginalised groups, often internalise fears of being perceived as intellectually deficient or professionally inadequate. This is where 'anticipatory obedience', defined by Hall (2020) as the pre-emptive alignment of one's behaviour with perceived institutional expectations to avoid sanction or exclusion, becomes a central mechanism. As Ball (2025) puts it, scientific institutions have a long history of cultivating such anticipatory obedience, reinforcing conformity to hegemonic norms while obscuring the structural dynamics of inequality.

Research on the underrepresentation of women academics—particularly women of colour—in STEM faculties demonstrates how institutional cultures and practices have historically privileged norms of success that valorise individualistic, competitive, and solitary pursuits. These norms intersect with the long-standing presumption that STEM is the preserve of white men who are thought to be uniquely endowed with innate intellectual brilliance, a presumption that has been used to stereotype women as comparatively lacking in such talent (Seron et al., 2018; Bhopal and Henderson, 2021).

Despite increasing calls for inclusion and diversity, the recognition of WAC as equal contributors remains fraught with barriers. Notably, some relatively recent publications (see, for e.g., Abbot et al., 2023; Blumner, 2024; Hayes, 2013; Krylov, 2021) have resisted diversification efforts, portraying them as political agendas and as social justice dogmas that compromise scientific "meritocracy." These works often reproduce a colour-blind narrative, insisting that science should be evaluated solely on merit while disregarding the structural inequalities that shape representational patterns and participation (Gillborn, 2015).

Such arguments reflect what Blair-Loy and Cech (2022) describe as a fundamental misconception of merit in academic science and engineering, arguing that such positioning is analytically flawed, empirically unfounded, and largely resting on the notion that excellence and equity are mutually exclusive and antithetical. Instead, and as studies have increasingly demonstrated, diverse teaching and research spaces are not only more innovative but also more rigorous, producing and facilitating knowledge that is both socially relevant and epistemologically expansive (Castilla and Bernard, 2010; Vincent-Ruz, 2025).

The hegemonic power of meritocracy is further entrenched in the masculine cultures of STEM, particularly in engineering, where positivist and meritocratic values dominate (McGee et al., 2021; Seron et al., 2018). Seron and colleagues' findings show how WAC frequently distance themselves from feminist identities, fearing such alignments might delegitimise their achievements against ostensibly objective standards of merit and excellence established within STEM cultures. This is in addition to scarcely recognising inequities while also being critical of their own experiences. This is what Khan and Jerolmack (2013, p. 10) conceptualise as "saying meritocracy and doing privilege." Such embodied, hegemonic practices promote the idea that STEM fields and academia more broadly are neutral, merit-based spaces, creating the illusion that success in these fields stems solely from objective measures and individual efforts, rather than being shaped by broader social and structural forces (Khan and Jerolmack, 2013; Myers, Gallaher and McCarragher, 2019; Pawley, 2019a, 2019b).

In response to these systemic challenges, it would appear that some WAC in STEM faculties are responding to marginal experiences by way of mobilising agency through an engagement with discourses of exceptionalism, positioning themselves as equally capable and competitive academics as their white and male colleagues. By aligning their professional identities and practices with meritocratic ideals, they emphasise individual achievement and hard work as primary determinants of success. This alignment often distances them from critical engagement with discussions of structural inequity, as they embody and reproduce the belief that disciplines like science and engineering are objective and depoliticised domains, unaffected by issues of race and/or gender (Carlone, 2023; Carlone and Johnson, 2007; Seron et al., 2018). This strategy, while perhaps foregrounding agency, paradoxically reinforces the very stratified systems that contribute to the marginalisation of gendered and racially minoritised faculty, implicating them in participating in and upholding structures that exacerbate these inequities.

Crucially, as Carlone and Johnson (2007) highlight, racially minoritised women in STEM, more often than not, possess the requisite qualification and expertise to excel as scientists but are frequently denied recognition by their colleagues as legitimate members of the 'scientific community' (see also Carlone, 2023; Yeldell et al., 2024). This context matters - in that the lack of recognition reveals a deeper issue rooted at the intersections of race, gender, and class, which predict not only which women are likely to enter STEM fields but also who is more likely to 'persist' (Myers, Gallaher, and McCarragher, 2019). These dynamics raise fundamental questions about how performance in STEM is defined, evaluated, and who is granted the symbolic status of the 'ideal' STEM academic. As such, meritocracy as hegemony operates to obscure and normalise social and institutional biases that serve to undermine the contributions of WAC and relegate them to a marginal status despite their demonstrable expertise. This seems to suggest that the underrepresentation of WAC in STEM is more attributable to both structural issues and the biopolitics of hegemonic practices that privilege certain masculinised subjectivities (Connell and Messerschmidt, 2005) rather than a case of merit.

The 'Invisible' Tax of Representation

Studies of Ong, Smith and Ko (2018) and Casad et al. (2021) echo similarities in contributory factors to the disproportionate turnover rate of women academics in STEM. Their studies reveal that there are often high expectations placed on women academics generally in STEM to perform roles that extend well beyond their formal responsibilities, such as functioning as 'academic mothers' (mentors and emotional caretakers for students – labour that often goes unnoticed and undervalued in performance evaluations). These expectations are compounded by disproportionate teaching loads, which intensify a sense of moral obligation to mentor and support large numbers of students.

Further, El-Alayli et al.'s (2018) study demonstrates that women academics and especially women of colour are often perceived as more approachable and constructed as 'benign multicultural others'. As a consequence, they are disproportionately asked to take on extra work, special favours, and emotional labour while simultaneously being expected to exhibit greater warmth and friendliness than their male colleagues. As such, students frequently assume that their requests will be met by women academics more often than by men.

In addition to heavier teaching responsibilities and expectations of perpetual helpfulness, women of colour in STEM are also disproportionately tasked with service commitments. Institutions often call upon them to serve on inclusion and diversity committees as the token "diverse" member (Casad et al., 2021), producing what Hall (1996, p. 5) refers to as a "multicultural drift": the appearance of diversity without the redistribution of power or equity. In this way, representation becomes instrumentalised as symbolic capital for institutions, while the burden of sustaining such appearances falls on a small number of women of colour.

This suggests that the issue of underrepresentation of WAC in STEM, as I have previously observed, is not simply a matter of numerical absences; rather, it extends to more complex issues of diversity, visibility, and the hierarchies of valued knowledge. As Said (1978, pp. 216-217) observes, reparative efforts against representational dynamics involve:

> "…the Orients' critique of history lies not only in coming to terms with absences or what has been omitted…but also in ways [marginalised subjects] are rendered visible, exoticised and deemed (un)intelligible—a condition that demands the poetry of decolonisation and resistance…"

Within this orientalist frame, representation itself becomes a double bind: a simultaneous acknowledgement of presence and a marker of difference. It is precisely this ambivalent terrain that demands, in Said's words, "the poetry of decolonisation and resistance"—an insistence on reclaiming 'voice' and epistemic authority from within structures that both erase and overdetermine (see also Bhopal, 2018; hooks, 2000, 2015; Mirza, 2018; Spivak, 1988).

Said's critique resonates sharply within contemporary STEM contexts. Four decades on, women of colour continue to describe their experiences in British academia as both emotionally and professionally burdensome, shaped by the absence of peers, the persistent privileging of Western epistemologies over other knowledge traditions and the paradox of (in)visibility (e.g., McCoy, Winkle-Wagner and Luedke, 2020; McGee and Bentley, 2017; McGee et al., 2021; Ong, Smith and Ko, 2018). This paradox captures the contradictory dynamics of hyper-visibility and invisibility that women of colour encounter within institutional spaces. On one hand, they are rendered hyper-visible as "diverse bodies," often recruited into committees, outreach initiatives, or public-facing roles to signal institutional inclusivity. Their presence is strategically showcased as evidence of progress, even when their voices are marginalised in substantive decision-making. On the other hand, they remain structurally invisible within epistemic hierarchies: their scholarship is undervalued, their authority questioned, and their contributions frequently overlooked in comparison to white and male colleagues. In this way, visibility becomes less of a resource for empowerment and more of a marker of 'difference' in a way that denies minoritised faculties substantive inclusion.

Having explored the 'invisible' tax of representation as part of the broader issues of the underrepresentation of women of colour in STEM and the ways in which dominant epistemologies sustain their marginalisation, the following subsections turn to the intersectional marginality. Here, I explore how the intersections of race, gender, and class serve to influence the career trajectories of women of colour in STEM, constraining their professional possibilities while also generating strategies of resistance through which they counter marginalising discourses and exercise alternative technologies of power.

Intersectional marginality

The failure to adequately recognise the intersectional nature of inequities in STEM contributes to the reproduction of gendered and racialised barriers for WAC, perpetuating a vicious cycle in which they must navigate professional spaces with limited institutional support, often at significant cost to their personal well-being and professional development (Casad et al., 2021; McGee et al., 2021).

Scholars have long argued that the underrepresentation of WAC in STEM—and in academia more broadly—cannot be understood through singular categories of inequality but must be located within the intersecting axes of gender, race/ethnicity, class, and other social identity categories (see for e.g., Bhopal and Henderson, 2021; Collins et al., 2021; Crenshaw, 2013, 2019; Nash and Moore, 2024; Ong Smith and Ko, 2018; Seron, 2016; Stockfelt, 2018). An intersectional lens highlights how minoritised women in STEM experience a compounded form of marginalisation often described as the "double bind," where sexism and racism are not merely additive but mutually constitutive, producing intersecting barriers that are qualitatively distinct from those faced by white women or men of colour (Ong Smith and Ko, 2018). Intersectionality is therefore a useful onto-epistemological lens for examining how overlapping social identities structure experiences of inequality as well as a means of highlighting the complexity of lived realities. As Crenshaw (1991, 2013) and Collins et al. (2021) stress, intersectional marginality resists reductionism: it demonstrates that multiple dimensions of identity converge to shape how power, privilege, and exclusion are experienced and negotiated in specific contexts.

In this section, I focus primarily on the intersections of race, gender and class. While I acknowledge that this represents a partial application of intersectionality—excluding, for instance, dimensions such as sexuality, migration status, disability and others—the decision to narrow the frame is deliberate. Concentrating on these three axes allows for deconstructing the frequent conflation of race and gender within institutional equity works (Bhopal and Henderson, 2021) while resisting the erasure of the complex identities embodied by WAC. Holding race, gender and class in simultaneous view allows this review, and subsequent analysis to foreground the particular ways in which WAC experience structural inequality, while remaining attentive to the possibility of broader intersectional analyses that move beyond these categories (Collins et al., 2018).

This focus is situated against the broader backdrop in which gender equity initiatives are often privileged over those addressing race or other social categories. Attempts to raise the simultaneous significance of race and gender within academic underrepresentation are too often dismissed as provocative, political, or reductionist, charged with essentialist discourses and oversimplifying meritocratic ideals infused with colour-blind narratives (McCoy, Wrinkle-Wagner and Luedke, 2020; Seron et al., 2018; Slaton, 2015, 2020). Such deflections reinforce the marginalisation of WAC by treating race as a secondary or an 'uncomfortable' concern that seeks to 'rock the boat' as Ahmed (2018) puts it – a move that is considered disruptive to institutional comfort that relies on the appearance of harmony, progress, and inclusivity while leaving the deeper architectures of inequality intact.

The culture of STEM faculties compounds this silencing by promoting the false ideal that scientific spaces are neutral, pure, and insulated from 'social' concerns such as justice, inclusion, and diversity (Charleston et al., 2014; McGee and Bentley, 2017). Intersectionality, however, exposes the limits of this ideal and its seeming neutrality as illusory. It provides a framework for understanding how the subjugation of WAC stems not from isolated categories of disadvantage but from their simultaneous construction as racialised and gendered minorities. This pushes the analytical boundaries of intersectionality beyond narrow inclusion logics based on sameness and difference (Crenshaw, 2019) to interrogate more deeply how the ideal academic in STEM is imagined, and how those marked as "other" are rendered visible yet devalued.

As a consequence, STEM faculties remain marked as exclusionary spaces. For racially minoritised women in particular, their presence and/or ambition are often symbolically celebrated—as a sign of institutional progress of diversity and inclusion —yet their day-to-day realities are shaped by exclusion (Nash and Moore, 2024). As Rios and Stewart (2015) argue, they occupy the contradictory position of being "outsiders-within": their qualifications and intellectual labour locate them on the inside, but discriminatory practices and microaggressions render them out of place (see also Collins' 1986 influential sociological reading of the outsider-within). Ong, Smith and Ko (2018) illustrate these dynamics vividly, documenting how WAC in STEM frequently experience impersonal or dismissive interactions with colleagues (often men, though not exclusively so) as well as instances of outright avoidance in professional spaces. Eaton et al. (2019) further illuminate how women faculty of colour are implicitly constructed as "lesser others," assumed to lack the competence of their white counterparts. Their analysis show that STEM faculties operates within an unspoken epistemological hierarchy in which White heterosexual middle-classed men, more than any other group, are consistently associated with intellectual authority, while white women are often positioned within the realm of care and pedagogy and WAC doubly marked: positioned simultaneously as less intelligent "tokens" whose presence must be justified while also being saddled with affective labour and tokenistic diversity work (ElMorally, Wong and Copsey-Blake, 2022; Nash and Moore, 2024).

These patterns of stereotyping and their consequences underscore how race, gender, and class continue to serve as central axes along which academic legitimacy is defined. In practice, they mark who is imagined as competent, intellectually rigorous, and authoritative, and who is otherwise associated with nurturing, support, or lesser capability (Ong, Smith and Ko, 2018; Wong and Copsey-Blake, 2023). Despite undeniable cultural shifts in expanding women's opportunities in academia, stereotypes about gendered and racialised attributes, responsibilities, and capacities remain remarkably persistent (Eaton et al., 2019). The endurance of these stereotypes has profound material consequences, shaping the process of recruitment, retention and career progression and contributing broadly to the persistence of inequitable patterns of representation in STEM, particularly for WAC, as well as sustaining exclusionary professional practices (van den Hurk et al., 2019).

What is striking in my reading of this literature is the way the intersectional marginality of WAC in STEM is not confined to this disciplinary space, but resonates across the broader landscape of British academia. Rollock (2019), for example, found that Black women in particular navigate a "messy" pathway and an unclear trajectory towards achieving a professorial position, often facing systemic racism, bullying, and the requirement to provide excessive evidence of achievement to secure promotion. Further studies have pointed to the intersecting force of white supremacist brutalisation and sexism in UK universities (Wright, Maylor and Watson, 2018), and how gendered and racialised exclusion continue to structure academic life (Mirza, 2018). Even more, Osho and Alormele (2025) reveal how WAC are disproportionately employed within post-1992 institutions where teaching and scholarship are prioritised over research, limiting their ability to access the kinds of research opportunities and networks that are crucial for progression to senior academic ranks such as professorship.

In part, van den Brink and Benschop (2014) attribute such disparity to the gendered and racialised practices of gatekeepers, particularly in recruitment processes. Their work shows that hiring committees often undervalue women of colour, perceiving them as less competent even when they possess equivalent qualifications and experience as their white male and female colleagues. As Eaton et al. (2019) argue, such discriminatory practices frequently draw on entrenched stereotypes that presume racially minoritised women faculty as burdened by childcare or family responsibilities, and therefore are likely to be less reliable, less committed, or insufficiently prepared for the rigours of academic life. I return to this issue more fully in my later discussions on the sub-section of the chronopolitics of gendered temporalities, where such assumptions are shown to operate both as interpersonal anticipatory biases and as structural practices that regulate who is imagined as 'fit' for academic life/time. What is clear, however, is that these stereotypes do more than misrecognise the professional capacities of WAC: they actively reproduce the structural devaluation of their labour, exacerbate their continued marginalisation, and undermine institutional commitments to equity and inclusion within STEM faculties.

The Paradox of (In)visibility

Across the reviewed literature, a similar thread is discernible: exclusion within STEM faculties and across academia broadly is no longer enacted solely through overt exclusion or outright denial of access, but increasingly through strategies of intense surveillance, particularly directed at racially minoritised faculties (see Bhopal and Henderson, 2021; Mirza, 2018; Nash and Moore, 2024; Ong, Smith and Ko, 2018). This heightened scrutiny renders these women hyper-visible within academic spaces while simultaneously undermining their intellectual authority and professional agency. In Foucauldian terms, this reflects a mode of governmentality—where power operates less through prohibition and more through the regulation and monitoring of bodies—ensuring that those who do not 'fit' the normative template of academic belonging remain legible, disciplined, and contained within the symbolic order of white patriarchal STEM culture (Foucault, 1977).

The paradox, then, is that visibility becomes a vehicle for invisibility: while women of colour are marked by their difference, their expertise, status, and lived experience are persistently questioned or dismissed through everyday practices of marginalisation. Said (1993a, p. 109) describes this as the "microphysics of imperialism," which Robbins et al. (1994) later term the "politics of containment," wherein those bodies perceived as unruly or disruptive to the normative order are 'surveilled' and disciplined into the hegemonic framework of whiteness. Such containment is not neutral; it relies on practices of distinction and exclusion that deny the legitimacy of plural identities while upholding a veneer of institutional diversity (Hall, 2020).

Yet, as Said (1994, p. 3) argues, the attempt to neutralise intellectuals is always incomplete, for the act of critique itself resists absorption. Through what he calls "contrapuntal reading," he exposes the tensions, contradictions, and resistance embedded within such dominant narratives (see also Kayaalp, 2017). In STEM faculties and across the British academy, this means recognising how the colonial legacies of whiteness and masculinity are sustained through its binary other—gendered and racialised subjectivities—which are simultaneously marginalised and yet indispensable to the reproduction of the academic order (Bhopal, 2018; Mirza, 2015). Although Said (1993a, p. 60) observes that the 'Western other' has deliberately structured the imperial narrative to "mysteriously exempt from analysis, the causes, benefits and practices of dominance where the 'Orientalised other' is discussed."

For women of colour in STEM, the consequences of not being fully 'absorbed' into the culture of the academy are profound. They are subjected to what Foucault (1977) would describe as a disciplinary gaze: a system of surveillance that does not simply monitor but also regulates and produces particular forms of subjectivity. Studies demonstrate that while the presence of women of colour is celebrated under the rhetoric of diversity and inclusion, they are disproportionately burdened with heightened accountability, excessive managerial oversight, and inadequate structural support (see for e.g., Casad et al., 2021; Nash and Moore, 2024).

National-level data confirm the depth of this disparity, revealing that women academics of colour are more likely than any other group to suffer intense scrutiny, alongside other discriminatory experiences. For example, the 2019 University and College Union (UCU) report by Nicola Rollock shows that ethnic minority women—compared to their white colleagues— are substantially more likely to experience harassment, bullying, and discrimination from both colleagues and senior management staff (see also Rollock, 2023). Similarly, the Unite UCU workplace satisfaction and wellbeing report (2024) found that 62% of members of the Unite UCU from minoritised ethnic backgrounds across UK higher education do not feel respected, supported, and valued by senior management staff and instead have reportedly been increasingly 'search-lighted' in ways that seemingly diminish their agency.

The psychological and emotional toll of such surveillance is well documented. O'Brien et al. (2016) show how hyper-surveillance and interpersonal discrimination undermine health, performance, and retention for women faculty of colour in STEM. Additionally, academics from minoritised ethnic backgrounds representing 45% of UCU members, including early-career academics, reported heightened levels of work-related stress, insomnia, anxiety, panic attacks, and self-doubt, which significantly contribute to the disproportionate attrition of women of colour before reaching senior academic ranks (Unite UCU, 2024). This, I suggest, is a manifestation of the regulatory technologies of governmentality, and a precursor to the dynamics of the 'chilly' academic culture of STEM, to which the next subsection now turns.

Chilly Academic Culture

One of the most enduring explanations for the persistent disparities in women's representation across academia is the notion of the 'chilly climate', a term first coined by Hall and Sandler (1982) and widely engaged in STEM literature to describe patterns of inequitable treatment that, through their cumulative effect, undermine women's confidence, self-esteem, and academic achievement. Subsequent research has documented how this "climate" manifests in STEM faculties, pointing to persistent patterns such as harassment from students and colleagues, inhospitable faculty and classroom cultures, biased hiring and promotion processes, inequitable allocation of teaching and service responsibilities, and institutional policies that inadequately support women's disproportionate role in managing work–family responsibilities (Britton, 2017; Miner et al., 2019).

Research consistently shows that the academic climate is often experienced as chilly, unwelcoming, and detrimental to the career progression of women in STEM and academia more broadly, with particularly acute effects for women faculty of colour (Casad et al., 2021; Cech, Blair-Loy and Rogers, 2018; Collins and Steffen-Fluhr, 2019; Miner et al., 2019; Riffle et al., 2013). Despite this robust body of evidence, the very existence of a chilly climate remains contested. As Ceci et al. (2014) controversially argue, there remains debate over whether such inequities reflect systemic bias or whether the very notion of a 'chilly climate' is overstated. This controversy is further compounded by discursive practices of meritocracy that foreground the reluctance of some women faculty to name race and gender as significant to their own careers or that they have experienced a chilly climate (Britton, 2017; Seron et al., 2018),

reflecting what Ahmed (2012) terms the 'politics of denial,' where acknowledgement of inequity itself is framed as disruptive.

Yet, the weight of empirical research points in the opposite direction. Women faculty in STEM, especially women of colour, continue to encounter subtle but pervasive forms of ostracism, incivility, and marginalisation that are exacerbated by the chilly, masculinised cultural norms within STEM disciplines (Carlone, 2023; Miriti, 2020). These norms often prescribe a narrow performance of professionalism that does not permit women—particularly Black women and other racially minoritised faculty—to be "unapologetically themselves" (Casad, Petzel and Ingall, 2019). As Robinson et al. (2016) note, women in STEM are often denied the freedom to display levity or "goofiness," as such behaviours are interpreted as incompatible with credibility, especially for those from minoritised racial or ethnic backgrounds.

This suggests that the chilly academic climate cannot be reduced to overt acts of discrimination or harassment alone (Casad, Petzel and Ingall, 2019). Rather, it is sustained through the performance of a masculinised cultural matrix and the circulation of subtle but exclusionary cues within STEM's physical and symbolic spaces (Cech, Blair-Loy and Rogers, 2018; Meyer et al., 2015; Miriti, 2020). Such cues include the masculine-coded décor of laboratories and departmental offices as well as the predominance of white male scholars in reading lists and citation practices, which render alternative epistemologies and marginalised knowledge traditions invisible. Holman et al. (2018) document a striking lack of gender and racial diversity in citation patterns across STEM fields, while McGee and Bentley (2017) argue that the systematic omission of women's and racially minoritised scholars' work constitutes a form of epistemic exclusion that compounds their underrepresentation and intellectual visibility. Other subtle practices are also implicated. For example, Britton (2017) highlights that white men are more likely to cite themselves than women and/or racially minoritised faculties, and women of colour are less likely to be invited to deliver keynote addresses at highly recognised scientific conferences or to receive prominent awards. These seemingly routine practices sustain hierarchies of recognition and authority, naturalising the dominance of certain bodies and 'voices' in STEM.

A particularly stark illustration of how privilege underwrites recognition comes from *The UK Guardian*'s (7 December 2024) exploration into the sociological patterns underpinning elite scientific awards, most notably, the Nobel Prize (Bell, 2024). Contrary to the common belief that Nobel Prizes are awarded solely on the basis of exceptional intellectual brilliance and merit, the investigation reveals that socioeconomic privilege and gendered subjectivity—most notably being a man and from a wealthy family—are powerful predictors of success at the highest levels. Over half of Nobel laureates come from families in the top 5% of the income distribution, and the majority have/had fathers in high-status professions such as medicine, engineering, or business ownership. This underscores how capital—both cultural and material—shapes entry into and recognition within elite scientific spaces, reinforcing the myth of meritocracy while systematically privileging those who embody dominant social identities.

These epistemic and cultural climates extend beyond recognition into the distribution of resources, reproducing disparities in access to social and institutional capital. Women of colour, and particularly WAC in STEM, often lack access to influential networks that provide mentorship, collaborations, and material resources crucial for career advancement (Collins and Steffen-Fluhr, 2019; Hart, 2016; Jackson et al., 2013). These inequities are starkly reflected in research funding outcomes. The UKRI's (2025) *Equalities Monitoring Report* reveals that racially minoritised women (excluding white minorities) constituted only 5% of principal investigator awardees—up only marginally from 2% in the period between 2014 and 2015. For co-investigators, the figure was 6%, while among fellows it reached 11%. Although these numbers show slight progress, they remain substantially lower than those for white women, underlining the enduring inequities embedded in UKRI-funded research (see also UKRI, 2023).

Over the past decade (2014 – 2014), the representation of racially minoritised women as principal investigators has grown only modestly, from 2% to 5%, reflecting structural barriers that continue to constrain opportunities. Moreover, grant success rates appear strongly mediated by social networks: applications co-investigated with white academics have a success rate of 45%, compared to just 17% for those led by racially minoritised researchers (UKRI, 2020). This disparity highlights the importance of networked privilege—an area where WAC are structurally disadvantaged—and raises the unresolved question of whether such outcomes reflect deficiencies in applications or, more importantly, as a consequence of the chilly academic climate.

Parallel inequities are also evident in job security. Data from Advance HE (2024a) on Staff Statistical Report show that ethnic minority academics are more likely than their white colleagues to be on fixed-term or casualised contracts, with 29% of UK-based ethnic minority academics on fixed-term contracts compared to 23.3% of white staff. Among non-UK nationals, the gap widens further, with 46.6% for ethnic minorities compared to 31.7% for white staff (cf. HESA's 2024c). Although disaggregated STEM-specific data remain limited, evidence from the Royal Society (2021, 2024) suggests that the figures are starker for WAC in STEM, with many concentrated in fixed-term positions and fewer progressing to senior ranks. Such precarity affects material security, professional identity and self-esteem (Leathwood and Read, 2020; Ylijoki, 2010).

This evidence substantiates that the chilly academic climate is not reducible to individual prejudice but is systemic, manifesting through representational absences, masculinised cultural practices, epistemic exclusions, and inequitable distributions of capital and security (Cech, Blair-Loy, and Rogers, 2018; Miner et al., 2018; Miriti, 2020). As Miner et al. (2019) sought to inquire, "Why is it always this cold?"—a question that foregrounds the persistent barriers to well-being, belonging, and advancement for WAC in STEM.

The Chronopolitics of Gendered Temporalities

The persistent tension between academic productivity and life-course responsibilities has long been a central concern in research on gender and higher education. Increasingly, scholars have turned to the concept of chronopolitics to unpack the power-laden temporal structures that govern academic life and how they unequally shape the career trajectories of women—particularly those navigating STEM disciplines while also managing the overlapping demands of partnership, motherhood and care work alongside institutional expectations (Adam, 1995, 2003, 2013; Craig et al., 2022; Felt, 2017, 2025; Moreau, 2020).

Chronopolitics of gender refers to how socio-temporal regulations organise women's lives, bringing into conflict academic timelines—such as expectations for securing permanent contracts, grant funding cycles, and publication metrics—with the biological and social temporalities of reproduction, caregiving, and family life. As Adam (1995, p. 12) incisively argues, "time is not neutral or universal—it is socially produced, embodied, and political," and it is precisely this political nature of time and its normalisation within academia that imposes a hegemonic order extending beyond schedules and deadlines to shape which bodies and which forms of knowledge become legitimised. This dominant model often projects the masculinised ideals of the "unencumbered" scholar (see also Felt, 2025). As such, Felt argues that we need a 'chronopolitical' analysis, a politics of time, to understand the changing temporal regimes of higher education, that is, how academic perception of time can be understood in relation to broader social dynamics of power.

Notably, Studies that have considered the intersection of gender and 'race' are particularly limited in the work–family research domain in STEM academia. A few of such studies have done so by homogenising women of colour into an undifferentiated 'non-white' category, making the specificity of gendered and racialised dynamics difficult to discern. For instance, Beddoes and Pawley's (2014) study of 15 women of colour, specifically those engaged in a minimum of 30 hours of work per week and across a diverse range of STEM fields, revealed how these women engaged the "discourses of choice" (p. 1573). Specifically, their findings showed that women of colour, grouped as "non-white," frequently experienced restricted choices around family formation and reported higher levels of work–family conflict and job-related stress than their white female colleagues.

While such findings support claims regarding the 'double jeopardy' effect (Frevert, Culberston and Huffman, 2015) experienced by women of colour in STEM, they do little to disaggregate effects across racial and ethnic groups. Indeed, complex intersectional power relations shape the experiences of women faculty of colour, as scholars (such as Collins et al., 2021; Crenshaw, 2013, 2019), have argued and therefore 'answers' possibly accounting for these disparities must attend to the network of complex power relations at the individual, familial, organisational levels, including broader socio-political and economic dynamics that shape how academic times are gendered, understood and experienced.

The Overlap between the 'Body Clock' and the Career Clock

In the context of STEM academia, this temporal misalignment manifests starkly. The normative academic timeline privileges masculine-coded subjectivities: characterised by unbroken career trajectory, long work hours, constant visibility, and geographic mobility—features that systematically disadvantage women, especially those from racially minoritised backgrounds, who are more likely to shoulder disproportionate caregiving responsibilities (Kachchaf et al., 2015; Thébaud et al., 2024). As Adam (2005, p. 125) observes, "modern institutions operate within clock time and linear progression, demanding compliance with externally imposed schedules that are incompatible with the trajectories of embodied life." This divergence between institutional time and lived time constitutes a form of temporal injustice, where women are not only structurally disadvantaged but also held individually responsible for adapting to a system that was never designed for them (Bennett and Burke, 2017).

The critical lens of temporal regimes (e.g., Adam, 2013) opens space for conversations around how academic institutions continue to valorise disembodied, 'always-available' forms of labour while devaluing care work and embodied difference (see also Moreau, 2020). Crucially, the tension between the common biological clock and the career clock is not a personal misalignment or a matter of poor time management—it is structurally and culturally produced. For racially minoritised women in STEM, these chronopolitical constraints are further exacerbated by the intersectional pressures of racialised expectations, familial obligations, and institutional exclusion, which together render the negotiation of time not just difficult but often professionally and personally detrimental (Crenshaw, 2013, 2019; Mirza, 2015). In effect, this standard renders partnership and even motherhood as a disruption to professional legitimacy.

This tension can be understood through Read's (2023, p. 2) discussion of *"the university as a Foucauldian heterotopia"*—spaces that purport to be progressive and inclusive yet in practice mirror and reproduce dominant social hierarchies. While the university appears to contest external norms, it functions as a regulatory space that disciplines bodies and behaviours through normative temporalities and idealised career trajectories. In this context, motherhood is rendered a spatial and temporal departure, something that sits uneasily within the institutional imaginary. Similarly, Morris and Rowell (2023) challenge the romanticised notion of the university as a 'prestigious dream space'—a sanctuary of pedigree and leisurely intellectual pursuit—exposing instead the demanding and often precarious working conditions that define contemporary academic life. Ylijoki (2015) echoes this critique in her analysis of the 'projectification' of research, describing how the myth of the solitary scholar—typically male and wholly devoted to his intellectual pursuit—has become "academic folklore," obscuring the time-pressured, fragmented, and hyper-competitive realities of today's academic spaces (see also Bennett and Burke, 2017).

These heterotopic myths are not only symbolic in nature; they also uphold a system that punishes those who cannot or will not detach their professional lives from their familial and relational commitments. This mirrors Jean, Pane, and Thompson's (2015) argument in their chapter on the family-related barriers women experience in STEM, citing unspoken but pervasive expectations of unreserved work devotion. These expectations are embedded within high-stakes, fast-paced academic cultures that structurally disadvantage those who carry caregiving responsibilities. As Kachchaf et al. (2015) and Dunn et al. (2022) show, racially minoritised women in STEM are particularly vulnerable to this temporal disjuncture, often navigating multiple overlapping pressures: the urgency of professional advancement, the cultural and personal imperatives of starting or maintaining a family, and the gendered politics of relational care.

For many women in STEM and academia, there is often no space to defer either motherhood or career. They are working against the demands of multiple temporal 'clocks' (regimes)—the biological, the institutional, and the relational—each operating at its own tempo, and each laden with its own expectations and penalties. These metaphorical clocks do not tick independently but intersect in ways that disproportionately constrain women's life choices, demanding constant temporal negotiation. The biological clock, often used as a biomedical metaphor, marks the socially and medically constructed period during which a woman is considered most fertile and physically capable of bearing children—typically between the ages of 15 and 44, with peak birth rates in the UK recorded between ages 23 and 31 (Office for National Statistics, 2021). Crucially, this window overlaps almost precisely with the timeline required to establish an academic career.

In higher education, this trajectory is highly structured: a four- to five-year undergraduate/master's degree, followed by a doctoral programme of similar duration, and then successive postdoctoral positions, which are highly competitive. For those following a direct academic path, the transition to permanent faculty roles often occurs in their mid-to-late 30s—already beyond the period of peak reproductive timing in the UK (Berrington, Stone and Beaujouan, 2015). For women who deviate from this path—whether through career breaks, care responsibilities, or institutional precarity—the milestone of permanency may not be achieved until their 40s or later.

The Partnership Penalty

This overlap between the biological and career clock is further exacerbated in dual-career households, where the male partner's trajectory often takes social and professional precedence. Women, in turn, become subject to multiple temporal pressures, navigating their own intersecting timelines of reproduction and academic progression as well as contending with the relational tempo dictated by their partner's career path. This may be understood as a form of what Felt (2025) describes as gendered chronopolitics: a misrecognition of time itself as gender-neutral, when in reality the temporal formation of the academy serves to privilege certain trajectories (typically white, male, and uninterrupted career paths). The labour of caregiving, relational negotiation, and embodied vulnerability—frequently feminised and racialised—are rendered illegible within the chrono-normativity of academic success (Felt, 2017), which equates productivity with linear, unbroken acceleration.

The partnership and motherhood penalty, then, is far more complex than a matter of inadequate leave policies or limited flexibility; it is, at its core, structural, epistemic, and woven into the fabric of academic institutional culture that continues to place a premium on disembodied, masculinised, and uninterrupted models of productivity. These models are not neutral but reflect and reproduce historical power relations that devalue embodied difference and render care responsibilities marginal, if not entirely invisible, within institutional discourses of merit and excellence.

As O'Connell and McKinnon (2021) compellingly argue that the normative temporalities and performative expectations of academic success—particularly within STEM fields—are profoundly misaligned with the lived realities of women, and especially women of colour. These scholars point to a structural incongruity between the linear, accelerated career trajectories typically expected in academia and the cyclical, care-laden life courses disproportionately experienced by women navigating multiple, intersecting responsibilities. This misalignment demands a dual form of labour from racially minoritised women: not only must they meet the intellectual and technical rigour of their disciplines, but they must also continuously perform self-legitimation within predominantly white, male-dominated institutional cultures (Ong, Smith and Ko, 2018). This identity labour—exhausting and ongoing—occurs alongside caregiving obligations within prevailing academic time economies that privilege constancy, presenteeism, and the uninterrupted accumulation of measurable outputs (Kelly and Grant, 2012).

Maternal Policies and Women

Undoubtedly, UK higher education has made important strides in establishing formal policies intended to support working mothers, particularly within the framework of parental leave. Central among these is the statutory and enhanced maternity leave, which offers eligible mothers up to 52 weeks of leave - comprised of 26 weeks of Ordinary Maternity Leave followed by 26 weeks of Additional Maternity Leave - often accompanied by up to 39 weeks of Statutory Maternity Pay (UCU, 2021b). Significantly, many universities have gone beyond the statutory minimum by enhancing maternity provision: institutions such as the University of Oxford and the University of York, amongst notable others offer up to 26 weeks of full pay, followed by statutory or tapered payments—a benefit partly secured through persistent negotiation efforts by the University and College Union (UCU, 2023; University of Oxford, HR support, 2023; University of York - HR, 2024). However, such enhancements are not the reality across the sector. Disparities persist, raising important questions about institutional variation.

This institutional variability lies at the heart of Epifanio and Troeger's (2018) inquiry, which sought to unpack the structural determinants underlying why some universities offer more generous maternity provisions than others. Their analysis reveals a notable correlation between the generosity of institutional maternity policies and an institution's research intensity, as well as its demographic composition—particularly the presence of women professors and early- to mid-career academics of childbearing age and/or with caregiving responsibilities. In effect, these findings imply that institutions with a visible commitment to gender equity—especially at senior levels—are more inclined to embed gender-sensitive practices, including progressive maternity and family policies in their academic infrastructures. Yet, such a correlation, while seemingly logical, cannot be assumed as the reality for all institutions with such demographic compositions.

Moreau and Roberston's (2019b) inquiry, "Care-free at the top?", problematises this narrative by exposing the persistence of care-related inequities among senior academics. Drawing on a relatively diverse sample of senior academics with caregiving responsibilities, their findings reveal the endurance of an entrenched institutional discourse that constructs care as antithetical to academic success. Even in institutions with gender-diverse leadership, care continues to be discursively and materially located in the private domain—implicitly excluding it from the academic subjectivity of the high-performing academic.

This critique is further substantiated by Gheyoh-Ndzi's (2023) analysis, which highlights the dissonance between demographic inclusion and structural transformation. Her research shows that even in universities with a higher proportion of women—particularly mothers and caregivers—the existence of more equitable family-friendly provisions cannot be assumed. The presence of women in senior academic positions does not automatically translate into more generous or accessible support structures. Rather, family-responsive policies often remain limited in scope and are shaped by managerialist agendas that favour cost-cutting gains over substantive equity. The implication here is clear: without a sustained challenge to the chrononormative and gendered logics embedded within academic time regimes, the maternal penalty will continue to be reinforced—regardless of demographic shifts at the top.

Nonetheless, institutional recognition of maternity leave as a 'special circumstance' has prompted systemic responses beyond individual university policies. National frameworks such as the Research Excellence Framework (REF) have incorporated formal mechanisms to account for care-related career interruptions (REF, 2021). Adjustments to research output expectations, for instance, aim to mitigate the structural disadvantage often experienced by academics taking maternity leave. Complementing these efforts, universities have increasingly adopted Shared Parental Leave (SPL) schemes, now frequently aligned with enhanced maternity pay arrangements, thus promoting a more equitable distribution of caregiving responsibilities (Universities and Colleges Employers Association - UCEA, 2022).

Further reinforcing the legal and cultural shift toward family-friendly academia, as of 6 April 2024, UK legislation now grants employees the right to request flexible working arrangements from day one of employment (CIPD, 2024). This reform makes adjustment to the previous requirement of 26 weeks' continuous service, strengthening the legal basis for remote, hybrid, part-time, and compressed work schedules in the higher education sector (UCU, 2025). Even more, a growing number of universities have introduced "returner grants", which provide financial and institutional support—such as research assistance, travel funds, or buyout time—to help mothers re-engage with academic work following leave. The University of Oxford's Returning Carers Fund, for example, allocates £6,000–£12,000 per applicant (University of Oxford - Equality and Diversity Unit, 2023). These interventions are often accompanied by mentoring schemes, phased returns, and workload adjustments - signalling a growing awareness across the sector that academic careers are not linear, and that equitable career progression requires structural responsiveness to the realities of caregiving (IHE, 2023; UCU, 2021b).

Yet the persistence of the maternal penalty speaks to the cultural and evaluative norms that undermine the intent of these policies at institutional levels, which is very much characterised by ambivalence. As Moreau and Robertson (2019a) aptly point out, although "family-friendly" policies are legal requirements for institutions, they are not without social consequences. Demographics for such provisions, particularly women, primary caregivers and student parents (PhD researchers) are often reluctant to position themselves as beneficiary of such policies owing to a regime of subtle disciplinary logics, wherein they are marked as "less committed," and as somehow deviating from the idealised norm of the "unencumbered academic"— a figure imagined as perpetually available, mobile, and singularly focused on scholarly productivity (see also Hoskins, Moreau and McHugh, 2023; Moreau and Kerner, 2015). This is simply not about policy access then – it is about how power operates through everyday perceptions and institutional norms to reproduce this masculinist epistemology.

As Cech and Blair-Loy (2019) show, the fear of reputational damage and career stagnancy discourages many, particularly women and caregivers, from fully utilising provisions designed to support them. Instead, there is a common preference for individualised practice, seeking support from outside the workplace through personal and informal care arrangements. This is not just the absence of uptake, but a performative politics of refusal—an affective negotiation with stigma, prestige, and survival in a deeply gendered academic economy, as Moreau and Robertson (2019a) put it.

In an experimental study, Correll, Benard, and Paik (2007) found that mothers are systematically evaluated as less competent and less hireable than equally qualified non-mother faculty—a bias that directly translates into disparities in hiring, salaries, promotions, and research funding (see also Miller and Roksa, 2020). In a more recent work, Jones and Floyd (2024) show how neoliberal subjectivities govern the rhythms of academic life, structuring expectations of constant availability, competition, and productivity. As a result, many women feel compelled to relinquish or curtail their maternity rights to maintain visibility and competitiveness—continuing to write grant applications, publish journal articles, supervise doctoral students, and respond to emails during periods normally designated for leave.

Importantly, these penalties do not begin with motherhood itself. Rather, it is anticipatory, extending to early-career women who are viewed as "at risk" of motherhood. Thébaud and Taylor (2021) describe how the 'spectre of motherhood' serves to constrain the trajectories of young women in STEM, limiting access to mentoring, collaborative networks, and leadership pathways even before family life begins. This pre-emptive marginalisation diminishes their visibility, undermines their professional confidence, and subtly deters institutional investment in their academic futures.

Exacerbating these dynamics is an increasingly vocal discourse that positions caregiver accommodations—particularly those for mothers—as unfair advantages or "special treatment." Scholars such as Hayden (2010), Jones (2014), and others (for e.g., Cech and Blair-Loy, 2014; Morgan et al., 2021; Thébaud et al., 2024) capture this resistance. They show how policies designed to address maternal-related inequities are often framed as reverse discrimination against the childless, implicitly reinforcing the notion that care work is a private inconvenience rather than a structural issue. Within this cultural logic, motherhood and partnership are constructed as career liabilities (born out of personal choices)—'invisible' to hiring or promotion committees, yet glaring in the gaps in publication records, missed grant cycles, and the slowed pace of academic mobility. This disjuncture reflects a deeper epistemological bias in academia—one that continues to devalue relational labour and to penalise scholars whose lives do not conform to an exclusionary ideal of academic success.

Troubling Heteronormative Care

To complicate matters further, the prevailing work–family discourse in STEM remains deeply heteronormative, presuming a narrow model of family grounded in white, middle-class, heterosexual-parent norms. This is particularly salient across the African, Afro-Caribbean, and Asian contexts, where broader notions of family may not necessarily align with white, middle-class and progressive expectations. As Sawyer, Thoroughgood, and Cleveland (2015) aptly argue, much of such practices is legitimising conventional and narrow models of family structures: typically dual-parent, heterosexual, middle-class, and white. As a result, non-traditional family structures such as LGBTQ+ parents, single-parent academics, and those embedded in extended or chosen kin networks are marginalised and rendered invisible within the very structures meant to offer support.

Recent work in critical discourse and diversity studies affirms this persistent exclusion within academic life. For instance, Morrison, Gallardo and Parra Fuster (2023) reveal that public policy discourses around families—especially in professional and institutional contexts—frequently rely on taken-for-granted, heteronormative assumptions about gender, caregiving, and domestic life. These alternative forms of care and connection often fall 'outside' the scope of institutional policy frameworks, despite representing a significant and growing portion of academic households (Forsythe et al., 2023; Morrison, Gallardo and Parra Fuster, 2023).

This invisibility is not uncommon. Take, for example, parental leave schemes or "family-friendly" benefits in UK higher education: these often presume clearly gendered parenting roles and legal parenthood, overlooking non-biological parents, queer co-parenting arrangements, or academics raising children within chosen families. These forms of care do not easily map onto institutional categories like "maternity" or "paternity" leave, meaning this group of academics must often engage in bureaucratic negotiations to justify their caregiving roles—or worse, are excluded altogether from such entitlements. This mismatch between lived realities and institutional recognition reproduces inequality by failing to accommodate the full diversity of academic faculties.

In STEM specifically, Forsythe et al. (2023) demonstrate how academic structures—from department communications to mentorship initiatives—remain implicitly aligned to heterosexual norms. LGBTQ+ staff and students are frequently left out of institutional programming, where "family" is imagined in normative terms and support systems fail to engage with the complexities of queer life. Childcare provisions or parental networking events are often built around the assumption of nuclear family structures, leaving LGBTQ+ parents feeling isolated or marginalised within the broader institutional narrative of who a "caregiver" is, and who is recognised as deserving of institutional support.

The gendered assumptions underpinning these dynamics are not incidental; they are historical. As Lorber (2018) notes, gender is not merely a reflection of biological difference but an organising principle that continues to categorise people into stratified roles and expectations. Building on this, Butler (2025) argues that gender is performative—a repeated social act embedded in systems of power that (re)constitutes what it means to be male and female at the societal level, which to a large extent remains binarised. In academia, these performances are tethered to dominant ideals of the "ideal academic," a figure that is implicitly white, male, straight, able-bodied, and often unencumbered by care. Those who deviate from this nuclear heterosexual matrix—especially women of colour in non-normative family structures—must not only justify their scholarship but also their legitimacy as professionals.

The Motherhood Penalty vs. the Fatherhood Premium

Even more troubling is the enduring gender disparity in the distribution of family responsibilities and in the social perceptions that accompany attempts to balance academic work with caregiving roles. These disparities are entangled with societal norms about what constitutes a 'natural' or 'appropriate' role for women and men. Whether it is a woman who prioritises her academic career over traditional familial roles (or vice-versa), or a man who assumes the position of a primary caregiver while his partner becomes the main breadwinner, both arrangements are often met with subtle, and sometimes overt forms of social sanctions.

These penalties are not exclusive to the workplace; they are pervasive within domestic spaces, reinforced by cultural expectations and family norms, particularly in patriarchal and heteronormative societies (see Kelly and Grant, 2012; O'Connell and McKinnon, 2021; Ward and Wolf-Wendel, 2017). In many such contexts, a woman's decision to defer family life or forgo it altogether is not merely questioned but often socially pathologised: seen as selfish, seemingly unnatural and deviant from the idealised image of womanhood – something that Hays (1996) constructs as intensive motherhood where maternal responsibility is not only feminised and constructed as naturalised, and morally obligatory but also socially tied to the role of a nurturer and homemaker (cf. Ward and Wolf-Wendel, 2012).

Although progress has been made, as men today are increasingly involved in caregiving, the burden of care continues to fall disproportionately on women who are persistently expected—implicitly and explicitly—to sacrifice career ambitions for familial obligations. As Thébaud et al. (2024) and Ward and Wolf-Wendel (2004, 2012, 2017) show, women, despite growing participation in full-time academic roles, continue to bear the larger share of childcare and domestic labour. These expectations remain pervasive even in dual-career households, where women work outside of the home just as much as their partners, and may be contributing equally—or even more—to the family's financial stability but are still expected to take primary responsibility for care work (Kachchaf et al., 2015).

While the demands of STEM careers are undeniably high for all individuals, the effects of family formation and caregiving responsibilities remain profoundly gendered. Crucially, these responsibilities tend to benefit rather than constrain the career trajectories of men. Research findings substantiate this claim, indicating that as men rise in their academic STEM careers, their social desirability as partners and their likelihood of forming stable partnerships or familial relationships often increase (Frevert, Culberston, and Huffman, 2015; O'Connell and McKinnon, 2021). Something that Glauber (2008) describes as the 'fatherhood premium' - a form of symbolic and material advantage wherein fatherhood enhances men's reputational capital, bolstering their credibility and career mobility in professional spaces, as fatherhood is often interpreted as a sign of maturity, dependability, and social responsibility (see also Correll, Benard and Paik, 2007; Kachchaf et al., 2015).

By contrast, for women in STEM and academia broadly, the reality is markedly different. Rather than being valorised, motherhood is often framed as a liability—both implicitly and explicitly—within the professional sphere. Mothers are frequently perceived as less committed, less available and productive, and more likely to be distracted by family obligations. These perceptions persist despite growing evidence that many academic mothers maintain high levels of output, often under conditions of greater constraint (see Malisch et al., 2020). Nonetheless, the cultural narrative surrounding motherhood remains powerful: it implicitly frames motherhood as a potential career disruption instead of a facet of human life. This narrative feeds into institutional practices that view women through a lens of anticipated absenteeism and risk management, rather than one of potential and investment.

The Biopolitics of Motherhood: 'May Babies' and Managed Lives

As a consequence, women in STEM and academia more broadly must often engage in meticulous deliberation over the timing and viability of childbearing—not merely negotiating with their biological clocks, but also with the rhythms and demands of academic life: tenure timelines, funding cycles, conference calendars, teaching semesters, and the relentless pressures of research productivity and publication. In such a context, motherhood is no longer a private or personal matter—it becomes a professional calculation, embedded within institutional practices that regulate not only women's labour, but also their bodies. This can also be understood through Foucault's (1978) construct of biopower—a mode of power that, rather than exerting force through repression, operates by regulating life itself: bodies, reproduction, health, and temporality (see also Foucault, Davidson and Burchell, 2008). Through discursive regimes and institutional norms, biopower exerts control over what kinds of lives—and bodies—are rendered intelligible, legitimate, or professionally viable. In this case, the temporalities of reproduction are regulated by the normative structures of academic life. The question becomes not just whether a woman will become a mother, but when and under what institutional conditions she is permitted to do so without risking professional penalty.

The calculative logic this produces is captured in the work of Armenti (2004), which describes a common strategy among women faculty: strategically timing pregnancies such that their children are born around late spring or early summer—after teaching end and before the next academic term begins—to maximise early postpartum care without interrupting professional obligations (see also Nitsche and Brückner, 2021). Jean, Payne, and Thompson (2015) document how this pattern has always been in existence and, even more so, has gained widespread adoption enough to have been coined "May or holiday babies." Such practices are less about personal convenience and more to do with navigating institutional structures, shaped by academic temporality and professional expectations. Recent UK-based research (e.g., Jones and Floyd, 2024; Pecis and Touboulic, 2024) also substantiates this pattern, revealing that most babies of academic parents are born around May and June or at the end of probation – strategies reflected in institutional discourse around post-probation pregnancies, care demands, and 'permanent contract clocks of neo-liberal academy (something that Robin Wilson, 1999, also termed 'academe's annual baby boom').

The practice of "May or holiday babies" is emblematic of how deeply biopolitical regulation operates—not only constraining when women can become mothers, but implicitly defining the acceptable conditions under which motherhood can be reconciled with academic legitimacy. As calculative as this strategy may appear, it reveals the extent to which women's reproductive lives are disciplined by the temporal expectations of the academy. As Foucault, Davidson and Burchell (2008) argue, biopower works not only through explicit prohibition but also through "norms" that subtly regulate conduct, producing self-governing subjects who internalise the need to conform. In this case, women faculty engage in self-regulation—not because they are told explicitly when to reproduce, but because the professional risks of deviating from normative timelines are too high to ignore. Thus, what might appear on the surface as a strategic or pragmatic decision is, in fact, a powerful indicator of systemic constraint. It highlights the persistent institutional failure to accommodate care work and reproductive life on equitable terms—and how women, particularly in STEM, must curate their lives around structures that were never designed with them in mind.

The COVID-19 pandemic exacerbated the structural inequities that exist in academia. Research by Crook (2020) and Thébaud et al. (2024) shows that during the height of lockdowns, women faculty—particularly mothers—experienced significant declines in research output, directly linked to heightened caregiving demands. Meanwhile, male academics, many of whom were relieved of commuting or had fewer domestic disruptions, maintained or even increased their productivity (see also Deryugina et al., 2021; Dun et al., 2022; Malisch et al., 2020). These disparities reveal the extent to which academia continues to privilege a masculinised ideal: the 'unencumbered scholar' - always available, always mobile, always working and unburdened or less burdened by domestic obligations.

What this reveals is not simply a gender gap, but structural issues that disproportionately 'penalise' those whose lives do not conform to these narrow norms. This leads me again to the critical issue of intersectionality. While gender equity in STEM is often framed in universal terms, the lived experiences of women—especially women of colour—cannot be neatly separated or understood through a single-axis framework. As Crenshaw (2013) and Collins et al. (2021) argue, women of colour are not simply marginalised because they are women or because they are Black or of any 'other' race or ethnicity, but because of how these identities intersect within broader systems of power.

The Temporal Fabric of Academic Lives

Drawing on Felt's (2025) critique of the temporality of academic lives within contemporary societies, I argue that the chrono-politics of time, both explicitly and implicitly, (re)produces the dominance of clockwork that sustains linear imaginaries (see also Adam, 2013). From this perspective, the issue is not simply one of 'juggling' work and family, but of negotiating overlapping and often competing structural and cultural pressures—and their underlying timescapes, which Adam (1999) conceptualises as the interconnected, multidimensional, and unequally embedded ways in which time is socially constructed, experienced, and regulated across material, cultural, and political life.

Within diasporic communities, family support can be deeply communal, yet cultural expectations around early marriage, fertility, and gender roles may be more acute than those faced by white peers. These pressures can create a situation where WAC academics are simultaneously subject to the institutional gendered demands of STEM and the cultural imperatives of their home communities. It is a balancing act riddled with trade-offs—of time, energy, opportunity, and sometimes identity itself. This inevitably begs an enduring feminist provocation: can women have it all? As Lorber (1994) attempts to respond, the answer remains complex, and for WAC in STEM, it is more often a painful no, not without significant personal and professional costs at the very least. Whether it is delayed family formation, deferred promotions, or emotional or physical burnout, the trade-offs are often substantive and cannot be overlooked.

Recent studies (e.g., Hong et al., 2025; Di Bartolo and Torres, 2024) corroborate these conclusions, highlighting how these tensions persist at the institutional level. Hong et al. (2025), drawing on data from a large-scale survey of over 5,600 U.S. and Canadian academics, identified caregiving responsibilities as a key mediator of gender disparities in career progression and overall well-being. Similarly, research published in the *European Heart Journal* reports that roughly 43% of women in STEM/medicine exited full-time positions after becoming mothers, citing unsustainable work–family pressures and institutional rigidity (Di Bartolo and Torres, 2024). In the UK academic context, these structural pressures are equally pronounced. For instance, EngineeringUK (2024) recently reported a worrying decline in women aged 35–44 within engineering roles—from 16.5% to 15.7%—suggestive of attrition mid-career, and showing that the probationary contracts and permanent-post transition align perilously with childbearing years (see also the UK's House of Commons - *Science & Technology Committee 2023 report* on Diversity and Inclusion in STEM).

Such findings echo Mirza's (2008, p. 124) assertion that academic success for Black and racially minoritised women often entails "twice the work, half the recognition, and a third of the life," forcing them to "posture as 'fresh water fish' swimming in academic sea-waters that are foreign to their embodied selves and histories." This evocative metaphor captures the tension that women of colour navigate within predominantly white, masculinised institutions that seldom reflect or accommodate their lived realities. Their pursuit of success is not only marked by overwork and under-recognition but also by a persistent negotiation of identity and belonging within structures shaped by colonial and patriarchal legacies.

Moreover, these data are not isolated; they form part of a broader transnational pattern that illustrates how the structural conditions and institutional architectures of academic life inadequately support those who mother—particularly racialised women. Thus, the partnership and motherhood penalty is not merely a matter of individual choice or inadequate institutional support. Rather, it is a manifestation of a form of chrono-political gendering – one that disciplines women's bodies and life trajectories through the normative temporalities of academic labour.

The academic clock – marked by precarious and temporal regimes, short-term funding cycles, and relentless publication pressures – competes with the biological, cultural, and familial temporalities that shape the lived experiences of racialised womanhood. This tension can be theorised as biopower of temporality in exercise – a fusion of Michel Foucault's (1977, 2008) notion of biopower and Barbara Adam's (2003, 2013) work on temporal governance. Within neoliberal academy, institutionalised time regimes operate as disciplinary mechanisms that regulate women's reproductive agency, constraining when, how, and under what conditions caregiving and career mobility can co-exist, while simultaneously devaluing the embodied, contingent rhythms of care, interdependence, and maternal labour.

As Adam (2013, p. 7) insightfully observes:

> …aspects of time continue to form an integral part of our lives, some having to do with synchronisation, ordering, sequencing or timing, others with control or measurement, and still others with the time aspects of machines and artefacts. All have bearing on our lives, not as separate abstracted entities but as radiated and interconnected whole.

This observation powerfully reiterates that academic time is never neutral; it is deeply social, embodied, and political. For racialised women in STEM, then, the normalisation of the "unencumbered" academic not only marginalises care work but also disciplines their bodies and life courses to align with institutional temporal norms. Within such structures, the aspiration to "have it all"—to thrive as partners, as mothers, and as scholars in the academic ecology—is constrained by socio-institutional barriers that demand constant calculation, strategic practices, and trade-offs.

Conclusion

This chapter has situated the underrepresentation of WAC in STEM within a multi-scalar landscape of statistical evidence, institutional policy, and theoretical critique. Beginning with statistical data across the UK, Europe, and the US, I have shown how patterns of exclusion are not incidental but structurally embedded, with numbers serving as testament to the enduring inequities that shape academic participation. I then explored institutional equality frameworks, most notably the Athena SWAN Charter, alongside global comparators, highlighting both their potential for change and their limitations in addressing the intersecting dynamics of race, gender and other axes of inequities. Through a thematic review, I have engaged literature on WAC in STEM, offering critical insights into structural barriers, epistemic exclusions, and affective experiences of WAC in an intersectional manner.

In this next chapter, I engage with theoretical constructs exploring representational dynamics and the embodied politics of academic knowledge production. Central to this engagement is Said's (1978) epistemological construct of *Orientalism*, read alongside key postcolonial and feminist scholars (e.g., Bhopal, 2018; Collins, 2008, 2022; Crenshaw, 1994, 2013; Hall, 2007; Spivak, 1988) whose work foregrounds the intersecting operations of race, gender, and embodiment in the production of academic knowledge. This theoretical framing is further complemented by an engagement with Foucauldian and poststructuralist feminist scholarship (e.g., Adam, 1995, 2013; Arribas-Ayllon and Walkerdine, 2017; Butler, 1990, 1993, 2025; Foucault, 1972, 1988a), which reconceptualises power relations—including gender—not as statically held but as temporally contingent, fluid, relational, and discursively produced.

Chapter Three - Theoretical Underpinnings

Introduction

This chapter begins by drawing on Edward Said's (1978) postcolonial conception of epistemological *Orientalism* to critically explore how relations of power, knowledge and legitimacy are produced, regulated and contested within academic cultures. Underpinning the orientalist constructions are discourses that work to explicitly and implicitly position the West (the 'Occident') as the primary 'site' of legitimate and authoritative knowledge production, while the East (the 'Orient') is constructed as its cultural and intellectual 'Other' (Said, 1994). These discourses have contributed to enduring hierarchies in which certain ways of knowing are naturalised as objective and legitimate, while others are rendered marginal.

Importantly, Said's post-colonial framing foregrounds that Orientalism (and as mobilised within this study) is not a simplistic geopolitical binary between an essentialised 'West' and 'East' categories, nor does it presume that all women academics of colour occupy non-Western positionalities. As the socio-demographic characteristics of participants show (see Methodology Chapter - page 161), some participants self-identify as first or second-generation British Nigerian, British Indian, British Pakistani and British Afro-Caribbean. The postcolonial framing adopted here is therefore engaged analytically rather than geographically, enabling an exploration of how the dynamics of epistemic authority (i.e., the power to define what counts as legitimate or valid knowledge), othering, and 'voice' operate within knowledge regimes that persist in ostensibly inclusive and post-colonial academic settings.

Within this frame, *Orientalism* can be understood less as a spatial distinction and more as a discursive formation through which epistemic legitimacy is unevenly distributed. "The West" signifies not a fixed location but a regime of knowledge production that claims universality, neutrality, and intellectual superiority. Yet, racialised and gendered subjects, even when identically affiliated with Western origins, may nevertheless be positioned as 'epistemic outsiders' whose knowledges, perspectives, and scholarly authority are questioned or devalued. In this sense, epistemological Orientalism operates as a mode of power that structures whose

knowledge counts, whose voice is amplified, and whose intellectual contributions are recognised or constrained.

Complementing this postcolonial critique are insights from postcolonial and feminist scholars (e.g., Ahmed, 2012, 2024; Bhopal, 2018; Collins, 2008, 2022; Crenshaw, 1994; Hall, 2007, 2020; Spivak, 1988; Subedi and Daza, 2008), whose work foregrounds the intersecting operations of race, gender, and embodiment in the discursive production of academic knowledge. These scholars trouble the notion of hegemonic epistemologies by drawing attention to the affective, situated, and institutional legacies through which exclusion is (re)produced within the academy. These theoretical lenses, alongside Said's work on Orientalism, allow for a critical reading of the ways marginalised 'bodies' and knowledges are not simply absent in academic spaces but also how these subjectivities are constituted through institutional cultures and practices that privilege whiteness and masculinity, and how these shape power relations of different groups.

Acknowledging the limitations of post-colonial framings (particularly Orientalism) in relation to intersecting histories of race, gender, and institutional power, I remain attentive to the reality that it cannot fully account for the heterogeneity of participants' identities or experiences. Instead, it is engaged in dialogue with Foucauldian poststructuralist feminist works (e.g., Adam, 1995, 2013; Arribas-Ayllon and Walkerdine, 2017; Butler, 1990, 1993, 2025; Foucault, 1977, 1988), which (re)conceptualise power relations, including gender, not as statically held realities but as a temporally contingent and fluid social constructs produced through dynamic and contested processes through which subjectivities are produced and negotiated. This facilitates a shift away from individualised or identity-based understandings of marginalisation, and moving instead towards a more structural and epistemological reading of how institutional cultures and practices shape whose knowledge is legitimised and whose presence is deemed intelligible within the academy.

Framing the 'Other': An Orientalist Discourse

Said's work exposes the mechanisms through which Orientalism functions as a "discourse" in the Foucauldian sense: a regime of 'truth' (i.e., a set of ideas and representations that gain authority and acceptance in the social world by being taken as objective fact) that actively produces, rather than merely reflects, its object of knowledge (Foucault, 1977). As such, the Orient is not simply (mis)represented; it is constituted through reiterative discursive practices that essentialise, homogenise, and 'others'. For instance, the recurring colonial trope of portraying Eastern societies as timeless and inherently irrational was not an isolated mischaracterisation but a patterned practice across scholarship, literature, and policy that continually reinforced the West's self-image as modern, rational, and progressive.

In this sense, the Orient, as Said writes, becomes "not Europe and not the West," but a "contrasting image, idea, personality and experience" (Said, 1978, p. 2) that justifies colonial intervention and affirms European superiority. These representational practices reduce diverse peoples and cultures to essentialised identities, obliterating internal heterogeneity and rendering resistance or agency unintelligible within dominant epistemic frameworks. Through this essentialising gaze, non-Western subjectivities are rendered legible only insofar as they conform to orientalist tropes – what Said (1978, p. 6) describes as a "grid for filtering the Orient into 'Western' consciousness."

While *Orientalism* remains a foundational text within postcolonial studies—widely acclaimed for its deconstruction of the epistemic and cultural dynamics of imperial domination—it has also drawn critical scrutiny for its tendency to overdetermine the discursive power of the West. Several scholars (Ahmad, 1992; Almlund, 2013; Clifford, 1980; Kayaalp, 2017; Mani and Frankenberg, 1985; Parry, 1993) have critiqued Said's privileging of Western representational authority, arguing that such an emphasis can obscure or marginalise the counter-narratives, resistances, and epistemological subversions exercised by the colonised 'Other'.

Ahmad (1992), for instance, offers a Marxist critique of Said's work, arguing that Orientalism foregrounds discourse to the detriment of materialist and historical specificities, particularly those concerning class formation and political economy. Ahmad contends that Said's "theory of ideology has no place for a theory of politics" (Ahmad, 1992, p. 116), and that his formulation risks reproducing a binary logic that renders colonial subjects as discursively produced and historically passive. In Ahmad's reading, this interpretive framework downplays anti-colonial agency and fails to adequately account for the heterogeneous and dynamic character of (post)colonial encounters, where power is often negotiated, resisted, and rearticulated (see also Parry, 1993). Similarly, Clifford (1980) critiques Said for lacking ethnographic nuance, particularly in his treatment of the lived cultural practices and representational strategies of colonised peoples. Clifford argues that Orientalism's broad discursive sweep neglects the ways in which those positioned as 'Other' have creatively reinterpreted, appropriated, or contested colonial representations.

These concerns become especially salient in contemporary postcolonial contexts where agency persists despite the enduring hegemonic practices. As Bhopal (2019), Kennedy (2016), and Young (2020) argue, the experiences of academics of colour in British higher education resist neat categorisation within fixed racial or geographic identities, revealing the limits of binary models of analysis. Said responded to such critiques in his later work (Said, 1993b), emphasising that his intention was not to essentialise the Orient/Occident divide but to provoke its destabilisation. As he clarified, the project of *Orientalism* was to "advance a new kind of dealing with the Orient in which the binary between 'Orient' and 'Occident' were to disappear altogether" (Said, 1978, p. 28). Read this way, Orientalism is less an endpoint than a provocation; a call to "unlearn the inherent dominative mode" by displacing entrenched epistemological and power-laden hierarchies.

Nonetheless, *Orientalism* continues to serve as a critical lens for understanding the endurance of colonial power relations in contemporary institutional and academic contexts—particularly as they manifest through racialised, epistemological, and cultural hierarchies. Said's enduring contribution lies in showing that colonial discourse is not confined to the past but survives through ongoing regimes of representation and knowledge production. His analysis directs attention not only to *what* is said about the 'Oriental Other,' but also to *how*, *by whom*, and to

what institutional or ideological effect. As he put it, orientalism is "not just an inert fact of scholarly enterprise," but "a distribution of geopolitical awareness into aesthetic, scholarly, economic, sociological, historical, and philological texts" (Said, 1978, p. 12). In exposing orientalism as a discursive apparatus that secures Western power under the guise of objectivity, Said invites us to interrogate the subtle yet enduring operations of coloniality in the production of knowledge.

In this light, the staying power of Said's work lies in his influential reconceptualisation of Orientalism—not simply as a dichotomy between East and West, or Orient and Occident, but as what he describes as "a whole series of interests which orientalism not only creates but also maintains" (Said, 1978, p. 12). By this, Orientalism is not simply a discourse about the Orient but a mode of power/knowledge production that constructs and sustains the Orient as a knowable, governable, and ultimately the Other. This argument underscores the entangled relationship between power and knowledge: knowledge about the Orient was not just produced within Western institutions—it was produced for the West, reinforcing its epistemic authority and legitimising its civilising, administrative, and imperial projects.

The Orientalist Woman

To extend this analysis, Said explicitly articulates how the Orientalist discourse constructs the East as a civilisational foil against which the West defines itself. "Western culture gained in strength and identity by setting itself off against the Orient as a sort of surrogate and even underground self" (Said, 1993a, p. 3) – which I loosely interpret as some sort of 'big brother' ideal of 'looking after' the culture of the 'East' and assuming capabilities of 'speaking for' the Orient. Here, the Orient is not merely Othered but projected as a constitutive outsider – a spectral figure that validates the West's cultural supremacy through contrast and projection. This positioning is aptly captured in Said's reading of the Egyptian courtesan as a model of the Oriental woman:

> …she never spoke of herself, she never represented her emotions, presence or history. He spoke for her and represented her. He was foreign, comparatively wealthy, and these were historical facts of domination that allowed him not only to possess her physically but to speak for her and tell his readers in what way she was typically Oriental (Said, 1978, p. 6).

Indeed, and perhaps more crucially, this depiction exemplifies how hegemonic power operates not only through territorial conquest or economic dominance, but through the more subtle and enduring regimes of knowledge production and representational authority. The West not only names the Orient but speaks in its place, silencing and/or erasing its complex history, voice and knowledge. As Said argues, the Orient "was almost a European invention" (1978, p. 1)—a projection of Western desires, constructed through elaborate grammar of silencing, simplification, and spectacle, legitimising, and naturalising imperial domination by speaking about, for, and ultimately instead of the Orient.

This production of meaning foregrounds the exercise of power, as Michel Foucault (1980) emphasises, "knowledge and power directly imply one another" (p. 119). It is through naming and categorising the Other that the West not only dominates but defines itself. The West, in Said's epistemological construction, does not simply describe the Orient—it produces it as object, as problem, as site of intervention. In this regard, the Oriental subject is stripped of epistemic agency, rendered voiceless within institutional spaces such as education, development, and policy, where Orientalist logics persist under the guise of multiculturalism and global expertise (cf. Hall, 2007; Kapoor, 2004). As Hall (2007) contends, "difference is ambivalent: it can be both positive and negative, both necessary and threatening at the same time" (p. 63)—a dynamic evident in the contradictory positioning of post-colonial subjects within so-called global knowledge systems.

In this Sense, *Orientalism* is not simply a historical relic. Rather, it is a living discourse—what Young (2020) calls a 'strategy of authority'—that continues to sustain global hierarchies of intelligibility, belonging, and academic legitimacy. Who can speak? Who is spoken for? Whose knowledges are granted legitimacy within the global academy? These and more are the very questions postcolonial theory compels me to ask. To decolonise, as Young (2020) argues, is to confront and seek to undo the epistemological architectures that have rendered non-Western peoples knowable only through the West's own terms of reference. It is to question and deconstruct the power-laden relations between the knower and the known, the self and the Other.

Central to Said's intellectual project of Orientalism also lies the critical recognition of the epistemological method through which the West constitutes the Orient as its discursive Other —an operation that actively produces the Orient as an object of knowledge and power by which the Oriental is simultaneously constructed, classified, and governed in the very process of 'knowing' them. As Said (1978, p. 36) puts it, "knowledge of the Orient… creates the Orient, it governs it." As such, it is not simply a matter of constructing an 'inferior Eastern world'; it is an act of epistemic violence that also exoticises, racialises, and genders its subject. The 'Oriental' becomes both threat and fantasy, simultaneously feminised and fetishised, hypervisible yet silenced, and rendered intelligible only through Western logics of difference.

Such contradictory representations are constitutive of what Yeğenoğlu (1998) conceptualises as the "colonial unconscious"—a latent structure of affect and desire embedded within the Western episteme, wherein the Orient is persistently framed as irrational, passive, and in need of governance (see also Lewis, 2013). In this sense, Orientalism functions less as a descriptive framework than as a discursive apparatus that regulates subjectivities and stabilises unequal power relations through the illusion of objective knowledge. The process of 'knowing' thus becomes inseparable from the act of subjectivising, where meaning is already implicated in the interplay of power, positionality, and the politics of representation.

Thus, the term Oriental itself becomes symbolic of this totalising process: it identifies and homogenises, names and nullifies. It is what Spivak (1988) describes as an epistemic silencing—a mechanism of power in which the subaltern (those situated outside hegemonic discourses of epistemic hierarchies) cannot speak, not because she lacks voice or agency, but because her speech cannot be recognised as what counts as legitimate knowledge. As Said (1978, p. 28) puts it, Orientalism "is more particularly valuable as a sign of the West's great cultural strength," a mechanism for rendering Otherness legible only through categories imposed externally through stereotypes, sexism, racism, and ideologies that academics of colour, particularly women, encounter daily as "uniquely punishing destinies."

Here, the Foucauldian discourse of surveillance becomes particularly relevant. Drawing on Foucault's (1977) discourse of *Discipline and Punish*, Said (1978, p.3) engages the 'technology of surveillance' that ensures the Orient "was, not and is not a subject of free thoughts and actions." The technology of surveillance, in this context, transcends the physical architecture of observation—it becomes an epistemological regime that produces knowable, governable, and docile subjects through mechanisms of classification and self-regulation.

Foucault (1977), in his study of Bentham's Panopticon (prison), illustrates how such surveillance becomes internalised and births discipline, constituting a regime in which individuals regulate themselves under the constant threat of observation. The major effect of the Panopticon, according to Foucault, is "to induce…a state of conscious and permanent visibility that assures the automatic functioning of power." (Foucault, 1977, p. 201). By this, he meant that the architectural apparatus of surveillance is produced through material infrastructure and discursive formation to have an enduring appeal even if it is discontinued in its action, such that the subjects are caught up in the power situation of which they are themselves the bearers.

This panoptic dynamic is mirrored in the lived experiences of racialised and minoritised academics, particularly women of colour, who are simultaneously hypervisible and invisible within the institutional structures of academia. As Ahmed (2018) articulates, hypervisibility renders these bodies perpetually seen—as 'diversity bodies', bearers of difference, or the racialised 'Other'—yet this visibility is paradoxically coupled with institutional erasure: excluded from structures of validation and recognition and a refusal to fully acknowledge, recognise, or value their intellectual contributions and affective labour. In Ahmed's (2012, p. 135) words, "…you become noticeable as the one who is 'out of place', and that is [mostly] all that is noticed." This paradox structures the politics of representation in institutions that claim diversity while upholding epistemic whiteness.

Thus, the "Orientalist woman," as Yeğenoğlu (1998, p. 39) argues in her feminist reading of Orientalism, is doubly inscribed: "She embodies the veiled and mysterious Orient but also becomes the ground upon which fantasies of domination, rescue, and governance are staged." Yeğenoğlu's argument underscores how the Orientalist gaze simultaneously objectifies and instrumentalises women of colour, situating them as symbols of cultural otherness and as visible objects of fascination while denying them full subjecthood. Similarly, Lewis (2013, p. 9) argues that "representations of the Orient were gendered, and these gendered representations were also racialised," demonstrating how femininity becomes the terrain upon which Orientalist hierarchies of power are both imagined and legitimised. Her analysis highlights how the racialised female subject is rendered both alluringly exotic and structurally subordinate, her visibility circumscribed within pre-existing frameworks of Western dominance. Together, Yeğenoğlu and Lewis foreground how orientalist regimes of representation operate through visibility and epistemic containment: the presence of women of colour in academic or cultural spaces is framed not simply as an issue of diversity, but as a process of symbolic exoticisation that reinforces hierarchical norms of belonging and epistemic authority.

'Subaltern' Silence

Gayatri Chakravorty Spivak's influential essay - *Can the Subaltern Speak?* (1988) extends and complicates this critique by interrogating the very conditions under which the subaltern can be represented. Drawing on and revising Antonio Gramsci's notion of the 'subaltern' as those structurally subordinated, Spivak problematises the ways in which Western intellectual traditions, including postcolonial and feminist critiques, may inadvertently reproduce the silences of marginalised 'voices' they seek to undo, particularly those of subaltern women. She argues that "the subaltern cannot speak" (Spivak, 1988, p. 104), not to suggest that the subaltern lacks voice or agency, but to highlight how dominant discourses systematically preclude their intelligibility within hegemonic frameworks of knowledge. In this context, the figure of the subaltern woman is doubly silenced—both by patriarchal social structures and by Western feminist appropriations that subsume her under a universalised category of 'woman' without attending to the specificity of location, class, and historical power relations (see also Mohanty, 1988).

Spivak thus problematises the romanticisation of the subaltern as a pure, pre-discursive subject and urges caution against the totalising gestures of Western intellectuals who speak on behalf of the subaltern. As she notes, "when we speak for the subaltern, we reinscribe our own power to represent" (Spivak, 1988, p. 75). Representation, in this sense, becomes a mechanism not of liberation but of containment, where the West continues to exercise its epistemic authority. Particularly in the case of subaltern women, Spivak emphasises that their subversive agency—the ability of the subaltern subjects to see, think, and speak of their own world—moves beyond representational practices of including silenced 'voices' and toward discursive practices of epistemic disobedience. Thus, she argues that "between patriarchy and imperialism, subject-constitution and object-formation, the figure of the woman disappears... into a violent silence… and potential erasure" (Spivak, 1988, pp. 102-103).

Moreover, her critique is not a call to abandon the project of subaltern engagement, but rather to undertake it with epistemic humility and critical reflexivity. She writes, "the task is to learn to speak to (rather than listen to or speak for) the historically muted subject of the subaltern woman" (ibid p. 90). In this framing, Spivak's intervention calls for a deconstruction of the discursive and institutional practices that render subaltern agency inaudible and unintelligible, and a recognition of the epistemic violence inherent in the act of representation itself. This, according to her, will signal a move towards reclaiming the 'voice' of subalterns, particularly in the case of women, including working-class women and those of colour as Spivak (1988, p. 90) puts it; based on her justification that these "women's voices are rarely 'heard' because they hardly occupy positions or are granted legitimacy to speak."

Intersectional Marginality

A further nuance emerges when considering the position of the Orientalist woman—a racialised and gendered figure historically produced through colonial discourse as both exoticised and subordinate (Said, 1978). As Said puts it, Orientalism is not merely an academic preoccupation but "a Western style for dominating, restructuring, and having authority over the Orient" (Said, 1978, p. 3). This authority extended to the production of the gendered racialised subject, where the Oriental woman was simultaneously hyper-visible as an object of fascination yet invisible as legitimate knowledge producers. Within contemporary academia, this trope continues to

operate discursively, positioning certain racialised bodies—particularly those of African and South Asian descent—as outsiders-within (Collins, 1986, 2022), whose presence is paraded as evidence of institutional diversity yet whose intellectual authority remains marginalised in the very spaces that claim to celebrate them.

Here, intersectionality converges with postcolonial feminist critique to expose how colonial-era racialised femininities are not historical artefacts but active, structuring forces in present-day academic power relations. Crenshaw's (2013) conception of intersectionality explicitly foregrounds "the fact that women of colour are situated within at least two or more subordinated groups that frequently pursue conflicting political agendas" (p. 99). For the Orientalist woman in academia, this means navigating the compounded effects of racism, sexism, classism, and possibly other forms of '-isms' along social categories within an institutional framework that often refuses to recognise their simultaneity.

As Crenshaw (2019) notes, "the problem with identity politics is not that it fails to transcend difference, but that it frequently conflates or ignores intragroup differences" (p. 145). In feminist and antiracist spaces alike, the identities "woman" and "person of colour" are too often treated as discrete categories—what Bhopal and Henderson (2021) call "competing priorities of inequalities"—rather than co-constitutive dimensions that shape lived experience in specific, intersectional ways. This single-axis thinking erases the complex realities of women of colour in academia, rendering their critiques unintelligible within dominant narratives of equality and diversity.

For Crenshaw (2017, p. 22), intersectionality is not only "an analytic sensibility" but "a way of thinking about identity and its relationship to power." It exposes the structural dimension of marginalisation where inequities are not reducible to isolated acts of discrimination but are embedded in institutional practices, policy frameworks, and epistemic norms. This is why, as Crenshaw (1989) originally articulated, intersectionality emerged to address "the location of women of colour both within overlapping systems of subordination and at the margins of movements that are supposed to represent them" (p. 140).

While initially developed in the context of Black women's legal invisibility, intersectionality's reach extends beyond this demographic to include people of colour in LGBTQ+ movements, women in immigration struggles, trans women in feminist spaces, and disabled people in campaigns against state violence. In many of these cases, intersectional erasure reflects what Crenshaw calls the "interlocking systems of subordination" that shape vulnerability and resistance. For the Orientalist woman in academia, such erasures manifest in the performativity of equity—where formal policies symbolise inclusivity yet substantively leave untouched the racialised and gendered distribution of prestige, authority, and resources.

Critics from conservative quarters (for e.g., Pluckrose and Lindsay, 2020) have framed intersectionality and post-colonial theorising broadly as "identity politics," reducing them to a form of grievance culture which they claim 'harms' everybody. Yet as Crenshaw notes, intersectionality "is not just about identities but about the institutional cultures and practices that use identity to exclude and privilege" (Crenshaw, 2017, p. 2). The analytical task is thus to unpack how identities and power intersect across contexts to produce and reproduce hierarchies in complex ways that marginality and exclusion are structured and not merely enacted.

This insistence on simultaneity dismantles dominant institutional narratives, revealing that patriarchy, white supremacy, and capitalism do not operate as discrete hierarchies but as interlocking systems (Collins and Bilge, 2020). When higher education collapses gender and racial inequities into separate policy silos, it produces what Crenshaw terms "discreet sources of discrimination" that are more pronounced only at their intersection. This analytic erasure not only limits scholarly understanding but actively undermines the possibility of remedial measures that respond to the apparatus of exclusion (Crenshaw, 2013; Collins et al., 2021).

As such, the figure of the Orientalist woman exposes the gap between diversity as representation and diversity as redistribution. Her hypervisibility masks her marginalisation; her symbolic inclusion conceals her substantive exclusion. Intersectionality, in this frame, becomes not just a methodological approach but a critical praxis—one that insists on confronting the epistemic and structural legacies of colonialism in the present, and on challenging the hegemonic "common sense" (Gramsci, 2020) that makes such marginalisation appear natural.

Heidi Mirza (2015) extends this discourse through her theorisation of the "politics of containment" in higher education, a framework that illuminates how women of colour in academia are simultaneously included and constrained. Their presence is celebrated as evidence of institutional progress, yet it is also symbolically managed through disciplinary norms that circumscribe agency, delimit knowledge production, and regulate affective expression. In this sense, the institutional gaze does not simply operate through exclusion but rather through the incorporation and regulation of difference—transforming presence into a site of surveillance, containment, and performance.

As Mirza (2015, p. 4) observes, the problem is not only one of absence: presence itself is problematic, since it remains conditional, contingent, and perpetually under scrutiny. She notes that "being seen to be assimilated is important, as standing out can invoke deep feelings of need, rejection and anxiety within the white other." To resist assimilation or to "stand out" is therefore to invite a form of surveillance that, while appearing benign, is profoundly destabilising and distressing for Black and ethnicised women (see also Mirza, 2009). In this sense, surveillance is not only visual but ontological—it shapes how racialised bodies can appear, what they can say, and how they are expected to perform within the institutional order.

Nevertheless, Said (1978, p. 6) clarifies that "Orientalism does not unilaterally determine what can be said about the Orient…although it is the whole network of interests inevitably brought to bear on (and therefore always involved in) any occasion when the Orient' is in question." He thus (1993a) urges marginalised groups to theorise their realities from their liminal positioning—not as victims, but as critical subjects (see also Said's 1993b). This echoes Mirza's (2015) call for theorising from the 'places of pain,'—sites where the lived experiences of epistemic marginalisation can be transformed into an exercise of subversive micro-practices of resistance that foreground counter-hegemonic storying and practices in relation to intersecting systems of racialised, gendered, and classed hegemonic practices (see also hooks, 2015).

Yet, as Simmonds (1997, p. 232) reflects on her embodied reality within British higher education, the spectre of otherness remains omnipresent: to be "a woman of colour" in academia is to be incessantly marked as "the other" by the very discourses one seeks to deconstruct. To theorise the experience of racialised 'bodies' and knowledges is to confront what Said (1978) calls the 'constructed knowledge divide'—an epistemic gap that demarcates the imperial centre from its racialised and gendered peripheries (see also Spivak 1988). This divide is not merely geographic or institutional; it is onto-epistemological, structured through a long history of colonial modernity in which the Enlightenment's universalist claims simultaneously racialised and relegated non-Western ways of knowing to the realm of culture or silence. As Collins (2008), Ahmed (2009), and Subedi and Daza (2008) have argued, the marginalisation of racially minoritised women is a structural consequence of the Enlightenment's imperial inheritance—the taxonomies of power that continue to organise knowledge production along racialised, gendered, and classed lines.

The Multicultural Drift

To merely celebrate diversity or inclusion without interrogating the epistemic architecture of postcolonial institutions—those spaces that continue to privilege Eurocentric practices of authority—is to risk what Stuart Hall (2000, p. 211) critiques as the "new pluralism" of multiculturalism: a regime in which difference and inclusion are formally acknowledged and performed but unequal power relations remain structurally untransformed. Hall warns that this form of "multicultural drift"—where diversity is depoliticised and commodified—operates as a mode of containment, absorbing cultural difference into dominant frameworks without troubling the underlying relations of power (see also Hall, 2020). Such tokenistic performance of diversity sustains the very hierarchies it claims to dismantle, reducing inclusion to a symbolic gesture rather than a structural transformation of institutional cultures and practices.

As Said (1978) maintains, it is precisely through a contrapuntal reading—a reading with and against the dominant narratives—that one must trace the silences, conformity, marginalisation and erasures that accompany them. This method refuses the singularity of Western epistemology and instead foregrounds the complex intersection of colonial and anti-colonial knowledges. In this contrapuntal mode, the academy itself becomes a contested site of

ideological struggle, where the possibility of decolonial praxis emerges through the construction of counter-narratives that resist the hegemonic image of the 'ideal academic'—white, male, and disembodied. As Hall (1996) argues, identities are not fixed essences but positions within discourse, always negotiated within relations of power (see also Hall, 2020). Inclusion that does not account for this dynamic risks reinforcing the very exclusions it seeks to redress.

At the heart of these idealised constructions are discursive practices of cultural hegemony. Drawing on selections of Antonio Gramsci's (2020) *Prison Notebooks*, hegemony refers not merely to domination through force, but to the ideological saturation of everyday life with the values, norms, and assumptions of the ruling class. As Gramsci notes, hegemony is "the permeation throughout society of an entire system of values, attitudes, beliefs and morality that has the effect of supporting the status quo in power relations" (see also Gramsci cited in Jones, 2007, p. 44). In this sense, hegemony functions as an ideological state apparatus—a set of institutions and discourses that work to reproduce consent and obscure the mechanism of domination. When Gramsci asserts that "the historical unity of the ruling class is realised in the State as 'ideological' unity," he argues toward the consolidation of power through the naturalisation of particular worldviews as common sense.

Epistemic Injustice

In the context of decolonising institutional cultures and practices, attending to Orientalism's limitations does not negate its analytical utility. On the contrary, it opens space for more nuanced discussions around the ways in which racialised bodies and knowledges are situated within intersecting structures of marginalisation. Therefore, to theorise from the margins is to mobilise such discourses to deconstruct and challenge the presumed universality of the Western academic subject. This is particularly salient given that the practice of epistemic exclusion, grounded in gendered and racialised hierarchies, resonates powerfully with broader postcolonial critiques of epistemic injustice (Fricker, 2007, 2013). Such exclusions are not simply workings of marginal positioning but manifestations of what de Sousa Santos (2007, 2014) theorises as 'epistemicide'—the systematic erasure of non-Western knowledges through the imperial imposition of Eurocentric epistemologies. Epistemicide, literally "the 'murder' of

Other or subordinated knowledges," represents a foundational practice of colonial modernity. The processes through which knowledge and epistemic traditions—particularly from the Global South, indigenous, Afro-descendent, feminist and subaltern knowledges—are delegitimised, marginalised or erased under the guise of neutrality, universality, and objectivity by what de Sousa Santos (2014) terms the epistemological (or cognitive) monoculture of Western modernity.

As de Sousa Santos (2007, p. 1) asserts,

> Western modernity has been profoundly marked by an abyssal thinking which consists of a system of visible and invisible distinctions established through radical lines that divide social reality into two realms, the realm of 'this side of the line' and the realm of 'the other side of the line'… this abyssal line renders many knowledges and peoples beyond the line invisible and as non-existent; not at least in any relevant or comprehensible way of being.

This abyssal line, drawn by colonial epistemologies, is what makes the erasure of women in science—or of any marginalised group—a form of epistemicide. Not necessarily denying their very epistemological constitution and capacity, but Othering them within dominant regimes of intelligibility. In this light, the historical and ongoing erasure of women and racialised bodies from scientific and academic spaces must be understood not only as social injustice but as epistemic violence—a gendered and racialised form of epistemicide that parallels the colonial dispossession of intelligibility (Collins, 2000, 2022).

de Sousa Santos' analysis deepens the critique of Western epistemic hegemony to expose the coloniality of knowledge, in which colonial conquest constituted not only a material plunder of land and bodies but also an epistemic expropriation. He argues that "…there is no global social justice without global cognitive justice" (de Sousa Santos, 2007, p. 25)—one that requires a new kind of thinking, a post–abyssal thinking, foregrounding the intimate entanglement of epistemic and social subjugation. For de Sousa Santos, cognitive justice is not a matter of merely appending subaltern knowledges to an existing Western canon; rather, it demands a radical epistemological pluralism – the inclusion of diverse knowledge systems and 'bodies' that redefine the very architecture of what counts as knowledge (see also de Sousa Santos, Nunes and Meneses, 2007).

de Sousa Santos (2007) builds upon this foundational insight to develop the notion of the "epistemologies of the South"—a framework that does not merely contest Eurocentrism but reorients the epistemological landscape altogether. He argues for an ecology of knowledges, a dialogic epistemology that resists the monoculture of modern science and affirms the validity of knowledges grounded in different historical, geographical, and cultural experiences. As de Sousa Santos puts it: "An ecology of knowledges consists in recognising the copresence of different knowledges and in conducting a dialogue among them, aiming at mutual enrichment and not at the cannibalisation of one by the other" (de Sousa Santos, 2014, p. 212). Simply put, an ecology of knowledges that recognises the coexistence of diverse knowledge systems in such ways that foster dialogue between them and to enable mutual learning and respect.

The call for epistemic justice, then, must be understood as a decolonial imperative: it is not merely additive (recognising other knowledges) but transformative (changing the criteria by which knowledge is legitimated) (Collins, 2022; Fricker, 2013). In this regard, both Said and de Sousa Santos converge in charting the epistemic foundations of colonial and postcolonial hegemony, yet de Sousa Santos gestures more explicitly toward the reparative dimension of knowledge production. His vision of cognitive justice compels a decolonial rethinking of knowledge itself—not merely by unsettling Western hegemony, but by revalorising silenced knowledges and enabling new ecologies of understanding to flourish. The task is thus not only necessarily to critique, but to co-create—to move from epistemological dominance to epistemological dialogue, from monoculture to plurality, from cognitive injustice to epistemic democracy.

However, to resist the essentialising tendencies inherent in both Orientalist discourse and to provide a strong analytical groundwork for my study, I now draw on poststructuralist feminist theories. These critical approaches unsettle the Enlightenment's claims to universal rationality, objective knowledge, and hierarchical categorisation, exposing how such epistemologies have historically served to exclude and marginalise racialised and gendered subjects. Rather than accepting fixed categories of identity or subjectivity, these frameworks foreground the fluid, contingent, and socially constructed nature of such terms. Poststructuralist feminism, in particular, the Foucauldian strand, problematises the very terms through which the racialised and gendered subjects are constituted—not simply as a stable identity category, but rather as an effect of intersecting discourses of race, gender, and power.

Racialised Femininities: A Foucauldian Discourse

Subjectivation and Power

Underpinning poststructuralist theory lies the deconstruction of essentialist stable identities. Michel Foucault's work is instrumental in shifting the focus of critical inquiry from universal categories of the subject to the historical and discursive formations through which subjectivities are constituted. In *The Archaeology of Knowledge*, Foucault (1972) defines discourse not merely as language or text, but as "practices that systematically form the objects of which they speak" (p. 49). Discourse, in this sense, is not neutral; it is productive—it brings subjects and objects into being through constructed meaning.

Nowhere is this more clearly articulated than in Foucault's (1982, p. 781) later work, where he explores the mechanisms by which individuals are subjected to power and made into subjects. As he writes in *The Subject and Power*:

> There are two meanings of the word 'subject': subject to someone else by control and dependence, and tied to his own identity by a conscience or self-knowledge. Both meanings suggest a form of power which subjugates and makes subject to.

Going by this, the subject is not a sovereign agent situated outside of discourse but is constituted through the operations of discursive power. This notion challenges the understanding of agency as autonomous and rational. For Foucault, power does not merely repress; rather, it produces, implying that subject positions are historically and culturally delimited constructions of what is sayable, thinkable, and practicable. As such, Foucault's conceptualisation of power refuses, in a way, a foundational theory of the subject as an essential or autonomous entity. Rather, if power is productive—operating relationally and acting upon the actions of people—it follows then logically that the subject is not necessarily the author of social practices but their effect—"an epiphenomenon of power/knowledge relations" as Arribas-Ayllon and Walkerdine (2017, p. 112) put it. In effect, the subject is not a stable individual or a fixed role, but a site of contradiction and discontinuity—a shifting multiplicity of positions constituted within power/knowledge relations. This understanding disrupts the essentialist notion of agency as rational, unified, and self-determining.

In his writing of the subject and power, Foucault explicitly locates the subject within this technology of power, arguing that:

> …the exercise of power is not simply a relationship between partners, individual or collective; it is a way in which certain actions modify others... A form of power applies itself to immediate everyday life which categorises the individual, marks [her] by [her] own individuality, attaches [her] to [her] own identity, imposes a law of truth on [her] which [she] must recognise and which others have to recognise in [her] (Foucault, 1982, p. 782 – *gendered pronouns replaced for emphasis*).

Here, Foucault emphasises how power constitutes subjects through categorisation, identification, and normalisation, producing both the conditions of possibility for agency and the discursive constraints within which it can be exercised. It is through these processes of categorisation and normalisation that subjects are both made intelligible and disciplined. This conceptualisation is particularly salient when analysing the experiences of marginalised academic subjects whose subjectivities, more often than not, are constituted through intersecting discourses of race, gender, and institutional legitimacy that both mark them as 'other' and subject them to intensified scrutiny and regulation.

While the Foucauldian discourse theory provides a powerful analytic lens for exploring how subject positions are constructed within historically specific matrices of power/knowledge relations, it does not offer a unified theory of subjectivity per se. Rather, as Arribas-Ayllon and Walkerdine (2017) argue, it allows us to trace the multiple, local, and often contradictory subject positions that individuals may inhabit within discourse. To occupy a position in discourse is to be located within particular ways of speaking, knowing, and being that are intelligible at a given historical moment. Yet this framework raises a theoretical concern: by deconstructing subjectivity as fragmented and dispersed across various discursive sites, it becomes difficult to account for the coherence and continuity of selfhood over time. As Henriques et al. (1984, p. 204) point out, poststructuralism leaves unresolved the question of how to account for the "continuity of subjective experience and the felt stability of identity", even as they are constituted through shifting and often contradictory discursive relations (see also Hook, 2001a, 2001b for the 'disorder' of discourse in relation to knowledge and materiality).

As such, this post-structuralist formation of the subject in relation to power has attracted substantial critique, particularly from feminist scholars who argue that Foucault's construction of the subject is caught within a totalising web of discourse, rendering subjects as overly passive and merely the effects of discursive and institutional arrangements. Fraser (1989), for instance, contends that Foucault's emphasis on subjectification, that is, how individuals are constituted as subjects, underplays their capacity to critically engage with, resist, or reconfigure the discursive regimes that produce them. As she notes, this results in "a one-sided emphasis on subjectification at the expense of the possibility of agency" (pp. 28–29). Similarly, McNay (2013) critiques what she terms 'discursive determinism,' suggesting that Foucault's account too often binds subjectivity so seamlessly to discourse that the space for autonomous and resistant action is diminished. These critiques underscore an important theoretical tension: while poststructuralist accounts illuminate how power constructs the conditions of subjectivity, they risk obscuring the very forms of agency through which individuals navigate, negotiate, and contest these same structures.

Gender as Performance

Poststructuralist feminists have sought to reconceptualise subjectivity by extending Foucault's insights into the productive nature of power while simultaneously accounting for the lived complexities of agency and resistance. Judith Butler, in particular, reframes subjectivity as a paradoxical process. She clarifies that:

> The subject is not determined by the rules through which it is generated because signification is not a founding act, but rather a regulated process of repetition that both conceals itself and enforces its rules precisely through the production of substantialising effects (Butler, 1990, p. 185).

This insight draws directly on Foucault's (1982) notion that subjectivity is never fully determined. Rather, it is constituted through discursive regimes of power/knowledge rather than through innate attributes. Subject formation, in his account, is shaped through regimes of normalisation, surveillance, and institutional regulations that produce subjects as intelligible within particular socio-historical contexts. However, while Foucault offers a powerful critique of essentialist notions of the subject, his framework seemingly privileges structural constraints over the possibilities of agency, subversion, or transformation. It is precisely this tension that poststructuralist feminists, most notably Butler, unpack.

Butler (1990, 1993, 2004a), alongside theorists such as Braidotti (1994, 2012) and McNay (2013), advances the politics of re-signification, which foregrounds the performative dimensions of identity/subjectivity and restores a form of agency through iteration. For Butler, subjectivity is never imposed once and for all but is discursively constituted through reiterated practices—acts compelled by normative structures, yet never fully determined by them. In *Gender Trouble*, Butler (1990) deconstructs the notion of gender as a fixed category, arguing that:

> ...gender is not a noun, but neither is it a set of free-floating attributes, for we have seen that the substantive effect of gender is performatively produced and compelled by the regulatory practices of gender coherence. (p. 24)

Here, gender is rendered intelligible only within the constraints of discursive norms. Yet this very process of performative repetition opens the possibility for gaps or failure through which subversion becomes (re)imaginable. Butler develops this further in *Bodies That Matter*, where she contends that:

> …the possibilities of gender transformation are to be found in the possibility of a failure to repeat, a de-formity, or a parodic repetition that exposes the phantasmatic status of normative identities (Butler, 1993, p. 237).

In simpler terms, if gender identity is performatively constituted, then repetition is never mere replication; it always carries the risk and the potential of deviation. Such deviation opens a space for critical rearticulation, enabling the subject to trouble and displace the very norms that seek to regulate it.

This line of argument culminates in *Undoing Gender*, where Butler extends the notion of gender intelligibility to the socio-normative frameworks through which gendered lives become intelligible, recognisable, and thereby liveable. She writes:

> The question of how to make gender trouble ought to lead to a consideration of the terms by which gender is recognised, in which gender is intelligible. It is not simply that we need to multiply genders, although that is crucial. We need to understand what makes and sustains a certain kind of gendered being, what counts as intelligible gender and what does not, and how those norms function to foreclose a liveable life. (Butler, 2004a, p. 214)

Butler's assertion reiterates a central tenet of poststructuralist feminism: identity is never onto-epistemologically secured but rather continually constituted and contested through performative iterations and regimes of normative recognition. Drawing on Foucault's (1982) notion of power as productive rather than merely repressive, Butler argues that the very discursive structures that constrain subjectivity also open up the possibility for its subversion. Through failure, parody, or other disruptions of normative repetition, gender norms may be troubled and re-signified, allowing alternative modes of being to emerge (Butler, 1990, 2004a).

This emphasis on contingency resonates with Braidotti's (1994) notion of the 'nomadic subject'—a feminist construct that resists fixity and is always in the process of becoming. For Braidotti (2012), subjectivity must be rethought not as a rooted construction but as a mobile, situated, and materially embedded process shaped by intersecting histories and discourses. The nomadic subject is thus not simply a metaphor for fluidity; it is a political strategy that challenges the regulatory pull of identity categories and affirms multiplicity, hybridity, and becoming. Feminist engagements with Foucault have thus produced a more nuanced theorisation of power—not as totalising or monolithic, but as a dispersed field of discursive formations within which subjectivities are simultaneously constituted and contingently contested. As Rose (1999) puts it, "…power does not crush the subject but composes it; and in composing it, makes possible its self-reflection, and with that, the possibility of resistance" (p. 7). Power is therefore ambivalent: repressive but also generative, enabling forms of agency even as it delimits them.

Building on this, poststructuralist feminism rejects fixed, essentialist or biologically determined notions of identity. Instead, it constructs subjectivity as historically contingent, discursively constituted, and performed through iterative practices of signification—a repeated exercise of normative practice. Butler's (1990, 2009, 2025) works underscore this position. She theorises gender not as pre-existing 'truths' but as "identities tenuously constituted in time, instituted in an exterior space through a stylised repetition of acts" (Butler, 1990, p. 191). Gender, through this lens, is not something one *is* but something one *does*—a practice repeatedly performed and governed by regulatory norms.

This reconceptualisation of gender as performative troubles the binary logic of sex and gender that historically underpinned epistemologies across both the Global South and North. Until the late 1970s, "gender" was often treated as a synonym for biological sex, confined within the heteronormative matrix that defined womanhood and manhood through presumed natural oppositions (Butler, 1990). However, by the late 1980s to the early 2000s, feminist and queer theorists—including Butler (1990), Anzaldúa (1981), and Sedgwick and Parker (1995; see also Sedgwick, 2020)—began to radically reframe gender as a cultural performance and site of contestation. The emergence and reclamation of terms such as queer coincided with broader social shifts, including the decriminalisation of homosexuality in many Western states, marking a growing recognition of gender as a fluid spectrum.

As Butler (1993, 2015, 2025) argues, this conceptual shift enables gender to be understood not as a rigid category but as a performative continuum: a site of discursive repetition and potential subversion. It therefore means that what we take to be "man" or "woman" is thus the effect of reiterated social norms, not intrinsic 'truths'. These insights open discursive and political space for the increasing visibility—and frequent contestation—of non-binary, transgender, and queer subjectivities. Such identities, encompassed within the expanding LGBTQ+ acronym, disrupt the presumed coherence, 'naturalness' and hierarchy of the gender binary, troubling dominant heteronormative regimes of intelligibility.

It is important, however, not to conflate gender with sexuality. While often co-constituted through social discourse and regulatory frameworks, the two are conceptually distinct. Gender refers to the socially constructed and performative dimensions of identity (i.e., how one is positioned within gendered structures of recognition), while sexuality pertains more directly to desire and sexual orientation. Nonetheless, both are implicated in what Butler (1993) calls the heterosexual matrix: a grid of intelligibility that aligns gender and sexuality to sustain normative configurations of male/masculine/desiring-women and female/feminine/desiring-men.

Disruptions to this matrix—through gender nonconformity or queer orientations—are still socially frowned upon and met with disciplinary responses within some societal contexts more than others. Although sexuality lies somewhat outside the primary scope of this analysis, its deconstruction remains important in highlighting the representational axes of inequality that reinforce gender hierarchies. This is particularly relevant in many contexts where femininity is not only constructed as the binary opposite of masculinity but also positioned as its inferior Other.

Also, at the heart of Butler's inquiry into gender as performance is the tension between constraint and agency. She asks: "Are there two different senses of performativity, or do they converge as modes of citationality in which the compulsory character of certain social imperatives becomes subject to a more promising deregulation?" (Butler, 1993, p. 231). While favouring convergence, she nonetheless clarifies:

> …performance 'as bounded act' is distinguished from performativity in so far as the latter consists in a reiteration of norms which precede, constrain and exceed the performer and in that sense cannot be taken as the fabrication of the performer's will or choice; further, what is performed works to conceal, if not to disavow, what remains opaque, unconscious, unperformable. The reduction of performativity to performance would be a mistake (Butler, 1993, p. 234).

Here, Butler emphasises that performance should not be conflated with performativity. While performance may appear as a conscious or individualised act, performativity refers to the citational structure of power that precedes and exceeds the subject. The subject does not author itself but is authored through normative scripts that must be repeatedly enacted to appear 'natural'. Yet these normative scripts are never perfectly reproduced; their inevitable failure or gaps open space for agency, not as sovereign will, but as what Butler calls subversive rearticulation (see also Butler, 2015, 2025).

Accordingly, poststructuralist feminism does not merely deconstruct the category of 'woman' but reimagines it as a politically contested and contingent construct. The 'woman', particularly racialised and/or marked by difference, is not a stable identity but a subject-position constituted through intersecting discourses of race, gender, coloniality, and institutional power. Such positions may risk misrecognition as passive effects of power, yet they are also sites of ongoing strategic negotiation. As scholars thus argue, poststructuralist feminism allows for a 'politics of becoming', wherein subjects occupy multiple, shifting, and contradictory positionalities, unsettling any totalising category of 'woman' or 'academic' (Arribas-Ayllon and Walkerdine, 2017; Davies and Gannon, 2005; Davies et al., 2006).

Such insights intersect with postcolonial feminist critiques that challenge the universalist assumptions of Western feminist discourse. These frameworks jointly insist that power is neither evenly distributed nor historically static, but is, instead, contingent and mutable across time, space, and institutional context. Thus, women and people of colour in higher education are not merely 'victims' of colonial epistemologies or patriarchal structures; they also navigate, strategically inhabit, and at times subvert these discursive terrains.

Disciplining Bodies

In *Discipline and Punish*, Foucault (1977, p. 147) aptly argues that the educational institution is not simply "a learning machine" but also "a machine for supervising, hierarchising, and rewarding." This disciplinary apparatus, he argues, operates through subtle and pervasive mechanisms of surveillance and normalisation that inscribe themselves upon the body, rendering it docile and at the same time productive. In this construct, 'bodies' are not simply passive recipients of knowledge but active sites of inscription, regulation, and control—disciplined bodies. Those assigned male at birth were historically interpellated into roles of intellectual and military leadership while those assigned female were oriented toward domesticity, care work, and obedience—each gendered subject shaped through what Foucault would term the microphysics of power—subtle mechanisms through which power operates at the level of individual bodies, shaping norms, and subjectivities through surveillance, discipline, and normalisation.

The disciplining of gendered bodies, however, extends beyond mere institutional regulation; it is again a discursive formation delicately tied to the construct of performativity, as Butler articulates, which I have discussed in the preceding subsection. Importantly, this performativity is not a matter of conscious will; rather, it is shaped by regulatory norms that both constrain and produce the intelligibility of the subject (Butler, 1993, 2015, 2025). Performativity, she writes, "is thus not the act by which a subject brings into being what it names, but, rather, the reiterative and citational practice by which discourse produces the effects that it names" (Butler, 1993, p. 2). In this sense, gender non-conformity becomes a form of subversion—not through open difference or rebellion, but through a failure to replicate normative citations.

Such failures, however, are not without consequences. As Foucault (1997) suggests, deviation from normativity—particularly the norms inscribed through heteropatriarchal matrices—is often treated as a transgression, punishable within the same logic that governs non-conformity with societal laws. The educational space, as with the prison, becomes a site of biopolitical control, where those who fail to conform to gendered expectations are rendered visible as deviant. These forms of gender regulation are deeply embedded in the material and symbolic structures of institutions such as academia, particularly in masculinised domains like STEM.

Here, the question of who gets to know and what counts as valid knowledge then becomes profoundly gendered. As Leathwood and Read (2009) argue, the cultural construction of disciplines themselves is epistemologically interlinked with gendered assumptions, wherein fields such as mathematics, physics, and engineering are often associated with masculine subjectivities such as objectivity, rationality, and dispassion. This not only delineates which bodies are deemed suitable for such disciplines but also constructs femininity as epistemologically delegitimated—too emotional, embodied, or subjective to fully participate in the pursuit of what is often seen as positivist knowledge—grounded in empirical observation, objectivity, and measurable facts.

Foucault (1977, 1980), through his genealogical analysis, argues that dichotomies such as subject/object, rational/irrational and masculine/feminine are not natural categories but historically contingent effects of discursive regimes. These binaries, he argues, are produced through power/knowledge formations that discipline bodies and normalise particular forms of subjectivity. Rather than reflecting intrinsic 'truths', they function as technologies of classification that legitimise certain identities (often white, male, rational) while marginalising others as aberrant or deviant. Foucault's objective is not to invert these binaries but to trace their conditions of emergence, destabilising their epistemological authority.

Thus, the disciplining of bodies in higher education—broadly and STEM in particular—is not simply a matter of physical representation or its absence, but of the deeper ontological and epistemological regimes that render certain bodies knowable and others impossible. Such discursive regimes challenge the recognition and reimagination of the conditions under which gendered, racialised, and non-normative subjects might become intelligible—not as subjugated binaries of the masculine subjectivities, but as part of a broader politics of becoming.

Gendered Knowledges

In exploring the epistemological structures of academia, the notion of gendered knowledges becomes central to understanding how knowledge production is embedded within—and perpetuates—socio-cultural hierarchies. These hierarchies are evident in disciplinary divides and the discursive framing of subject disciplines (as briefly discussed in the previous section) as either masculine or feminine, an essentialisation with material consequences for who is recognised as a legitimate knower. Foucault's (1972) construct of discourse again finds relevance here: knowledge is not neutral but instead shaped by discursive regimes that produce 'truth' through power. Within this construct, the gendering of disciplines such as STEM and the arts is not simply a matter of social perception but a manifestation of institutionalised power-knowledge relations.

Research (e.g., Francis, 2008; Ross et al., 2022; Read, 2025; Watts, 2007) evidence how these essentialised narratives are sustained through distinct academic cultures across STEM, the social sciences, and the arts and humanities. These cultures are encoded with implicit essentialist logics, where STEM fields are discursively constructed as the domain of 'hard', objective, and masculine knowledge, while the arts and humanities are feminised and associated with subjectivity, emotions, and 'softness'. As Leathwood and Read (2009) argue, this binary not only delegitimises the latter but also reinforces broader patriarchal norms by aligning 'serious' epistemic labour with masculinity (see also Read, 2025). Foucault's (1980) assertion that "power produces knowledge [and that] power and knowledge directly imply one another" is salient here: the masculinisation of STEM and feminisation of the social sciences and the arts are not innocent descriptors but mechanisms through which certain knowledges (and knowers) are legitimised while others are rendered marginal. In this way, gendered discourses of knowledge both produce and police epistemic authority.

This gendered disciplining of knowledge also intersects with race, class, and colonial histories. As Watts (2007, p. 285) observes, the masculinisation of science is closely tied to its professionalisation, a process that relegated women's contributions to the realm of 'amateur science'. Such a label diminished both the epistemic and institutional value of their work while simultaneously positioning professionalised science as the exclusive preserve of men's 'serious' intellectual labour, a hierarchy reinforced by wider social inequalities of power (see

also Francis, 2008; Oreskes, 2019; Read, 2025; Watts, 2005). In this sense, the discursive construction of what counts as 'science' is bound up as much with power and authority as with methodology. As Read (2025) argues, there remain unequal global relations of knowledge production: some countries and regions are primarily considered sites of data extraction, while others accumulate data and occupy privileged positions from which to construct and disseminate abstract knowledge.

It is worth recalling Foucault's (1978) analysis of biopower—the mechanisms through which 'bodies' are regulated through scientific, biological, and institutional discourses (see also Foucault, Davidson and Burchell, 2008). In this context, science does not merely observe or describe 'difference' but actively produces and hierarchises it. Emily Martin (1991, p. 485) exposes this in her analysis of reproductive biology, revealing how even the language of science is gendered such that the sperm is valorised as active and aggressive, while the egg is framed as passive and inert. As she writes:

> I realised that the picture of egg and sperm drawn in popular and scientific accounts of reproductive biology relies on stereotypes central to our cultural definitions of male and female. The stereotypes imply not only that female biological processes are less worthy than their male counterparts but also have an almost dogged insistence on casting female processes in a negative and inferior light.

Martin's work highlights how even the most ostensibly objective domains of knowledge are saturated with gendered assumptions—assumptions that mirror and reinforce the broader socio-political structures of patriarchy. Thus, gendered knowledges are not only descriptive of historical imbalance but constitutive of how disciplines, credibility, and legitimacy are framed and maintained. As Foucault (1977, p. 131) argues, the discursive construction of knowledge operates through the 'regimes of truth'—a socially accepted system of establishing what is true, and who is able to judge what counts as true. Women, particularly WAC, often fall outside the boundaries of this 'truth regime', their intellectual labour dismissed as anecdotal, affective, or unscientific. Challenging such hierarchies, therefore, requires not only the inclusion of marginalised voices but a fundamental reconfiguration of what counts as knowledge. As Harding (2013) argues, the social positioning of knowers shapes what and how they can know. This reorientation calls into question who produces knowledge as well as the very frameworks through which knowledge is legitimised.

Time as 'Technology' of Power

Foucault's concept of biopower describes the shift from sovereign authority to forms of power that regulate life itself. Biopower, as Foucault writes, is a form of power that "exerts influence on life… to administer, optimise, and multiply it, subjecting it to precise controls and comprehensive regulations" (Foucault, 1978, p. 66). This transformation reflects a movement from the right to kill (le droit de glaive) to the imperative to "foster life or disallow it to the point of death," as Foucault puts it metaphorically (p. 67). In this framework, institutions no longer simply prohibit; they cultivate, channel, and normalise life—producing hierarchies of viability and disposability.

The contemporary university, particularly within the disciplinary matrix of STEM, operates within this biopolitical apparatus, shaping who can thrive within its temporal regimes. It not only governs through formal regulation but also through the chrono-politics of time, space, and subjectivation. This means that academic life is not merely governed by institutional policies or organised by calendars but also shaped by how individuals come to understand and 'discipline' themselves within temporal norms that valorise uninterrupted productivity, speed, linearity of career trajectories, and the relentless optimisation of performance.

These norms operate as a chronodisciplinary technology - one that shapes who can be intelligible and successful within the academic field. As Foucault writes, "power is exercised rather than possessed [and it] traverses and produces things, it induces pleasure, forms knowledge, produces discourse" (Foucault, 1980, p. 119). In STEM, time is not only measured but governed—a key mechanism in the production and exclusion of racialised, feminised bodies. Temporally, this means power operates as a dynamic force through the regulation of time—a key mechanism in the production and exclusion of racialised feminised bodies while also privileging temporalities aligned with whiteness, masculinity, and neoliberal efficiency.

This discourse of time as governance foregrounds Barbara Adam's (1995) claim that time is never a neutral backdrop, but a socially and politically charged medium through which life is stratified and the structure of privilege is maintained. She writes, "time is not a given, a neutral framework within which action occurs. Rather, it is created through social practice, imbued with values, and structured to serve specific interests" (Adam, 1995, p. 95). And the interest time is structured to serve is that of the imagined subject: mobile, disembodied, unburdened by care, and seamlessly integrated into the rhythms of institutional life. For racialised women— often subject to complex dynamics of gendered care, migration regimes, transnational family networks and postcolonial positionalities—this abstraction of time reduced into disembodied productivity becomes a site of exclusion, rendering them temporally marginal and positioning their lived realities out of sync with the normative academic tempo (Adam, 2003).

Further arguing on the sociopolitical nature of time, Adam characterises it as "a silent organiser of social practices and relationships," in which "control over time is control over life" (Adam, 1995, p. 9). This manifests as a form of chrononormativity—one that naturalises temporal discipline, rendering institutional expectations of constant productivity and linear progression as neutral measures of academic legitimacy. This is what Adam means when she argues in her succeeding work that "the lived experience of time is displaced by the homogenised, commodified time of the clock, which has become the invisible regulator of modern life" (Adam, 1999, p. 139).

As such, this is not merely an issue of access or representation; it is a manifestation of temporal marginality, wherein certain bodies disproportionately bear the weight of negotiating a disjuncture between institutional time and embodied, lived time. The university does not simply exclude racialised femininities by accident; it constitutes their marginality through its normative temporal architecture. As Adam argues, "to ignore time is to ignore power" (Adam, 1995, p. 3). Time, here, is not a passive dimension but a biopolitical apparatus that operates not just through policy or discourse, but through an ontological regulation of temporality (Adam, 2013).

The University as Spatially Heterotopic

In his lecture Of Other Spaces, Foucault introduces the concept of heterotopia to describe 'real' spaces as "…all other real sites, that can be found within the culture [and] are simultaneously represented, contested, and inverted" (Foucault, 1984, p. 3). Simply put, heterotopic spaces present themselves as seemingly contesting aspects of the 'everyday' social world, underlyingly committed towards social justice while spatially and temporally embedded within regimes that serve to represent aspects of the real world, (re) producing marginality in such ways that unequal power relations seem natural.

As Read (2023) observes, the university is rarely foregrounded as an example of the Foucauldian heterotopia, yet it arguably embodies this construct with striking precision (see also Dalgleish, 2021; Wong, 2023). As a heterotopia, the university operates as a space of deviation—simultaneously idealised and exclusionary—where normative discourses of merit, neutrality, and rationality conceal the regulation of bodies through spatial and temporal ordering. Within a Foucauldian frame, it becomes a site where disciplinary and biopolitical forces converge, producing hierarchies of inclusion by naturalising chrononormative expectations and spatial practices that privilege certain subjects while rendering others marginal or out of place or time.

In her reflection on the university as a spatial heterotopia, Read (2023) draws on Foucault's example of social burial practices to interpret the marginal ways in which inequality and exclusion are delicately intertwined. She explains that the peripheral siting of cemeteries out of town—linked to nineteenth-century conceptions of death as pathological, where the dead body became a contaminant—mirrors how the university socially distances itself as a prestigious 'ivory tower.' This spatial distancing sustains its identity as an objective arbiter of 'truth', ostensibly immune to the social conditions it inhabits. This is what Read terms the 'ivory tower rationalist' discourse in her earlier work (see Read, 2018, p. 599), which she identifies as at the heart of the university's contribution to the 'public good.'

I extend this analysis to include how this 'rationalist' discourse not only legitimises epistemic authority but also conceals the chronobiopolitical operations of exclusion within the academy. The spatial separation of the university is mirrored by its temporal ordering: a regime governed by chrononormativity, where only those who conform to dominant timelines of productivity, career progression, and availability are rendered viable subjects. Thus, the heterotopic university is not simply a space of symbolic distance, but a site where biopolitical spatiality and temporality intersect to regulate who may enter, persist, and thrive within its walls. As Foucault (1984) notes, heterotopias "…function at full capacity when men arrive at a sort of absolute break with their traditional time" (p. 6)—yet for racialised and feminised bodies, this break is not liberatory but alienating, as they are forced to navigate temporalities that were never designed for them. Foucault's gendered imagery in the quote above reflects this.

While contemporary universities may no longer be readily conceived as "dream spaces—places of armchair pondering and luxury pursuits," as Morris and Rowell (2023, p. 29) observe, the symbolic resonance of Foucault's heterotopic imagery—particularly his analysis of cemeteries as spatial markers of inequality—remains powerfully instructive. Foucault (1984) notes that "the cemetery is the only heterotopia that is universal...as death is a 'great equaliser' [but] even within this universality, there are profound differences" (p. 9), pointing to how even death is stratified by wealth, with elaborate mausolea and spatial privilege afforded to the elite. This metaphor translates with striking clarity to the architecture of the modern university, where permanence and epistemic authority are spatially and temporally unevenly distributed.

In this context, the 'ornate tomb' becomes emblematic not only of socio-economic distinction, but of the deepening divisions within the academy between the securely embedded and the marginally precarious. The contemporary UK university, while cloaked in meritocratic rhetoric, increasingly operates through structures of academic labour that are casualised, short-term, and temporally fragmented. As Foucault argues, power is not simply repressive but productive; it "produces reality; it produces domains of objects and rituals of truth" (Foucault, 1977, p. 194). The temporality of academic employment—short-term contracts, delayed career progression, and intensified demands for accelerated output—constitutes one such "ritual of truth," shaping who is seen as a credible academic subject.

This temporal discourse privileges those who can conform to institutional rhythms of speed, availability, and linear progression—typically disembodied, unencumbered figures and relatively unmarked by caregiving responsibilities. For racialised and feminised academics, particularly those navigating structural inequities, care responsibilities, this temporal regime imposes profound exclusions. In what follows, I explore how precarity, understood as a temporally stretched condition of uncertainty, fragmented and casualised job contracts intersect with the biopolitics of care and motherhood, functioning as a mechanism in the reproduction of inequality and serving to penalise academic mothers or those considering starting families. Drawing on Foucauldian notions of biopower and normalisation, I critically explore how maternal time, reproductive labour, and care responsibilities are rendered incompatible with the academy's chrononormative demands.

Precarity and the Biopolitics of Care

Precarity in contemporary academia is both structural and temporal; it transcends the more visible markers of contingency—short-term contracts, diminishing prospects of permanence, and employment insecurity—to encompass deeper biopolitical issues that regulate the very terms of academic subjectivity. As Morris et al. (2024) argue, the neoliberal university, influenced by managerialist agendas of cost-cutting, functions as a site where academic labour is governed through intersecting axes of gendered, racialised, and classed power, producing conditions of embodied insecurity and existential disorientation (see also Bennett and Burke, 2017; Leathwood and Read, 2020). Within this context emerges what may be described as chronoprecarity: a form of temporal instability that inscribes certain academic bodies more than others into perpetual states of insecurity, exhaustion, and unmeetable futurity.

Butler's theorising of precarity provides a critical lens through which to understand this condition, particularly as it concerns the differentiated distribution of vulnerability across populations. In *Precarious Life,* Butler (2004b) asserts that: "precarity is not a passing or episodic condition, but a rubric that defines the instability of contemporary subjecthood" (p. 25). This redefinition signals a conceptual shift from precarity as an economic or labour-related status to precarity as ontological vulnerability, embedded in the constitution of life under contemporary power regimes. For Butler, precarity becomes a politically induced condition of

vulnerability, whereby certain lives—especially those that are rendered unintelligible within dominant norms of gender, race, and productivity—are disproportionately exposed to insecurity, and higher risk of living in precarious conditions.

Importantly, this precarity is not only spatial, marking certain groups as marginal, but also temporal. For racialised and gendered subjects, particularly mothers in academia, time itself becomes a disciplining and exclusionary apparatus. Chronoprecarity names the experience of impermanence, of always being behind, of striving to "catch up" with the imagined norm of the productive academic subject—implicitly white, male, able-bodied, and unencumbered by caregiving responsibilities. Butler's (2004a, p. 42) emphasis on recognisability is key here. In *Undoing Gender*, she argues that "those who do not live their genders in intelligible ways are at heightened risk of violence". The broader implications of gender intelligibility extend to all forms of deviation from hegemonic norms. The "violence" at stake is not only physical but also epistemic and temporal: it encompasses institutional erasure of alternative life rhythms, modes of care, and affective investments that do not conform to the masculinist, output-driven temporality of neoliberal academia.

Yet Butler's construction of precarity, while instructive, can also be problematic, particularly in relation to her framing of vulnerability in ways that partly obscure the historically specific and materially embedded forms of violence. Puar (2017), for instance, complicates Butler's account of vulnerability, arguing how the appeal for recognisability can reproduce the biopolitical exclusions it seeks to contest – somewhat resembling what Hall (2000) describes as a 'multicultural drift' wherein inclusion is tokenistically commodified. Rather than striving for incorporation into dominant schemas of time and value, Puar urges the disruption of the structures of chrononormativity—the temporal regimes that dictate who belongs, when, and on what terms.

This insight underscores how the temporalities of embodied labour and care, particularly within academia, must be understood not as anomalous interruptions of a normative baseline but as socially constructed disruptions to chrononormative order. As Felt (2017) observes, institutional life is organised around regimes of productivity, progress, and linear success. Within such regimes, care—particularly mothering—emerges as an interruptive temporality that unsettles the masculinist ideal of the seamless academic trajectory. The academic mother, especially when racialised, is thus situated as "out of time," her embodied reality clashing with the temporal infrastructures of the institutional clock.

This tension exceeds a mere negotiation of personal and professional priorities; rather, it reflects how affective economies foreground the temporal politics of academic life. As Ahmed (2004) argues, emotions operate as forms of cultural politics; within the neoliberal university, with guilt, aspiration, regret, and exhaustion all produced through normative temporal practices, privileging disembodied time-sovereignty. Bodies that disrupt these rhythms are marked as obstructive—*"in the way"* of institutional momentum—revealing how care-oriented subjectivities are discursively and materially marginalised within a system optimised for uninterrupted, masculinised productivity (Ahmed, 2023).

Here, Ahmed's (2010) notion of the "promise of happiness" is particularly salient. Whether constructed as the fulfilment of maternal devotion or through academic prestige, 'happiness' operates as a disciplinary mechanism binding individuals to competing, and often incompatible, temporal demands. Moreau and Robertson (2019a, 2019b), Hoskin, Moreau, and McHugh (2023), and Hoskin and Barker (2025) have shown how the neoliberal university persistently fails to adequately incorporate caregiving into its temporal architecture through recognition/need-informed support for academic parents with caregiving responsibilities. Instead, institutions continue to presume a time-sovereign academic subject, rendering caregiving an incompatible disruption. The university is thus structurally and affectively ill-equipped to accommodate care-laden temporalities, perpetuating exclusions through ostensibly neutral temporal regimes.

Returning to Foucault helps to better situate Butler's insights into precarity within a broader framework of governmentality. The self-monitoring subject, caught in the panoptic gaze of institutional apparatus—short-term contracts, performance metrics, publication quotas, and research funding pressures, is compelled to discipline their time, body, and affect to remain 'competitive' (Foucault, 1977). This is what Foucault (2004) later articulates in *Society Must Be Defended*, as biopower, the "administration of bodies and the calculated management of life" (p. 246). This biopolitical and temporal discipline can be better understood through what Brown (2015) describes as the 'entrepreneurialisation of the self' – a notion foregrounded in neoliberal rationality of governmentality, capturing how individuals are increasingly expected to act as self-investing, self-marketing entities under the logic of market metrics and competition.

Yet this demand is unequally borne. Those 'bodies' carrying communal, cultural, or maternal care responsibilities find themselves structurally penalised, their time rendered less valuable or even pathological. As Adam's (2008, p. 4) argues, "the future is colonised by those who have the institutional power to define, organise, and control time". This biopolitical regime disciplines subjects by aligning them with normative academic temporalities, privileging those who can embody uninterrupted productivity (see also Foucault, Davidson, and Burchell, 2008). Precarity thus emerges as a form of temporal governmentality—a mode of controlling subjects by scripting their relation to time itself. For the racialised academic mother, temporality is doubly governed: she is held accountable to the neo-liberal demands of the institutional clock, while simultaneously responsible for affective labour that exists on fundamentally different temporal terms. This split temporality intensifies her precarity and creates what Butler (2004b) describes as an increased exposure to violence for those whose lives are unintelligible within dominant norms.

Conclusion

This chapter has established the theoretical foundations necessary for exploring representational dynamics and the embodied politics of academic knowledge production. Drawing first on Said's (1978) postcolonial critique of Orientalism, the discussion underscored how epistemological hierarchies continue to structure the academy, sustaining the normative authority of Western/Occidental knowledge systems while subordinating or erasing alternative epistemologies. This was further enriched through postcolonial feminist constructs, which highlighted the intersecting operations of race, gender, and embodiment in shaping both the exclusion and conditional inclusion of marginalised knowledges and subjectivities. Also, the integration of Foucauldian poststructuralist feminist perspectives provided a complementary analytic lens, reframing power not as static or individually possessed, but as discursive, relational, and historically contingent. This approach enabled a move beyond identity-based accounts of marginalisation, towards a structural reading of how institutional norms and academic practices regulate legitimacy and intelligibility in knowledge production.

Building upon this theoretical groundwork, the next chapter turns to the methodological framework through which my research questions can be explored. It sets out the epistemological commitment, research design, methodological choices, ethical considerations, and analytical strategies that underpin my study, demonstrating how the theoretical lenses are translated into methods of data production and analysis. In doing so, the methodology chapter ensures that the empirical work remains grounded in, and responsive to, the epistemological orientations established through the literature and theoretical discussion.

Chapter Four - Methodology Chapter

Introduction

In this chapter, I present and discuss the methodology framework upon which this study is grounded, starting off with a conceptual clarification of the methodology that guides the inquiry. Underpinned by an interpretivist onto-epistemology, the chapter foregrounds the view that knowledge is co-constructed through meaning-making within specific social, cultural, and historical contexts. This philosophical orientation informed the choice of qualitative research methods aimed at exploring the nuanced, lived experiences of my participants through the use of semi-structured interviews alongside timeline maps—methods chosen for their capacity to elicit personal narratives while allowing participants to exercise agency in shaping the data produced.

I then proceed to outline the research context and process, discussing how participants were recruited, how fieldwork (online) was conducted and negotiated, and how trust was cultivated. Reflexivity is woven throughout, as I engage in reflections on my positionality as both an insider and outsider—negotiating shared racial identity and critical distances by virtue of being a man—and the implications of this duality for my research experience. Ethical considerations are addressed with rigour, particularly concerning informed consent, confidentiality, and the relational ethics of working with marginalised groups. Rather than treating ethics as a procedural formality, I present it as an ongoing, situated practice bound up with accountability, representation, and the politics of 'voice.'

To ensure the credibility and integrity of the research, I articulate the steps taken to enhance trustworthiness, including in-depth engagement with the data produced and 'member-checking'. The analytical strategy employed combines thematic analysis with elements of discourse analysis, offering a layered interpretation of participants' accounts that attends to both language and the discourses participants used to make meaning of their experiences. Throughout, I remain attentive to how my assumptions and interpretive lens shape the analytic process, embracing a reflexive stance that underscores the collaborative and contingent nature of qualitative research.

Methodology: A Conceptual Clarification

Methodology, as distinct from methods, refers to both the technical procedures of data production and analysis as well as the overarching strategic rationale that underpins those choices. Crotty (1998, p. 3), in his foundational texts of social research, aptly defines methodology as "the strategy or plan of action which lies behind the choice and use of particular methods." This strategy is embedded within broader philosophical and theoretical commitments that shape how knowledge is conceptualised and pursued. Recent scholarship continues to affirm this distinction. Clark et al. (2021), in the latest edition of *Bryman's Social Research Methods*, complement the view that methodology serves as a bridge between epistemological assumptions and the specific methods employed, guiding the researcher in aligning what they seek to know with how they come to know it.

Crucially, methodology is anchored within a research paradigm—an intersection of beliefs and values (and sometimes contradictions and controversies) that frame inquiry. Guba and Lincoln (1994; revisited in their later writing – Lincoln, Lynham and Guba, 2011) argue that to understand methodology, one must engage with the fundamental question: How can the inquirer go about finding out whatever they believe can be known? This inquiry leads to a coherent consideration of four interrelated components: ontology (the nature of reality), epistemology (the nature of knowledge), methodology (the strategy for inquiry), and methods (the tools for data production and analysis). These components are not merely theoretical abstractions; they are all epistemologically interconnected in every practical decision made in the research process. Methodological clarity, therefore, requires an account of these philosophical foundations and their implications for the conduct and interpretation of research.

Contemporary qualitative methodologists such as Braun and Clarke (2021) have further argued for a renewed attentiveness to the conceptual underpinnings of methodology, warning against the uncritical use of methods detached from their epistemological roots. In their work on thematic analysis, they advocate for what they term a 'fully specified approach' that requires researchers to transparently articulate their theoretical and epistemological positioning. This stance resists the view of methodology as a technical toolkit and instead emphasises its role in shaping meaning, power relations, and knowledge production. In line with this perspective, the present chapter unpacks the methodological orientation of the study by locating it within an interpretivist paradigm, thereby foregrounding the assumption that knowledge is constructed, contextual, and co-produced. Through this lens, the research design, methods, and analytical choices are inherently subjective but ethically and epistemologically sound.

Different research paradigms are underpinned by divergent ontological and epistemological assumptions, each shaping distinct understandings of reality and the nature of knowledge. These foundational beliefs not only influence the direction and purpose of inquiry but also guide the selection of appropriate methodologies and methods. As Lincoln, Lynham, and Guba (2011) argue, these differing paradigmatic positions often give rise to intellectual tensions, debates, and at times, productive convergences. Such paradigmatic controversies reflect deeper philosophical divergences about what can be known, how it can be known, and whose knowledge is legitimised in research. Nonetheless, emerging dialogues across paradigms have also begun to challenge rigid binaries, encouraging more pluralistic and context-responsive approaches to inquiry.

Ontology, often referred to as the study of being, is primarily concerned with the nature and structure of reality (Crotty, 1998). It prompts researchers to consider what kinds of entities exist within the social world and what it means for something to be real. This ontological positioning is not merely a theoretical exercise; it requires researchers to commit to particular assumptions about the nature of the phenomena they seek to investigate—whether reality is singular and objective, or multiple and constructed. These assumptions, in turn, influence how research questions are framed and how findings are interpreted.

This is where epistemology comes into question. Closely intertwined with ontology, it addresses the nature, scope, and legitimacy of knowledge. Creswell (2013) describes epistemology as the philosophical grounding that guides how researchers come to know the world and what counts as valid knowledge. In this regard, epistemology informs the relationship between the knower and the known, shaping the interaction between researcher and subject. Denzin and Lincoln (2017) elaborate further by conceptualising epistemology as the set of assumptions that interrogate what constitutes acceptable knowledge as well as the nature of the relationship between the would-be knower and what can be known. In essence, epistemology grapples with the question: what does it mean to know something, and how can we be sure of that knowing? Recognising the interdependence of ontology and epistemology is vital, as together they form the philosophical architecture upon which coherent and credible research design rests.

Within the ontological and epistemological framework that underpins this study, reflexivity plays a central role in evaluating both my own subjectivity as well as the inherently subjective nature of participants' accounts. This reflexive stance serves to strengthen the credibility and trustworthiness of the study as well as foreground the co-constructed nature of knowledge. From a decolonial perspective, such reflection challenges conventional hierarchies of knowledge and subverts embedded power imbalances between researcher and researched. Drawing on the work of Said (1978), this approach seeks to re-centre marginalised voices and situate analysis within a democratised framework of knowledge production.

Aligned with social constructionism, I acknowledge that the act of inquiry is not neutral or detached. As Clark et al. (2021) argue, it is impossible to study a phenomenon without simultaneously influencing and shaping it through the research process. This recognition underscores the relational and interpretive nature of knowledge-making, where research findings are not discovered in isolation but emerge through the dynamic interplay between the researcher and participants. Thus, my interpretations are not mirror reflections of an objective reality but rather situated, subjective accounts that are shaped by my positionality, methodological choices, and conceptual framing.

As Symon et al. (2000, p. 460) aptly put it, "social constructionists believe that reality is a product of social construction." From this vantage point, I embrace the existence of multiple, contextually embedded realities that can only be accessed and represented through interpretive engagement. My role, then, is not to unpack a singular 'truth', but to construct meaning of narratives grounded in participants' lived experiences and my own analytical lens. This demands an ongoing, critical awareness of my subjective positioning and interpretive influence. It is within this context that I now turn to my onto-epistemological perspective – interpretivism – which necessitates a reflexive approach to the meanings participants assign to their experiences, and a commitment to exploring how and why those meanings are formed, conveyed, and understood within the social world.

Interpretivist Onto-epistemological leaning

This research is qualitative in nature and is broadly leaning on an interpretivist epistemological perspective, allowing a deep engagement with how participants construct meaning from their lived experiences, and how these meanings are co-produced and interpreted within specific social, cultural, and historical contexts (Clark et al., 2021; Dean, 2018). This is what Pascale (2011) means when she argues that while research outputs are often credited to individual researcher(s), knowledge is never an isolated, objective reality or produce. Instead, it is a product of dynamic interactions between researchers, participants, disciplinary gatekeepers, publishing institutions, and research audiences—constituting a cultural community of meaning-makers. Hence, interpretivism, against popular notions, should not be understood as simply 'seeing through the participants' lens,' but rather as an ongoing negotiation between the ontological and epistemological positions of all those involved in the research process, including future readers and critics.

Leading methodological scholars such as Denzin and Lincoln (2011) have noted the conceptual ambiguities surrounding interpretivism, particularly in contrast to positivist paradigms dominant in the 'hard' sciences. However, they emphasise that interpretivism emerged from within a qualitative research approach to offer an inductive, theory-building, and equally rigorous approach to social research (see also Dean, 2018). Committed to the philosophy of social construction, interpretivist research thus prioritises understanding how individuals make sense of social phenomena through subjective co-interpretation and symbolic interactions (Pascale, 2011), signalling what has been described as marking the interpretive turn —a shift away from decontextualised, dehumanised methodologies toward research practices that centre human meaning-making, contextual specificity, and reflexivity (see also Dean 2018; Yanow and Schwartz-Shea, 2015).

Within this broader paradigm shift, feminist scholarship has played a pivotal role in challenging the assumptions of positivist and post-positivist epistemologies in social research. These paradigms have historically treated the researcher's identity and positionality—as well as their choice of methods—as neutral and detached from the research process and analysis. Such assumptions tend to obscure the influence of the researcher's presence in the field and do little to disrupt existing power imbalances within the research encounter (Almlund, 2013; Jackson et al., 2024). Feminist theorists such as Harding (2004, 2013), Haraway (2013), and Hanon (2025) have instead sought to reimagine research practices in ways that are reflexive, non-oppressive, and grounded in the lived experiences of women. Haraway's (2013) notion of situated knowledges, for instance, rejects the myth of the neutral or objective observation, emphasising that all knowledge is subjectivity, contextual, and embodied. Likewise, Hanon (2025) and Harding (2013) have advocated for non-oppressive research through standpoint epistemologies, which foreground the authority of marginalised knowers and the political dimensions of research.

This reorientation has prompted a rethinking of fundamental ethical and methodological questions: What does it mean to conduct ethical research? Who is authorised or legitimised to carry out research, especially in contexts involving marginalised communities? And how can research be designed in ways that are inclusive, emancipatory, and representative of those it seeks to understand? To respond to such questions, some scholars (such as Burns and Walker, 2005; Leatherby, 2011) have argued for gender-matched research, suggesting that women may be best positioned to research other women. They contend that woman-to-woman interviewing facilitates empathetic understanding, shared cultural references, and insider rapport that can yield richer and more authentic accounts. Burns and Walker (2005) further argue that men, particularly in the context of women research subjects, may lack the embodied knowledge and socialised experience necessary to fully engage with or interpret women's realities. This resonates with de Sousa Santos' (2012) critique of epistemic exclusion, wherein dominant groups often fail to grasp the nuances of marginalised life-worlds.

These arguments are rooted in feminist standpoint epistemology, which serves to critique positivist arguments of social science research. It challenges the dominant assumptions of objectivity and neutrality in knowledge production by questioning who counts as a legitimate knower and under what conditions knowledge is produced and validated (Hanon, 2025; Harding, 2013; Hartsock, 2017). Central to standpoint theory is the idea that knowledge is socially situated: one's experiences and structural positioning—particularly those of marginalised groups—may offer more complex, situated, and ethically engaged understandings of social phenomena that are often obscured or ignored in mainstream epistemologies (Haraway, 2013; Smith, 2016; Smith, 2021). Thus, standpoint theorists argue that marginalised groups can generate more ethically engaged, reflexive, and contextually grounded understandings of social realities (Harding, 2004, 2013; Hartstock, 2017).

Building on this, scholars such as Jenkins (2007) advocate feminist methodologies that encourage researchers to cultivate non-hierarchical, emotionally resonant relationships with participants (see also Hanon, 2025; Oakley, 2013). This often involves shared disclosures, mutual recognition, and appeals to common identities—creating space for trust and co-authorship of meaning. However, a number of poststructuralist feminists have problematised the assumption that shared gender automatically ensures ethical or non-extractive research. Scholars such as Hesse-Biber (2017) and Hanon (2025) caution that power differentials— whether shaped by class, race, education, or institutional affiliation—can still render woman-to-woman research hierarchical and potentially exploitative.

In what has been called a cultural turn in feminist epistemology, poststructuralist scholars have shifted focus toward the politics of "truth," the contingency of knowledge, and the relational construction of subjectivity. They argue that both researcher and participant are socially embedded subjects with their own 'truths', and neither is epistemically neutral or ontologically fixed (Jenkins, 2007; Ladson-Billings, 2003b). As such, feminist research requires continuous ethical reflexivity—not just in how data is produced and analysed, but also in how relationships are formed and how representational authority is exercised.

Referring to feminists working with Derridean grammatology and Foucauldian notions of disciplinary power, Clough (2008) critiques the politics of identity matching in research, particularly the assumption that shared identity, especially gender, is a necessary precondition for producing valid or situated knowledges. She questions the essentialist logic embedded in some interpretations of standpoint epistemology, where experience is positioned as the unquestioned ground of knowing, and identity becomes a proxy for epistemic legitimacy. As Harding (2013) also cautions, such essentialist framings risk homogenising identity categories and failing to account for the internal diversities, contradictions, and power dynamics within them. While shared experiences and identity can serve as important resources for amplifying the voices of marginalised populations, they should not be treated as automatic pathways to epistemological authority. Rather, they must be critically explored within a broader recognition of how subjectivities—both of the researcher and the researched—are socially and historically constructed (Archer, 2002, Ashton and McKenna, 2020; Berger, 2015; Hannon, 2025; Harding, 2013; Ladson-Billings, 2003a).

'Doing' feminist research, then, requires more than a mere alignment of identity. It demands attentiveness to the entire research process as a site of epistemological negotiation, where meaning is co-constructed through the interaction of differently situated knowers. As Ladson-Billings (2003a) and Jackson et al. (2024) argue, the subjective standpoints of both researcher and participants shape not only what knowledge is produced, but also how it is produced and to what end. These subjectivities are not inherently liberatory; rather, they hold transformative potential when consciously deployed to do research *with* and *for* women, and not on them. Feminist epistemology, therefore, becomes not merely a critique of traditional paradigms but a call to ethical and reflexive engagement that confronts questions of power, representation, and responsibility.

This call has been taken up by Black feminist scholars such as Collins et al. (2021) and Crenshaw (2019), who have raised crucial critiques of feminist research practices that insufficiently attend to the ways that race, class, and coloniality shape experience and interpretation. Collins, for example, underscores how interlocking systems of oppression affect knowledge production and warns that women researchers may inadvertently reproduce forms of epistemic violence through misrecognition or misrepresentation of women of colour's experiences. Similarly, Ahmed (2009) cautions against a superficial identification with the 'Other' that ignores structural inequalities and cultural differences. These critiques challenge researchers to develop epistemic humility, recognising that shared gender does not erase the power imbalances that shape cross-cultural (and by extension cross-gender) research relationships. Berger (2015) further notes that cultural dissonance may limit a researcher's ability to produce meaningful data, as unfamiliarity with identity norms in a broad sense and lifeworlds can hinder the production of rich, contextual understanding (see also Archer, 2002).

As an interpretivist researcher, I am reflexively aware of these critiques and locate my inquiry within the interpretivist epistemology that views knowledge as relational, partial, and context-dependent (Dean, 2018; Lincoln, Lynham, and Guba, 2011). I do not regard knowledge as something 'discovered' or 'collected' in the field; instead, I lean towards the epistemological terminologies of producing or co-constructing knowledge through dialogue, reflexivity, and interpretation. Hence, I adopt the language of 'knowledge production' rather than data collection (Denzin and Lincoln, 2011; Yanow, 2013), foregrounding the interpretivist dimension of the research study. Methodologically, my use of semi-structured interviews alongside timeline mapping was not aimed at achieving statistical generalisability. Instead, these methods were designed to explore how the contextual and situated experiences of WAC in relation to their intersecting identities, and how these shape their career trajectories. This kind of inter-subjective inquiry, as Yanow (2013) emphasises, lies at the heart of an interpretivist research culture committed to reflexivity, nuance, and contextual sensitivity.

The interpretivist onto-epistemology, despite significantly contributing to deepening understanding of meaning-making and lived experiences, is not immune to critique. Yanow and Schwartz-Shea (2015), for example, caution against an excessive inward turn—something that can be described as epistemological 'navel-gazing'—which, while valuing reflexivity, may overemphasise subjectivity at the expense of grounded empirical engagement and analytical rigour. Often from a positivist standpoint, interpretivist research is frequently challenged for relying on small, non-representative samples, which critics argue limit their replicability, generalisability, and capacity to produce cumulative knowledge (Clark et al., 2021). In particular, the perceived absence of standardised procedures can compromise the reliability and validity of findings, especially where there is insufficient triangulation, transparency, or member-checking to verify interpretations (Bibi, Khan and Shabir, 2022; McAnulla, 2006).

Such critiques suggest that the highly contextual and subjective orientation of interpretivism may inadvertently undermine its empirical robustness if not balanced by methodological transparency and systematic reflexivity. However, scholars such as Denzin and Lincoln (2017), Pascale (2011), and Lincoln, Lynham, and Guba (2011) have argued against treating the interpretivist approach as a dichotomous binary of the positivist research, noting that such critiques misunderstand the epistemological commitments of interpretivism. Rather than minimising rigour, interpretivism reframes it, privileging depth over breadth, richness over replication, and meaning over measurement. As such, the ontological and epistemological boundaries between interpretivism and positivism are not rigid dichotomies, but often fluid, overlapping, and contextually contingent, inviting a more pluralistic and ethically engaged research practice.

Ethical Considerations

In line with the University of Glasgow's (UofG) research ethics guidelines, I initiated my ethics application within the first three months of my doctoral programme, submitting the first version to the College of Social Sciences Research Ethics Committee by the end of March 2022. Beyond being a formal requirement, I recognised the ethical review as a vital process through which committees work to uphold research integrity by balancing obligations to research participants, institutions, researchers, and society more broadly (Brown, Spiro and Quinton, 2020). As scholars have noted (e.g., Hesse-Biber, 2017; Sikes and Piper, 2010), the ethics approval process is often marked by tensions—particularly between researchers and ethics committees—as both parties negotiate the practical and normative boundaries of ethical research. Brown, Spiro and Quinton's (2020) aptly question whether ethics committees function as 'friends' or 'foes' in educational research, concluding that the key determinant is the presence of transparent communication, mutual respect, and a supportive institutional culture.

My awareness of these debates informed my early engagement with the ethics process, especially since I intended to collect data considered by the UofG's Data Protection Office as 'special category'—namely, personal data concerning participants' racial and ethnic identities. I had therefore anticipated an iterative ethics process, considering this an important opportunity to articulate and refine the ethical implications of my study, particularly those pertaining to the mitigation of potential harm to my participants. In preparing the application, I consulted the updated BERA's (2018; and later, the 5th edition, 2024) *Ethical Guidelines for Educational Research* as well as guidance from the ESRC's *Framework for Research Ethics* (2025). These frameworks collectively informed the ethical principles underpinning my approach, including informed consent, confidentiality, privacy, autonomy, dignity, and social responsibility.

Despite this preparatory work, I had not anticipated that the ethics approval process would extend over six months and require four resubmissions. A recurring point of concern raised by the committee involved my proposed sampling strategy—primarily snowball sampling through personal and supervisory networks. The committee requested, as a condition of approval, that I first obtain formal authorisation from the Clerk of Senate before initiating participant recruitment. While I understood the need for institutional oversight, this additional layer of approval, compounded by the requirement to notify relevant Heads of Colleges and Schools—even after obtaining the Clerk's permission—contributed to the sense of increasingly bureaucratic constraints. This reflects broader scholarly critiques of how procedural ethics can sometimes undermine researcher autonomy and responsiveness to context (Hammersley and Traianou, 2014). At the same time, I appreciated that institutional leadership must be aware of research involving their staff, particularly when institutional affiliations may be recognisable and reputational considerations are at stake.

Further ethical uncertainties arose when my supervisors queried whether similar permissions were required for accessing participants based at institutions outside the UofG. As a precautionary step, I sought clarification from the ethics committee, who advised me to seek formal permissions from each external institution. This posed a considerable practical challenge, given my intention to recruit participants from up to six other universities. In response, I reiterated that participants would be approached through personal and informal academic networks via snowballing, rather than through institutional channels. Following further communication, the committee administrator confirmed that if participant recruitment occurred through personal contacts rather than institutional affiliation, formal permissions from external institutions would not be necessary.

This experience highlights the complexities and situated ethical dilemmas that often arise during fieldwork—challenges that may not always be fully anticipated in the formal structure of ethics application forms and guidance notes (Clark et al., 2021). While ethics committees typically adopt a thoughtful and context-aware stance (Brown, Spiro and Quinton, 2020), there remains an important space for researchers to exercise careful, reflexive judgment in interpreting and working with ethical principles in practice. In developing my application, I engaged constructively with the committee's feedback, although some recommendations required adaptation based on the specific dynamics of my research context. My understanding was that the ethics committee supported such informed flexibility, recognising the situated nature of ethical decision-making in qualitative research.

Following approval, I commenced recruitment by contacting potential participants and institutional gatekeepers across STEM faculties, and by leveraging academic networks. All prospective participants were provided with an information pack containing a participant information sheet, informed consent form, privacy notice, and a copy of the ethics approval certificate. These materials were intended both to inform participants about the nature of their involvement and to build trust in the study. Only those who provided both verbal and written consent were included. I took care to discuss and arrange suitable interview settings in advance to ensure privacy and mitigate the risk of participants being overheard. Most interviews took place in private spaces—either participants' homes or individual offices—while I conducted all interviews from my own flat, as my university office was shared.

Prior to data production, I revised the semi-structured interview guide in consultation with my supervisors to ensure that the questions were neither leading nor potentially traumatising, particularly given the focus on participants' gendered and racialised experiences. The guide was also aligned with the study's four overarching research questions to avoid 'function creep'—the unintended or undisclosed expansion of data production beyond the original scope (Clark et al., 2021). To enhance transparency and participant agency, I adopted an iterative approach to informed consent, offering participants the opportunity to review their interview transcripts, comment on emerging interpretations, and raise concerns. Participants were also provided with the contact details of both the University's Data Protection Office and the Information Commissioner's Office should they wish to raise a concern about data handling.

During the interviews, I employed responsive, on-the-spot prompts to probe issues raised by participants, while remaining attentive to verbal and non-verbal cues that might indicate discomfort. Where appropriate, I clarified and/or rephrased questions or reminded participants of their right to skip questions or terminate the interview at any point. This iterative consent process proved particularly important in allowing participants to retain control over the narratives they shared (Guillemin and Gillam, 2004).

As the research progressed, it became instructive that to deepen my understanding of the institutional contexts shaping participants' experiences, it would be valuable to include interviews with Heads of Schools and Colleges—an addition that was not part of the initial methodological design. While I planned to conduct five such interviews, only two were feasible given time constraints. Nonetheless, this development necessitated the submission of an ethics amendment. While unanticipated, this step was crucial in upholding the principles of transparency and accountability central to ethical research conduct. The amendment process provided an opportunity to reflect on the evolving scope of the study and to carefully consider the new ethical dimensions introduced by engaging individuals in positions of institutional authority. This included re-evaluating consent procedures, data management strategies, and potential risks of institutional identifiability—especially given the increased likelihood of linking specific responses to institutional practices or cultures.

The ethics committee's response to the amendment reinforced the importance of adaptive ethical reflexivity in qualitative research. While the process required further justification and minor revisions to participant-facing documents (such as updates to the participant information sheet and interview schedules), it ultimately ensured that the expanded scope of the research remained aligned with core ethical principles. The need for the amendment also highlighted how ethical considerations are not static but must be revisited and reinterpreted in response to methodological shifts in the field. This aligns with broader scholarly arguments that view ethics as an ongoing, dialogical process rather than a one-off bureaucratic hurdle (Guillemin and Gillam, 2004). The experience underscored the value of ethical flexibility—supported by institutional structures—in enabling researchers to respond meaningfully to emergent questions while safeguarding the rights, dignity, and privacy of all participants.

In line with the General Data Protection Regulation (GDPR) principle of data minimisation, only personal data essential to the research aims was generated and retained. All data were handled with strict confidentiality and stored securely using password-protected folders within my University of Glasgow OneDrive account, with backups on my personal OneDrive. I adopted the OHDA file-naming convention, using pseudonymised identifiers (e.g., Participant1_BlackAfrican_UniversityA) for transcript files. These were translated into pseudonymised version for analysis (e.g., Sophy, Black-African in Computing Science) and later anonymised for archival purposes to protect participant identity. A separate, password-protected file containing the key linking pseudonyms to participants was maintained and stored securely apart from the main dataset. Both technical and organisational measures were employed to ensure the integrity, security, and ethical stewardship of participant data throughout the research process.

The Research Context

Clark et al. (2021) note that "getting started on a research project begins with one's orientation to basic tenets about the nature of reality, the purpose of doing research, and the type of knowledge to be produced through the researcher's efforts" (p. 74). This implies the imperative for researchers to articulate a clear epistemological stance and purpose at the outset of their study. Accordingly, I began the research process by engaging in a critical review of relevant literature and theoretical frameworks, drawing on Saidian postcolonial and Foucauldian poststructuralist lenses. This engagement foregrounded the analytical lens through which data was later interpreted, but also for familiarising myself with the key debates surrounding the underrepresentation of WAC in STEM and identifying gaps within the existing scholarship.

Initial searches on Google Scholar, using Boolean operators ("AND", "OR") with keywords such as underrepresentation, inequality, women (academics) of colour, BAME, STEM, and higher education, yielded limited results. This scarcity likely reflected both the stark underrepresentation of WAC in STEM academia, particularly in senior roles, and the broader structural silencing within both academic representation and research. To address this limitation, I employed a snowballing strategy, searching reference lists in the initial studies to identify further relevant literature. In the later stages of revising my literature review, I also utilised ChatGPT to find more recent publications and reports. The literature review proved helpful in clarifying the scope of the study and affirmed the relevance of an interpretivist research paradigm. Given the subjective and situated nature of the research focus, I adopted a qualitative methodology involving semi-structured online interviews supplemented with timeline mapping to explore participants' experiences in depth.

Despite having previous research experience from my master's project and undergraduate studies, and robust guidance and mentorship from my supervisors who specialise in sociology of education and gender and inequality studies, I approached the fieldwork with both enthusiasm and apprehension. I was deeply motivated by the potential to contribute to the growing body of work aimed at decolonising STEM academia, but also anxious about the practicalities of data production, especially concerning participant recruitment, the sufficiency of data for analysis, and its interpretive richness. The study was designed to produce and analyse the subjective meanings participants attached to their social realities, aligning with Dean's (2018) interpretivist stance that prioritises description, interpretation, and contextual understanding.

To enhance my preparedness, I undertook two advanced research training courses on research design and qualitative methods. These courses were instrumental in reacquainting me with key methodological principles and resources. Nevertheless, I recognised a gap in the literature when it came to detailed, reflexive accounts of the practicalities of qualitative research—particularly from the perspective of male researchers studying women's experiences. While numerous reflexive accounts exist by women studying men (e.g., Arendell, 1997; Cassell, 2005; Lefkowich, 2019), detailed accounts by male researchers studying women remain scarce. Moreover, the few published studies lack a thick description of the research process or contextual dynamics, as is often the case with many studies in scholarly journals, particularly due to word count constraints (Busso and Leonardsen, 2019).

Clark et al. (2021) argue that the academy must create more space for insights generated through the research process that fall outside conventional definitions of "data." Although qualitative research is frequently couched in principles of contextualisation and reflexivity, much of the published scholarship remains focused almost exclusively on data analysis and findings (Busso and Leonardsen, 2019; Hickson, 2011; Jenkins, 2007). This tendency suggests an implicit view that rich reflections, observations, and "thick descriptions" of the research process are the exclusive domain of ethnographic work. Whether this exclusion stems from authorial choices or editorial constraints, Hickson (2011) identifies two major problems with this tendency. First, insights that could meaningfully inform and contextualise qualitative data are lost when the research process is overlooked. Secondly, the absence of detailed methodological reflection deprives future researchers—particularly PhD and early career researchers—of valuable learning opportunities about the practical challenges and ethical dilemmas that often arise in qualitative research. This was a significant issue I encountered at the start of my own project.

In what follows, I provide a reflective account of my research experiences, foregrounding the methodological decisions and challenges that shaped the study. These reflections are organised in alignment with the research methodology and aim to provide a transparent account of the dynamics involved in conducting semi-structured interviews online. My intention is not only to demystify aspects of the research process—particularly interviewing women about sensitive gendered and racialised experiences—but also to engage with issues that are often taken for granted in qualitative inquiry. I hope this level of transparency offers both conceptual and practical value, particularly for male researchers who may aspire to undertake research that centres women's voices and experiences with the care, sensitivity, and reflexivity such work demands.

Research Methods: Semi-structured Interviews and Timeline Maps

Semi-structured Interviews

Data was produced primarily through online semi-structured interviews which were complemented by a timeline mapping exercise as a participatory elicitation method (discussed in the next sub-section). The interviews were designed to allow a degree of structure while enabling flexibility and responsiveness to participants' narratives, in line with interpretivist and feminist epistemologies that privilege subjectivity, complexity, and co-construction of meaning (Hesse-Biber, 2014).

Prior to the main fieldwork, I conducted two pilot interviews to refine the interview guide and build confidence in the interview process. The first pilot was conducted with a female postgraduate student in computing science, who was also my flatmate at the time. This interview felt more informal and fluid, possibly because the participant was known to me and positioned more as a peer. A second pilot was intentionally conducted with a volunteer PhD researcher I did not know personally, in recognition that most actual interviews would be with junior to senior academics across institutions, many of whom I had no prior relationship with. This second pilot better approximated the anticipated dynamics of the actual interviews and allowed me to prepare emotionally and methodologically for a more formal researcher–participant interaction.

Both pilot interviews lasted approximately 40 minutes—closely aligning with the targeted 60-minute timeframe for the main interviews (including a planned 10-minute break period). These pilots were instrumental in trialling the 20-item interview guide for the development of on-the-spot prompts for deeper inquiry and honing my active listening skills. They also revealed areas where questions required rewording for clarity, particularly those related to institutional STEM cultures and faculty dynamics. Notably, some participants diverged from direct responses, instead redirecting the conversation to other and perhaps more personally resonant experiences. This raised a methodological dilemma around whether to steer the conversation back or to honour participants' agency in deciding what constitutes relevance in their own narratives—a tension acknowledged in qualitative interviewing literature (Creswell, 2013).

This ethical tension—between guiding the interview and allowing participants to shape the conversation—was reflective of the interpretive epistemology underpinning the research, wherein knowledge is co-produced and shaped by power dynamics, positionalities, and affective resonances (Burkette, 2022). Rather than treating deviations as 'off-topic,' they were welcomed as meaningful articulations of participants' lived realities, offering rich insight into what matters most in their professional journeys.

Participants were invited to take part in the study via carefully worded and ethically vetted email invitations. These were accompanied by a set of supporting documents, including a Participant Information Sheet, Informed Consent Form, Privacy Notice, and a copy of the institutional Ethics Approval. This comprehensive documentation was designed to ensure transparency regarding the nature and scope of the research, clarify participants' rights and responsibilities, and reinforce the voluntary nature of their participation. Additionally, the inclusion of the ethics approval and formal documentation aimed to build trust and credibility, fostering participant confidence in the integrity and ethical oversight of the study (BERA, 2024 – *Ethical Guidelines for Education Research*).

The online semi-structured interviews were conducted via the Zoom videoconferencing platform. Zoom was selected over alternatives such as Microsoft Teams or Skype due to its reputation for user-friendliness, stability, and ease of access—particularly in inter-organisational settings involving participants with varying levels of digital savviness (Archibald et al., 2019). This platform provided a familiar and low-barrier interface that helped reduce potential technological anxiety and facilitated smoother communication, especially among participants located across multiple institutions and regions.

At the start of my interviews, I experienced a degree of insecurity stemming from my limited personal exposure to gender-based marginalisation. While this initially caused some anxiety, it simultaneously created space for a form of inquiry that a well-established academic/researcher may have been less willing to ask. Rather than indicating a lack of experience with the complexities of interview dynamics, this positioning enabled a form of openness that encouraged participants to articulate experiences that might otherwise be overlooked or taken for granted. I attribute this, in part, to the strong ethical commitment reiterated at the beginning of each interview, where I reaffirmed the study's confidentiality protocols and participants' rights to withdraw or redact any part of their narrative. This ethical transparency, combined with deliberate rapport-building strategies such as active listening, empathetic engagement, and sensitivity to verbal and non-verbal cues, helped to foster a trusting interview space in which participants felt both heard and respected.

Online interviewing proved to be a pragmatic, cost-effective, and ethically considerate methodological choice. It enabled the inclusion of geographically dispersed participants without incurring travel-related expenses or logistical complexities (Archibald et al., 2019). Moreover, in light of the ongoing implications of the COVID-19 pandemic, particularly during the early period of my study, conducting interviews virtually mitigated health risks of contracting the virus for both researcher and participants as it eliminated the need for physical meeting spaces, aligning with public health guidance and safeguarding participants' wellbeing. Beyond safety, this approach also prevented conflicts arising from finding suitable and safe locations to conduct interviews and contributed to sustainability goals by reducing the carbon footprint associated with academic research travel, which is capable of impacting the climate (Archibald et al., 2019).

Crucially, the flexibility of adopting a semi-structured interview format supported the development of a dialogical and co-constructive dynamic between participants and myself. This format allowed for a balance between structure—anchored by pre-formulated questions aligned with the research objectives—and fluidity, enabling spontaneous follow-up prompts to explore emergent themes and experiential nuances (Clark et al., 2021). The open-ended nature of the interviews provided opportunity for participants to reflect, elaborate, and sometimes reframe their responses, which not only deepened the richness of the data but also fostered rapport and mutual trust. Such rapport was essential, particularly given the sensitive and complex nature of the topics under discussion, which touched on identity, marginalisation, and institutional power.

As Showunmi and Maylor (2013) note in their research on Black women's experiences in English higher education, many critical insights often emerge in the field beyond what interview guides can anticipate. In my own fieldwork, two salient themes became apparent that were not explicitly captured in my interview instruments: first, the performative dimension of the researcher's self-presentation during interviews; and second, the subtle but significant "us/them" dichotomies that emerged in interactions between myself and participants—a dynamic I return to later in this chapter (in my discussion of positionality). These contextual and relational nuances were not only illuminating but particularly instructive given my positionality as a male researcher studying the experiences of women—specifically women of colour—in STEM higher education.

Given the gendered nature of the research focus, I was acutely aware of how my identity could shape the research process as a whole. As such, I found myself anticipating questions about my motivation for undertaking this research, and I struggled a bit with how to articulate my positionality without seemingly reproducing hegemonic power relations or reinforcing the patriarchal trope of a male academic trying to 'save' women through research, similar to Spivak's (1988) critique. At the same time, I was concerned about being perceived as someone exploiting narratives of a marginalised group for personal academic advancement. These internal tensions underscore the need for reflexivity in cross-gender research studies, particularly when they take place within historically unequal power structures.

I quickly recognised that 'doing' feminist research is not only dependent on the voices of women but also on their goodwill, trust, and support, particularly when it comes to participant recruitment and access to networks (Yarrow, 2018). Following Dean's (2018) emphasis on ethical alignment and transparency, I made a conscious decision to present myself as a doctoral researcher committed to co-producing knowledge, rather than as someone attempting to 'speak for' or 'save' women of colour through research. I clarified in my verbal and written communications that my aim was to learn from participants' lived experiences and to create space for their perspectives to inform institutional critique. This framing was met in some instances with receptivity, particularly among participants who expressed curiosity or concern about my research intentions in relation to my gender and/or racial identity.

Equally significant was the way I introduced myself both in email correspondence and at the outset of interviews with a keen awareness that the performance of my identity could either enable or prevent the possibility of the interview itself and its depth. 'Doing my gender' in a non-patronising or condescending manner thus became a necessary form of self-presentation – one that required careful performance of my embodiment. I was also mindful of the phenomenon of research fatigue (Clark, 2008) and the multiple demands placed on academic staff, particularly women academics of colour who may be overburdened with diversity-related and pastoral responsibilities alongside caregiving demands (Crook, 2020). Consequently, my introductory communication explicitly mentioned my institutional affiliation with the University of Glasgow, including the names and titles of my supervisors. As Pink (2001) argues, the symbolic capital associated with prestigious academic institutions and well-established scholars can enhance legitimacy and facilitate participant recruitment and cooperation. Indeed, in several instances, participants' willingness to engage with the study appeared to have been linked to my affiliation and institutional positioning, rather than solely the topic under study.

Despite careful preparation, conducting online interviews between autumn 2022 and summer 2023 presented unforeseen challenges, particularly as these were majorly busy periods of the academic term in many universities. Although interviews were designed to last approximately one hour to allow for a nuanced and flexible discussion of participants' experiences, many sessions were constrained by the tight schedules of busy academics. Several interviews had to be scheduled during participants' break period or outside regular working hours, often with a strict time limit. Some lasted under 40 minutes—the maximum time participants could spare—underscoring the time pressures faced generally by academics. Regardless of how I felt, I kept my opinions and emotions to myself during the interviews to ensure that I was not necessarily interfering with participants' responses or seen as asking leading questions.

Due to the sensitivity of discussing gendered and racialised experiences, efforts were made to ensure interviews were conducted in private, secure settings. However, this was not always feasible. In one case, a participant had to conduct the interview from a shared workspace, and her observed hesitancy in responding suggested the presence of a colleague was affecting her sense of privacy. I responded by offering to pause the interview, and once her colleague left, we resumed the conversation. In another case, a participant with caregiving responsibilities joined from home and was repeatedly interrupted by her infant child. We had to pause the interview to allow her to tend to the baby before continuing. These moments were deeply humanising and served as a reminder of the often-unacknowledged care burdens shouldered by many women in academia. Additionally, minor problems such as changes in plans for some participants meant that I had to reschedule interviews with very short notice.

On my part, I assumed that conducting interviews from my own flat would ensure minimal disruptions. Nevertheless, a few unanticipated challenges arose. On two occasions, I had to briefly pause interviews to answer the door for delivery services, which was audibly distracting the interview process. In both cases, the timing of delivery was unknown when the interviews were scheduled. Technological issues also disrupted the flow of some interviews. At various points, I experienced poor internet connectivity and PC malfunction (freezing), leading me to rejoin the interview. There was also an instance of basic logistical hiccups, such as a pen running out of ink while taking notes, forcing me to take notes electronically while conducting the interview. While seemingly minor, these incidents constitute a set of challenges with conducting online interviews, which can cumulatively affect the interview dynamic and potentially undermine the professionalism of the research encounter.

As de Villiers, Farooq, and Molinari (2022) argue, prolonged technical difficulties or logistical lapses may be perceived as a lack of preparedness or disregard for participants' time, which could erode the trust essential to qualitative research in any online context. Moreover, such disruptions—especially when they interrupt moments of emotional disclosure—can impact the depth and direction of the conversation. As Pink (2001) notes, time lost to resolving unexpected interruptions may often not be reclaimed in interviews, especially with time-constrained participants.

Thus, conducting qualitative research online, particularly with participants engaged in high-stakes academic environments, demands spontaneity, patience, and flexibility (Clark et al., 2021). These are not just essential skill sets but methodological imperatives when dealing with research involving marginalised populations and sensitive themes. Reflexive awareness of how researcher positionality, material conditions, and digital infrastructures interact in the co-production of data is essential—not only to navigate logistical constraints but also to preserve the ethical integrity of the research process.

To supplement the interviews and foreground participants' narrative agency, I invited participants to complete a timeline mapping exercise ahead of the scheduled interviews. The purpose of the exercise was both practical and epistemological: to serve as a conversation starter while also enabling participants to visually or textually chart their career trajectories in ways meaningful to them. Participants were encouraged to identify and illustrate key moments, transitions, and turning points—whether personal, structural, or relational—that had shaped their academic journeys. These included critical incidents, moments of affirmation or marginalisation, influential figures (mentors, family members, managers), as well as institutional barriers and enablers.

Participants were given the option to sketch these timelines using charts (e.g., lifelines, arcs, or step functions), annotate them with brief descriptions, present them in textual format or any other forms that they deem convenient. The method draws on participatory arts-based traditions in qualitative research that centre the participant as a knowledgeable agent and expert of their own experience (Kolar, Ahmed and Chan, 2015; Sheridan, Chamberlain and Dupuis, 2011). Given the demands on participants' time—especially within the context of academia where academics, particularly women often shoulder disproportionate workloads, including teaching, administrative duties, and family responsibilities (Crook, 2020; Oginni, 2021)—the activity was optional and designed to be as accessible as possible.

Out of the 15 participants, only five returned completed timeline maps. These ranged from simple linear sketches with annotated points to rich, multi-modal textual reflections as follows

- One participant submitted a colour-coded career arc segmented into 'formative years,' 'early STEM exposure,' 'institutional barriers,' and 'moments of validation.' The chart included visual markers of stress periods and highlighted external interventions such as scholarship awards and mentorship networks.
- Another participant mapped her journey through a series of concentric circles, each representing a distinct layer of influence—family expectations, cultural norms, gendered institutional practices, and peer networks—emphasising the intersecting nature of personal and structural forces.

- A third participant opted for a detailed narrative timeline, structured chronologically but interspersed with emotive commentary, such as: "2016 – rejected for PhD funding again, questioned if academia was worth it," or "2020 – COVID lockdowns intensified caregiving, halted research momentum."
- In two cases, timelines included sketches and emojis that symbolised emotional responses to key events—such as frustration, imposter syndrome, resilience, and pride (see a cross-section of participants' timeline maps in the Appendices).

While overall engagement with the timeline mapping was limited, its value proved significant. In each of the five interviews where timelines were used, they enabled deeper reflections and facilitated early rapport-building. They also proved useful in surfacing events and trajectories that may not have emerged through direct questioning, especially concerning sensitive or emotionally charged experiences. Moreover, the method allowed for a visual representation of the nonlinear, intersectional, and cumulative nature of participants' academic lives—resonating with the broader aims of the study to unpack complexity and the nature of discourse that participants used to construct meaning of their experiences rather than essentialise them.

In line with Kolar, Ahmed and Chan (2015), I understand timeline mapping not simply as a supplement to the interviews but as a methodological strategy in its own right—one that centres participants' epistemic authority and resists the reduction of career trajectories to simplified categories of success or failure. The co-presence of visual and narrative data enriched the analytical process, allowing for a nuanced exploration of gendered and racialised dynamics in participants' experiences.

This study engaged fifteen WAC currently based at seven UK universities (which remain unnamed to preserve participant anonymity), and across a range of STEM disciplines and academic career stages. Participants included doctoral researchers, graduate teaching assistants (GTAs), postdoctoral scholars, lecturers, research and teaching associates, as well as a STEM industry professional who had left academia. Notably, some participants occupied hybrid positions—simultaneously engaged in paid academic work while pursuing postgraduate qualifications—which offered rich insights into the complexities of how race, gender, and class intersect with issues of academic hierarchy and temporal precarity, and how these issues serve to constrain the career trajectories of WAC in relation to their progression and retention in STEM.

To further contextualise participants' narratives within broader organisational cultures, I approached five senior faculty members and institutional gatekeepers based in STEM departments (for which ethical approval and a subsequent amendment were secured). Although only two interviews were ultimately conducted, they offered valuable contextual depth to the study. One interview was conducted with a British-Indian woman, also in her late 50s, serving as a departmental head within a faculty of science and engineering. The other was with a white British man in his late 50s, occupying a senior leadership role within a medical science faculty. These interviews, while not initially part of the original methodological design, offered a window into the dominant discourses, managerial rationalities, and implicit cultural norms that often shape (and constrain) inclusion efforts in STEM.

The fifteen main participants self-identified across a wide range of racial and ethnic categories, including Black African (Ghanaian, Nigerian, Kenyan), Black British, Afro-Caribbean, British-South Asian (Indian, Pakistani heritage), and South Asian (Indian). Ages ranged from early thirties to late fifties, offering intergenerational perspectives on academic work, belonging, and exclusion. Their disciplinary faculties were equally diverse, spanning biomedical engineering, computing science/engineering, pharmacology, astronomy/astrophysics, microcellular biology, infectious disease biology, and neuroscience, reflecting the broad cross-section of the STEM

fields in which women of colour often remain underrepresented (see table of participants' sociodemographic details below).

No	Pseudonym	Position	Race/Ethnicity	STEM Faculty
1.	Rabita	Research Associate	South Asian – Indian	Biomedical Engineering
2.	Samira	Associate Tutor/PGR	South Asian – Indian	Molecular Pharmacology
3.	Fifi	Post-doc Fellow	Black African – Ghanian	Neuroscience
4.	Kikelomo	Senior Lecturer	Black African – Nigerian	Biomedical Engineering
5.	Sophy	Lecturer	Black African - Nigerian	Computing Science
6.	Níkẹ́	Lecturer	Black African – Nigerian	Molecular Pharmacology
7.	Jasmine	Research Associate	British-Afro-Caribbean (2nd Gen.)	Biodiversity & Vet Medicine
8.	Ngozi	Lecturer	Black African – Nigerian	Computing Engineering
9.	Raagvi	Associate Tutor/PGR	British-Indian (2nd Gen.)	Infectious Disease Biology
10.	Maya	Senior Lecturer	Black African – Kenyan	Infectious Disease Biology
11.	Láídè	Senior Lecturer	British-Nigerian (1st Gen.)	Microcellular Biology
12.	Saachi	Lecturer	South Asian - Indian	Solar Astronomy & Eng.
13.	Priscilla	Post-doc	Black African – Nigerian	Computing Engineering
14.	Yashi	Research Associate	South Asian – Indian	Astrophysics
15.	Raafa	QA Engineer	British-Pakistani (2nd Gen.)	Manufacturing Engineering
16.	Neeraja	Professor/Inst. Head	British-Indian (1st Gen.)	Chemistry/STEM Education
17.	Callum	Professor/Faculty Head	White-British (Man)	Engineering (Autonomous Systems)

Table1: Participants' socio-demographic details

As part of the ethical design of this study, participants were invited to select their own pseudonyms from a set of options provided, and in some cases, they chose to supply a preferred pseudonym themselves. This approach was intended to offer participants a degree of narrative and representational agency while maintaining necessary protections around identity. While care has been taken to anonymise institutional affiliations and specific identities, it is important to acknowledge that anonymisation itself is not a neutral act but a methodological and ethical imperative shaped by power and risk. In line with feminist reflexive research principles (Ashton and McKenna, 2020; Guillemin and Gillam, 2004), I remained reflexively aware of the politics of representation, particularly the tension between offering rich contextual detail and ensuring participants' confidentiality. For instance, some participants referenced their caste or class backgrounds—identifying as working class or from historically marginalised

backgrounds—which was significant for understanding the layered nature of their academic trajectories and encounters with exclusion.

Rather than treating socio-demographic variables as fixed descriptors, I approached them as socially situated and analytically productive categories. This reflexive stance enabled me to unpack how gender, race, class, and academic positionality intersect to shape participants' experiences of inclusion, exclusion, precarity, and resilience in UK STEM academia. In doing so, I drew on methodological insights from interpretivist epistemology, foregrounding participants not merely as data sources but as co-constructors of knowledge whose lived realities challenge dominant paradigms of neutrality and objectivity in research (Collins, 2022; Dean, 2018; Harding, 2004, 2013).

Sampling Procedure

To achieve a manageable but broad cross-section of participants, participants were purposively selected from seven universities across the UK to arrive at a sample size of fifteen main participants and two faculty heads. Five potential participants were initially selected on three major criteria relevant to the research focus, including that participants identify as women, as having African, Afro-Caribbean, or South-Asian Ethnic origins, and as working and/or studying in STEM disciplines. The initial sample of five WAC were thereafter asked to recommend other participants like themselves who fit the demographic of my research subject. These participants then suggested others, and in some cases, put me in direct contact with other participants. As with snowball sampling, the sample gradually increased in size as the study progressed.

To achieve a manageable yet diverse cross-section of participants, a purposive sampling strategy was employed across seven UK universities, yielding a sample of fifteen primary participants and two faculty heads. Initial recruitment was guided by three core inclusion criteria aligned with the research focus: (1) participants self-identifying as women, (2) having African, Afro-Caribbean, or South Asian ethnic heritage, and (3) currently working and/or studying within STEM disciplines. These criteria were established to ensure that the sample

captured the intersectional dynamics of gender, race/ethnicity, and disciplinary location within underrepresented academic spaces.

The first five participants were recruited through direct outreach, and thereafter invited to recommend additional individuals who matched the demographic and disciplinary profile of the study. This approach, a form of snowball sampling (Clark et al., 2021), allowed for the incremental expansion of the participant pool through social and professional networks. In several cases, participants facilitated introductions via email or social media, which significantly aided access to otherwise hard-to-reach individuals.

Although a few participants in the initial cohort were known to me through personal or academic affiliations, the majority were either colleagues of acquaintances or individuals contacted independently via institutional email directories, LinkedIn, or through referrals from academic supervisors. This hybrid recruitment strategy helped to mitigate sampling bias while also fostering trust and credibility, particularly in reaching participants who may have otherwise been reluctant to engage in research on sensitive issues of marginalisation in academia.

Nonetheless, as anticipated at the outset of the study, accessing and maintaining contact with participants proved challenging. This was not unexpected, given the stark and seemingly intractable issue of underrepresentation of Women of African, Afro-Caribbean, and South Asian heritage within STEM fields in UK academia—a pattern consistently documented in both statistical data and the literature I have reviewed in the preceding chapter. In response to this limitation, I adopted a supplementary strategy of contacting Heads of STEM departments and affiliated academic networks to identify additional potential participants. In cases where department heads responded positively, I either requested interviews with them directly (regardless of gender or ethnicity) or asked to be connected with women of colour within their faculties. These interviews with faculty leaders, while originally unplanned, ultimately enriched the data by offering critical insights into the institutional dynamics, gatekeeping practices, and structural conditions that may be contributing to the ongoing underrepresentation of women of colour in STEM academia.

Researcher's Assumptions

Going into the field, I subconsciously held largely negative assumptions about the experiences of women—particularly women of colour—working and/or studying in STEM higher education. These assumptions were, in part, shaped by my own encounters within academic spaces, where I have grown increasingly sceptical of the sincerity of institutional equality, diversity, and inclusion (EDI) initiatives for their performative and tokenistic approach. My outlook had also been reinforced by critical and decolonial scholarship that rightly problematises the persistence of structural inequities in higher education broadly and STEM faculties particularly. These preconceptions fed into what Hickson (2011, p. 829) refers to as "what you see is what you're looking for": a tendency to seek out, and thus inadvertently affirm, what one already believes.

It was therefore surprising—and initially disorienting—when a few participants shared accounts of largely positive experiences in their STEM faculties. These narratives did not conform to the deficit-based framework I had inadvertently internalised, which assumed that racially minoritised people, particularly women, primarily experience marginalisation, discrimination, and institutional barriers. In retrospect, my assumptions mirrored a form of essentialism: viewing women of colour in STEM as a monolithic, perpetually oppressed group. This perspective masks the diversity of experiences and overlooks the ways in which race, gender, class, nationality, and discipline intersect to shape both opportunities and exclusions in non-linear and sometimes contradictory ways (Collins, 2022; Crenshaw, 2013).

As I tried to understand these unexpected narratives, I began to confront the binary thinking that had underpinned my initial interpretive lens. I had unknowingly adopted a dichotomous framework despite expressing commitment to interpretivist principles - one that positioned institutional actors and practices as inherently oppressive and WAC as uniformly disempowered—what Fook and Gardner (2007) caution is a common reflexive trap. This binary framework also influenced how I conceptualised change: as something necessarily imposed upon a flawed system. If changes were needed, I reasoned, then something must be unequivocally "wrong." Such reasoning, however, foreclosed the possibility of understanding power and marginality as complex, dynamic, and discursively constructed rather than fixed.

Deconstructing this dichotomous thinking became a critical turning point in both the analytic and reflexive processes. As I engaged more thoroughly with the data—(re)reading transcripts, examining pauses, contradictions, and narrative shifts—I began to discern more nuanced accounts of identity, resistance, and complicity. It became clear that I needed to privilege narratives that were not merely essentialist but discursive and critical—those that revealed how participants negotiated and sometimes disrupted dominant norms within STEM, while also implicating themselves within those systems.

This shift was particularly informed by dialogic engagement with participants who reflected on how their strategies of coping or thriving could simultaneously resist and reproduce institutional norms. For instance, a few participants described adopting hyper-professionalism as a way of "fitting in," which some later critiqued as inadvertently reinforcing assimilationist expectations of their STEM faculties. These reflexive moments, where participants demonstrated self-awareness of the contradictions in their own trajectories, prompted me to privilege discourses that challenged simplistic accounts or essentialised narratives (Wolgemuth, Hicks and Agosto, 2017).

In privileging such accounts, I chose to emphasise the socially constructed nature of gendered and racial inequalities in STEM—not as objective realities experienced uniformly, but as contingent outcomes shaped by institutional discourses, self-positioning, and identity performances (Butler, 1993, 2004a, 2025). Thus, in the analysis chapters, I consciously included data excerpts and interpretations that highlight how inequalities are actively negotiated and discursively (re)produced, resisting the impulse to frame WAC as solely acted upon by structural forces. Instead, I aimed to represent them as agentic subjects navigating, subverting, and sometimes being implicated in the very systems they seek to critique.

Engaging with literature on positionality and the insider/outsider dynamics prompted me, early on, to anticipate the complex position I occupied as a male researcher of colour exploring the experiences of WAC in STEM. I was aware from the outset that my social positioning—as a Black African man and early career academic—could produce an ambiguous relational dynamic in the research process, marked by what Breen (2007) refers to as 'in-betweenness'.

However, this anticipated positional complexity materialised in tangible ways as I began fieldwork: I encountered poor responses to calls for participants, expressions of hesitance or scepticism regarding the purpose of the study, and a general sense of guardedness from some participants. These reactions suggested that my gender and perceived researcher identity may have contributed to a lack of trust or uncertainty about the aims and implications of the research.

Although I shared elements of participants' racialised experiences, my male identity became a salient axis of difference that shaped how I was received and how relationships were negotiated during the research process. This underscores the relational and dynamic nature of positionality, which cannot be fixed in advance but is continuously constituted through interactions in the field (Jenkins, 2007; Ogunyankin, 2019). As I reflect further in the next section, these early challenges underscored the importance of adopting a reflexive stance—not only in anticipating my location within the research but in responding to how it was being interpreted by participants in real-time.

The 'insider/outsider' positionality: Towards a reflective account

In the introductory reflections of *Cartographies of Knowledge: Exploring Qualitative Epistemologies*, Pascale (2011) articulates the tensions she experienced between dominant 'rational/technical' epistemologies and the complexities of identity and positionality in qualitative research. For Pascale, as for myself, these tensions produced a dissatisfaction with methodologies that disregard the researcher's a priori knowledge and situatedness within the research context. This reflection resonates with my own efforts to navigate the epistemological and methodological position for my study. In what follows, I offer a reflexive account of how my own social location—as a Black man, a doctoral researcher, and an outsider to the lived experiences of gendered marginalisation—shaped the research process, including participant access, interview dynamics, and data interpretation.

Prior to data production, I anticipated the ethical and emotional complexity of researching WAC as a male researcher of colour, and I was mindful of how issues of trust, power, and identity might manifest in the research process. Reflexivity, therefore, was not an optional add-on but a central methodological commitment throughout the study (Berger, 2015; Guillemin and Gillam, 2004). I expected some degree of scepticism from potential participants—especially given historic patterns of extractive research—but I was often surprised by participants' warmth and generosity. Many offered professional advice, encouragement, and emotional solidarity, demonstrating an empathetic understanding of the challenges of the PhD journey. These interactions challenged dominant stereotypes about WAC—such as the 'angry Black woman' trope (Ashley, 2014)—and revealed complex layers of shared experience and support, even across identity differences.

Despite these affirming interactions, my early doctoral journey was fraught with challenges. Like many PhD researchers, I struggled with uncertainties around access, methodological execution, and sample recruitment. Though I was supported by my supervisors with extensive expertise in gender and sociology of education research, my confidence was shaken, especially during a doctoral winter school seminar when a senior STEM professor openly criticised my methodological design and interpretive approach. He questioned the contribution of my qualitative research in STEM contexts, suggesting that my methodology approach lacked the rigour and novelty to constitute "first-order" research. His framing implied that only research aligned with large-scale, positivist, and discovery-driven paradigms carries academic merit and are more likely to have a meaningful impact. This interaction served as a shocking reminder of the hierarchical value systems that dominate the academy, where interpretive, feminist, and decolonial methodologies are often dismissed as 'soft' or insufficiently impactful (Smith, 2021).

This moment of epistemic invalidation, while unsettling, strengthened my commitment to the interpretivist onto-epistemology, reinforcing earlier arguments that I have made about its credibility and particularly cautioning against positioning it as a dichotomous binary with what is described as the positivist paradigm. Thus, I turned to scholars who argue for pluralistic understandings of rigour and impact in qualitative inquiry (see Flyvberg, 2006, and Tracy, 2010, for example). Moreover, it is common knowledge that scholarship and research outputs are often assessed and assigned value on the basis of sounding academic and 'authoritative', demonstrating leadership and independence, and contributing 'unique' and 'expert' findings to the field. As such, many scholars feel pressured to adopt this 'masculinised' voice to demonstrate the impact and trustworthiness of their research work in a bid to solicit competitive funding (Lefkowich, 2019). Such norms marginalise research approaches rooted in humility, relationality, and ethical care.

While the professor's challenge may have temporarily undermined my confidence, it ultimately deepened my commitment to a methodology that values 'voice', context, and social justice. I defended the study by articulating its relevance to Sustainable Development Goals 4 and 5 and its capacity to inform institutional policy and practice in academia more broadly and STEM, particularly. Though power dynamics in that moment constrained my ability to engage fully, the experience compelled me to question the potential impact of my study and to produce a robust justification of my study's contribution—one that I continue to develop and reflect upon in the concluding chapter of this thesis.

Conducting research on the experiences of WAC in STEM as a Black male early-career researcher necessitated critical engagement with the complex and often fluid dynamics of the insider/outsider positionality (Jenkins, 2007). While my racialised identity and lived experiences of structural inequality afforded a degree of shared understanding, my gender and relatively junior academic position introduced an element of "in-betweenness" (Breen, 2007), revealing the ambiguity of researcher positionality (Ogunyankin, 2019). Although my status as an early-career researcher may have somewhat disrupted traditional hierarchies of power—given that I was researching women from junior to senior academic positions—it did not negate the broader social power dynamics shaped by gender and the epistemic authority often granted (or denied) on that basis.

Crucially, my identity and lived experiences of racialisation did not automatically grant acceptance or epistemic proximity to participants, given the gendered nature of the research topic. Instead, it necessitated ongoing ethical sensitivity and reflexivity of how my perspectives, assumptions, and interpretive lens shaped the research encounter. Returning to the reflections I outlined at the start of this chapter, the process of researching across lines of both affinity and difference became a valuable site for methodological learning—one that underscored the importance of humility, ethical attentiveness, and openness to participants' meaning-making on their own terms.

Nevertheless, my identity as a male researcher introduced particular tensions, with some participants displaying hesitancy or initial distrust of my research intentions. A salient example was an early research encounter in which a participant—who had assumed from our correspondence that I was a woman—was visibly surprised when we connected via Zoom. Upon seeing me, she said, "I thought you were a woman," followed by a brief period of silence as though she was reconsidering her willingness to continue participation. When she eventually snapped out of her silence and turned her video on, she apologised, saying she assumed I was a woman. This was a bit unsettling. In that moment, I felt the need to defend not just my presence but also the epistemological and ethical foundations of my study. I reiterated my interpretivist stance, clarifying that my aim was not to speak for WAC but to better understand how intersecting axes of identity—particularly race, gender, and class—shape their career trajectories, and that I was committed to conducting ethical, respectful, and non-exploitative research that represents participants' experiences with integrity and accountability.

Although I had anticipated, in broad terms, potential issues related to recruitment and the cultivation of participant trust during the proposal stage—particularly in light of the historical legacies of research extraction and the systemic marginalisation of minoritised communities—this encounter rendered visible the profound limitations of identity matching and foregrounded the critical role of standpoint in the production of knowledge (Ladson-Billings, 2003a). It became evident that identity cannot be reductively equated with skin colour, phenotypic resemblance, or racialised categorisations (Jackson, 2022); rather, it is complexly mediated through intersecting modalities such as gender, embodiment, and positionality.

In this instance, my own gendered presentation may have been misread—however unintentionally—as signalling a potential risk to psychological safety or as suggestive of an underlying motive to reinforce dominant epistemologies, to assert unearned authority, or to position myself as an 'expert' over the lived realities of those whose experiences I sought to engage. Drawing on Ahmed's *Living a Feminist Life* (2024, p. 234), which itself extends Audre Lorde's critique of the master's tools, I was reminded of the imperative to resist the reproduction of hegemonic embodiment: this meant "I had to find ways not to reproduce the grammar [of hegemony] in what I said, in what I wrote, in what I did, and in who I am" becoming through this research.

As Dean (2018) cautions, researchers engaging in scholarly inquiry who do not share connections to the research topic or subjects risk being seen as appropriating marginalised experiences or reinforcing unequal power relations, even when their intentions are aligned with equity and justice. Nonetheless, the experience with the shocked participants offered important practical and ethical lessons. It highlighted the significance of transparency not just about the research aims, but also about my own positionality. As a direct response, I immediately revised the participant information sheet, clearly stating that I am a male PhD student seeking to research WAC experiences in STEM. I also edited my invitation emails and subsequent recruitment correspondence to explicitly reflect my positionality. This adjustment served as a means of fostering trust and allowing potential participants to make fully informed decisions about their engagement with the study. More broadly, the experience deepened my understanding of how researcher identity can mediate access, trust, and perceptions of legitimacy in the field, reinforcing the value of reflexivity as an ongoing, adaptive practice rather than a one-time declaration (Berger, 2015; Guillemin and Gillam, 2004).

Reflecting further on the impact of my identity and position in interviewing predominantly women academics, I became acutely aware that my access to interview participants may have been granted access to conduct the interviews by virtue of being a black male PhD student – perhaps perceived as less threatening or as someone who could benefit from professional generosity, rather than being perceived as a competent researcher. At the same time, it is plausible that my gender may have constrained the depth of engagement in some interviews, particularly in contexts involving sensitive disclosures related to gendered and racialised

experiences. Perhaps, this had to do with prevailing societal norms that socialise women to exercise caution in their interaction with men, especially in the context of vulnerability and trust (Lefkowich, 2019). Additionally, participants may have perceived a potential epistemic gap—namely, a concern that, as a man, I might lack the experiential grounding necessary to fully comprehend or empathise with the nuanced realities of their lived experiences. It could also have been the associated discomfort of discussing (and/or reliving) traumatic or marginalising experiences to an 'unknown' male researcher (Watt, 2007; Zembylas, 2014).

There are many plausible reasons I could think of, including the unequal power dynamics typical of the researcher-researched relations, where the former is perceived with distrust for having an 'extractive' (exploitative) motive, with the latter taken as 'data sources' rather than being considered as co-constructors of meaning. Such critiques are especially salient in feminist and decolonial scholarship, which problematise the hierarchies embedded in researcher-researched relationships and advocate for ethical, dialogical engagement (Puwar, 2004; Smith, 2021). For me, this experience and the possible rationale were a significant opportunity for reflection on the role that my identity and position played in the overall research process.

While the study posed minimal physical risks, given that interviews were conducted online, the perceived psychological and emotional risks for participants raised important questions about credibility, legitimacy, and trust. These challenges forced me to (re)think whether I was truly equipped to undertake this research and whether my gender undermined the value of the study. Yet, while poststructuralist critiques of standpoint epistemology caution against essentialist notions of identity matching, they do not negate the relevance of researcher identity altogether. Rather than being simply sources of data, as Cassell (2005) argues, interviews are performative spaces where both participants and researchers actively engage in "identity work", mutually co-constructing identities through interaction and dialogue that both reflect and shape the research process (Burkette, 2022).

Within the interview context, both the researcher and participant mobilise various discourses to justify their interpretations and actions, engaging in a dynamic co-construction of meaning. From this lens, my salient demographic features—being male, Black, and early-career—constituted a positional framework through which I experienced, interpreted, and was interpreted during the research process.

Analytical methods: Thematic and Discourse Analysis

Data produced through in-depth semi-structured interviews, timeline maps, and 'field' notes was followed by a detailed process of transcription, employing Zoom's automated transcription function. These transcripts underwent rigorous manual checks to ensure accuracy and improve readability. This iterative process of transcription editing—revisiting both transcripts and original recordings—was necessary not only to enhance clarity but to maintain the contextual nuances and affective tones of participants' narratives (Davidson, 2009; Kowal and O'Connell, 2014). Though mindful of the ethical concerns this may constitute, particularly in relation to 'cleansing' data (Clark et al., 2021; Saunders et al., 2015), I ensured that edits did not distort the meaning of participants' accounts. Where filler words such as "um", "err", and so on, or unintelligible phrases were minimally removed or clarified for coherence, I used ellipses within the quotations […] to indicate these modifications. This served to preserve the authenticity of voices while ensuring analytical clarity.

My approach to data analysis was hybrid in nature, drawing on a mix of thematic analysis with discourse analysis with the aid of the NVivo software (Braun and Clarke, 2021; Dean, 2018). Thematic analysis facilitated the identification of recurring patterns across the dataset, while discourse analysis enabled interrogation of the socio-linguistic construction and normative ideologies foregrounded in participants' accounts, particularly in relation to their negotiation of power, identity, and subjectivity. This informed an analysis of the ways in which discursive practices—potentially linked to epistemologically orientalist power dynamics—shape and influence the conduct of WAC in STEM spaces, and how they are constituted as subjects of knowledge (Arribas-Ayllon and Walkerdine, 2017).

The production of the four dominant themes, namely (1) Checking a colour box, (2) The masculinity of science identity, (3) The partnership and motherhood penalty, and (4) Out of place yet unrelated to gender or race—emerged through iterative cycles of coding, memoing, discourse mapping, theoretical reflection and interpretive labour that extended over eight months.

Initial engagement with the data began with surface-level readings of the transcripts—printed and annotated manually with coloured highlighting pens—allowing me to immerse myself in the conversational texture of the interviews. This immersion supported both interpretive sensitivity (Dean, 2018) and inductive openness and integrity (Nowell et al., 2017). I composed marginal memos to capture analytical insights, surprising statements, or contradictions. These memos were developed into preliminary codes, which I later clustered using NVivo's visual and hierarchical tools. Recurrent codes were streamlined through manual sorting, while codes that resisted neat categorisation but were analytically insightful were retained for their potential to disrupt normative narratives (Braun and Clarke, 2021).

At this stage, discourse analytic sensitivity proved indispensable. For instance, **Theme 1: Checking a colour box** emerged from repeated invocations of tokenism and diversity performativity in participants' accounts—phrases such as "present yet silent" or "being the face and voice of diversity" were both descriptive and invoked power-laden discursive regimes around visibility, compliance, and institutional performance of inclusion (Ahmed, 2012; Puwar, 2004). Discourse analysis allowed me to explore these moments as instances of epistemic commodification, where racially and ethically minoritised individuals, particularly women, were tokenistically included but their epistemological agency and contributions were under questioning (de Sousa Santos, 2014; Spivak, 1988).

Similarly, **Theme 2: The masculinity of science identity** was discerned through participants' consistent framing of STEM as a "manly culture" or "hyper-competitive" space. These statements were coded initially as "exclusionary cultures," "emotional silencing," and "dispassionate expectations," but through discourse analysis, I identified a shared semiotic field where hegemonic masculinity operated as an unspoken norm within scientific identity (Carlone, 2023; Carlone and Johnson, 2007; Connell and Messerschmidt, 2005; Faulkner, 2009). This highlighted the gendered discourses shaping epistemic legitimacy and authority in STEM fields.

Theme 3: The partnership and motherhood penalty emerged from affectively charged narratives around balancing domestic roles and professional ambition. Here, thematic patterns such as "sacrificing career for family," "invisible labour," and "time poverty" were evident, but discourse analysis illuminated how participants' language engaged neoliberal narratives of individual responsibility and gendered expectations of care. This theme was particularly strengthened by intersectional reflections on the gendered and racialised dimensions of care work with temporal precarity and the affect to remain 'competitive' (Adam 1999, 2003; Hoskins, Moreau and McHugh, 2023).

The discursively contradictory, yet analytically rich accounts formed **Theme 4: Out of place yet unrelated to gender or race**. It arose through contradiction: participants would describe feelings of marginality but simultaneously downplay gendered or racial experiences. These utterances, coded as "I feel out of place but," "diversity is great but you want the best people," or "can't name it," initially lacked explanatory clarity. Discourse analysis provided a way to interpret this ambivalence not as confusion, but as a form of discursively mobilised agency, where participants navigated "unspeakable positions" (Butler, 1993) within academic cultures that disavow structural inequalities in favour of hegemonic and meritocratic individualism. This points to the internalisation of liberal post-racial discourse, which paradoxically silences critical reflection on systemic marginalisation (Goldberg, 2009).

Theoretical Grounding

As extensively discussed in the theoretical chapter, my analytical framework was principally informed by Said's (1978, 2003) postcolonial concept of epistemological Orientalism, which interrogates how knowledge systems are historically entangled with colonial power relations. This was complemented by broader postcolonial critiques (de Sousa Santos, 2007, 2014), including postcolonial feminist scholarship (Ahmed, 2012, 2021; Bhopal, 2018; Collins, 2022; Crenshaw, 2013; Spivak, 1988; Subedi and Daza, 2008), all of which foreground the ways in which knowledge and power are discursively produced through regimes of racialised, gendered, and classed intelligibility.

In parallel, I drew on Foucauldian poststructuralist feminism (Adam, 1995, 2013; Butler, 1990, 2015, 2025; Davies et al., 2006; Foucault, 1977, 1988), which enabled a critical interrogation of how subjects are constituted within discourse, how agency is temporally regulated, and how claims to (il)legitimacy are structurally produced. This dual analytical orientation—combining the thematic mapping of patterned experience with a discursive exploration of meaning-making—proved both epistemologically and methodologically salient for unpacking the complex interplay of identity, discourse, and power.

Enhancing the Credibility of the Study

In qualitative research underpinned by an interpretivist epistemology, the notion of credibility assumes particular importance as an alternative to the positivist instrument of reliability and validity. Guba and Lincoln (1994) argue that, unlike quantitative approaches, which assume an objective reality subject to replication and verification, qualitative research is rooted in the recognition of multiple, co-existing realities constructed through language, discourse, and positionality. In this context, credibility becomes the guiding criterion for establishing the trustworthiness and authenticity of research accounts (see also Clark et al., 2021; Creswell and Miller, 2000).

To enhance the credibility of this study, I employed member checking—a process that Lincoln, Lynham and Guba (2011) describe as taking data and preliminary interpretations back to participants to verify whether these representations align with their lived experiences. This step was not merely a procedural necessity but became a reflexive exercise, compelling me to confront and interrogate my own assumptions, interpretations, and analytical frames. It extended beyond verifying transcript accuracy to engaging with participants' readings of the interpretations I was beginning to construct from their narratives.

Rather than convening a follow-up focus group, which places further demands on participants' time (Creswell, 2013) as well as logistical constraints of scheduling suitable times for participants to discuss in a group, I shared each participant's transcript and relevant field notes with them individually via email. This allowed them to confirm, challenge, or nuance the representation of their contributions in a manner that felt more accessible and respectful of their time (Pascale, 2011). Some participants responded with comments that affirmed the resonance of their narratives, while others offered subtle clarifications or expanded further on their initial responses. These exchanges revealed the iterative and co-constructed nature of meaning-making in qualitative inquiry, where participants are not merely subjects of analysis but actively shape the research narrative.

This process inevitably involved an act of self-disclosure—of laying bare the interpretive lenses through which I approached the data. As a Black man and a PhD researcher with institutional capital, I was aware that my positionality both enabled and constrained particular forms of access, rapport, and interpretation. Engaging in member checking foregrounded how my interpretive frames were not neutral but informed by my own embeddedness within discourses of race, gender, and academic authority. It highlighted instances where my reading of participants' narratives may have unintentionally mirrored dominant discourses or failed to fully grasp the subtleties of resistance, ambivalence, or emotion embedded within their accounts.

Although not all participants engaged in the exercise, member checking then became more than a check on accuracy to a dialogic space where the co-production of knowledge was made visible. It sharpened my understanding of participants' meaning-making processes and, crucially, revealed how those meanings are never stable or singular but negotiated through the complex entanglements of identity, power, and context. This reflexive engagement aligns with Creswell and Miller's (2000) assertion that validity in qualitative research involves examining the meaning-making process itself, not just the data produced.

While conventional research practice may allocate such reflection to a standalone section on positionality (Guillemin and Gillam, 2004), I have instead woven this reflexive commentary throughout the analysis chapters. In doing so, I follow Denzin and Lincoln's (2017) call to 'write oneself into the text'—acknowledging that the researcher is never outside the research but always implicated in the discursive and interpretive processes that give the study its shape and meaning.

Conclusions

This chapter has set out the methodological foundations of the study, establishing the interpretivist framework through which knowledge is understood as socially situated and co-constructed. Through a reflexive discussion of the research design, data production methods, and analytic strategies, I have sought to demonstrate both the transparency and the rigour of the study. Building on this methodological foundation, the following chapter opens the analysis by exploring racialised and gendered discourses that shape representational dynamics and questions of legitimacy. WAC in STEM emerge within these discourses as simultaneously hyper-visible and structurally marginalised. I analyse how participants narrate their experiences with institutional diversity regimes, paying particular attention to the ways they are positioned and often constrained through the discursive practice of 'checking a colour box.' This theme provides a critical entry point into a greater understanding of how symbolic gestures of inclusion intersect with enduring structural inequalities in shaping the everyday experiences of women of colour in STEM.

Chapter Five – Checking a Colour Box

Introduction

The discourse of "checking a colour box" emerged as a dominant theme in this study, referenced explicitly by six of the fifteen participants and echoed implicitly by others. Phrases such as "I was not necessarily heard," "being the face and voice of diversity," "present yet silent", "being unseen or finding our voices," amongst others, recur across interviews, revealing a shared sense of frustration with the superficiality of institutional diversity efforts in STEM despite their laudable aim at seeking to foster inclusion. These expressions signal a critical stance toward performative inclusion practices, where racialised and gendered representation is prioritised for appearances rather than substantive engagement with the expertise and lived experiences of WAC.

As such, this chapter explores how such narratives illuminate broader racialised and gendered discourses around representation dynamics and representational legitimacy, which position WAC in STEM as simultaneously hyper-visible and structurally marginalised. Participants describe being perceived not so much as knowledge producers or disciplinary experts, but more as representatives of identity categories—what Puwar (2004) describes as "space invaders" in academic settings. These identity-based expectations are in direct tension with dominant discourses of the "ideal academic": neutral, disembodied, apolitical, and implicitly white and male (Bhopal, 2018). Within these ideological workings, these women are positioned within contradictory power dynamics, reinforcing a paradox of (in)visibility, within which they are made hyper-visible by their race and gender identities yet rendered invisible within academic discursive practices that tokenise their contribution.

Foregrounding how participants navigate and resist these tensions, the discourse of "checking a colour box" serves as a critical metaphor that encapsulates the epistemic, emotional, and institutional processes of tokenised status. It traces how this discourse reveals the persistent gap between symbolic inclusion and structural transformation within STEM faculties and academia broadly. While institutions may champion diverse recruitment, the data strongly suggest that deeper discursive and structural inequities remain entrenched, manifesting in the delegitimisation of WAC's expertise, intensified performance pressure of diversity work, and limited access to decision-making spaces (Ahmed, 2012; Ong, Smith and Ko, 2018). As such, this analysis contributes to ongoing debates about how performative diversity discourses uphold dominant power structures while marginalising the very voices they seek to include.

"Checking a Colour Box"

Describing her experience as part of a research group, Maya (a Black African woman in Infectious Disease Biology)[5] said:

> …the overall feeling as a member of staff has not really been positive…so there was this project I was involved in with members of staff in the faculty… but the research was within an African context. As the only black person on the project, I was asked to lead… which is good and all, but as the research progressed, a part of me felt that I was not necessarily heard…and I was mainly leading to check a colour box…there was this underlying feeling, a nagging sense that my leadership wasn't entirely about my expertise or my perspective being valued.

When prompted to clarify what she meant by "checking a colour box", Maya further shared:

> …despite leading, there were moments of critical discussions where my input seemed to...just skim the surface, not adding depth to our deliberations. It was as if my voice, born out of insights from a lived experience and an understanding of the research context, was sidelined in favour of voices that resonated more with what was familiar or comfortable to the majority.

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[5] When presenting participants' quotations, I include relevant socio-demographic descriptors in brackets (e.g., Maya – a Black African woman in Infectious Disease Biology) to indicate participants' areas of expertise rather than to denote specific Schools or Departments for preserve anonymity.

Maya's account offers a compelling instance of how postcolonial discourses of representation and authority are reproduced within contemporary academic contexts under the guise of diversity. Her description of being asked to lead a research project set within an African context, ostensibly due to her racial and regional identity, signals the operation of epistemological Orientalism (Said, 1978)—the discursive construction of the racialised "Other" as simultaneously knowable and manageable by Western norms. In this instance, Maya is positioned as the 'authentic' native informant, yet her leadership is contingent not on epistemic authority, but on a symbolic function: she was there to 'authenticate' the project, not to necessarily shape it.

Maya's use of the phrase "checking a colour box" points not only to the superficial performance of diversity but to the instrumentalisation of racial identity as a legitimating device. She is expected to symbolically signal inclusion without disrupting the epistemic centre. Her voice, grounded in both disciplinary expertise and lived experience, is perceived as "skim[ming] the surface" rather than contributing depth. This inversion of value reflects what Young (2020) describes as the coloniality of gender and knowledge, where knowledge produced by racialised 'bodies' is systematically devalued through a racial-gendered matrix of inferiority (see also Subedi and Daza, 2008). Moreover, Maya's statement that the perspectives more readily received were those "familiar or comfortable to the majority" gestures toward Ahmed's (2012) analysis of institutional whiteness as a comfort zone, where anything outside dominant norms is perceived as disruption rather than contribution.

Moreso, Ahmed's (2022) concept of '*diversity bodies*' is relevant here for understanding the racialised politics of inclusion within contemporary institutions. Rather than focusing on numerical disparities or representational imbalance, Ahmed theorises diversity bodies as those who become *embodied signs* of institutional commitment to equality—figures whose presence is made to carry the weight of diversity work itself. Maya's account reveals how this form of conditional inclusion operates as a mode of epistemic exclusion rooted in colonial power relations. She is visible enough to authenticate institutional diversity claims, yet not audible enough to reshape knowledge practices or epistemic norms.

This supports Ahmed (2012) contention that inclusion is not the presence of diverse faces but the redistribution of discursive and institutional authority (see also Schoen, Rost and Seidl, 2018). Maya's narrative thus reflects a contemporary iteration of postcolonial silencing, where the inclusion of the racialised academic serves to authenticate institutional legitimacy without altering the Eurocentric frameworks that govern whose knowledge counts.

Raagvi (a British-Indian woman in Infectious Disease Biology), speaking about what her involvement in academic STEM means to her as a WAC, shared similar thoughts, saying:

> …I think it will probably mean that you're the only woman of colour in the room…and sometimes it means that you will be the only voice… which is hard…[because] there is that unspoken expectation to be the face and voice of diversity in the faculty, which by the way is additional workload…I want to be recognised for my work, my expertise, and all that I bring with me. I don't want my work to be simply underlined by my race or ethnicity, but then at the same time, I understand because of social structures and my identity that it is always going to be a factor, and if I'm the only person of colour, then I may be more obliged to do it.

Raagvi's reflection captures a central feature of postcolonial othering: the rendering of the racialised subject as hyper visible yet epistemically constrained (Ahmed, 2012; Said, 1978). The 'only voice' she describes becomes not a space of empowerment but a discursive positioning as both the embodiment of diversity and its chief negotiator, with very little room for autonomous professional identity. This supports Spivak's (1988) notion of the subaltern being 'spoken for' within representational dynamics, rather than being allowed to speak from a position of epistemic authority. Such performative gestures, while often couched in the language of equity, reproduce tokenism and delegitimise racialised and minoritised scholarly contributions.

Yashi (a South Asian woman in Astrophysics) highlights the identity labour that such practices entail, including the associated discomfort of representing a diverse group:

> …in our discussions as course leads within the programme I teach, we often touch on the topic of teaching to a diverse group of students…and I'm often singled out to represent the "female minority" perspective. I must say, it's quite daunting and quite frankly, an uncomfortable position to be in, to be seen as the spokesperson for an entire gender or racial group….especially when I believe that there isn't a one-size-fits-all female perspective. Each one of us brings a unique viewpoint to the table, shaped by our individual experiences and histories.

To start with, Yashi's phrase "we often touch on…" is revealing, signalling a surface-level engagement with diversity that is common in institutional settings. "Touching on" the subject of inclusion and diversity implies a fleeting, perhaps perfunctory, engagement with the issue, revealing diversity as a discursive object that is acknowledged but not deeply interrogated. Also, Yashi's narrative, when viewed through a postcolonial feminist lens, reveals the institutional mechanisms of tokenism and epistemic essentialisation of identity that often shape the experiences of WAC in academia broadly. Her account of being "singled out" to represent the "female minority perspective" highlights how diversity discourses often commodify identity, reducing complex subjectivities to symbolic figures of inclusion (Ahmed, 2012; Puwar, 2004).

Furthermore, this form of tokenistic inclusion echoes the concerns of epistemic exclusion, defined by Settles et al. (2021) as the marginalisation of scholars from knowledge production processes due to their social identity. Yashi is not merely overburdened with these symbolic duties—she is also situated in an epistemic bind where her presence is reduced to representation, not expertise. Her use of emotionally charged descriptors such as "daunting," and "uncomfortable" brings this affective dimension of institutional discourse into focus. These words reveal the emotional labour involved in navigating imposed representational roles of diversity work. Emotion here is not incidental; rather, it is part of the affective politics of inclusion (Ahmed, 2004), where women of colour are expected to embody institutional values of diversity, even as this embodiment extracts unacknowledged labour and intensifies vulnerability.

However, Yashi's resistance to essentialism is explicit in the counter-claim: "…there isn't a one-size-fits-all female perspective." Here, Yashi engages a discourse that rejects monolithic identity categorisation in favour of an intersectional epistemology (Collins, 2022; Crenshaw, 1991). This shift destabilises institutional assumptions that identity categories are stable, singular, and internally coherent. She asserts a pluralism of experience that challenges dominant representational logics, emphasising that gender and race are not discrete labels but intersecting, contextually shaped positions.

Institutional hierarchies exacerbate this dynamic. As Jasmine (a British-Afro-Caribbean woman in Veterinary Medicine) recounts her faculty experience as often being "lonely", saying:

> …we have quite a diverse group of students, but there is very little diversity among staff…as far as I know, I'm the only woman of colour currently in the faculty...the higher you go up the academic ladder, the whiter and more male it gets.

Jasmine's account highlights the disjuncture between numerical diversity and institutional inclusivity, foregrounding how hierarchies of race and gender are maintained through structural invisibility. Her use of the term "lonely" is an affective articulation that signals more than personal isolation; instead, it exposes the embodied consequences of institutional exclusion and a lack of epistemic community. The discursive paradox in her statement—"a diverse group of students but very little diversity among staff"—serves as a critique of performative diversity, where institutions claim inclusion largely through student demographics while leaving leadership and decision-making spaces untouched (Ahmed, 2012).

Through this mapping of the academic hierarchy, Jasmine names a stratification of whiteness and masculinity, supporting Ong, Smith and Ko's (2018) findings of vertical marginalisation where women of colour are concentrated at the bottom of the academic hierarchy and rarely ascend into senior roles. This reveals what Ahmed (2012, p. 173) calls "diversity work as wall work," where efforts to diversify institutions do not dismantle exclusionary structures but merely mark their boundaries. Moreover, Ahmed (2018) argues in her later work on 'women of colour as diversity workers' that the experiences of minoritised women faculty can best be illustrated in terms of what Joseph and Hirshfeld (2011) conceptualise as 'cultural taxation'. At

the core of many of these instances of unremunerated and undervalued cultural taxation are the expectations that minority faculty serve on minority-related projects and committees, advise minority students, and even act as spokespersons on equity, diversity, and inclusion (EDI) matters, regardless of their area of academic expertise.

Ahmed (2018, p. 331) argues against such exploitative models of diversity work, emphasising that diversity work is indeed work—laborious and crucial. In her discussions, Ahmed conceptualises diversity work in two parallel but interrelated ways. Firstly, diversity works as entailing efforts to transform institutions by making them more accessible to previously excluded groups. Secondly is the labour of those whose embodied subjectivities defy institutional norms and thus must navigate and challenge these norms in their daily professional lives. Sophy's (Black African in computing science) echoes this concern when she said:

> …it's difficult enough to be seen as not fitting whatever stereotypes there is…but then I understand that institutions are trying to use women of colour to encourage other women of colour to join and remain in STEM…most of the pressure to serve on EDI-related committees and events comes from external sources…mostly from individuals who have read my profile on LinkedIn or elsewhere…not until recently did I start rejecting some invitations and offer…because I have to protect my time…but then I wonder if most of these women are paid for this…why are there expectations for women of colour to do diversity work for free?

Her observation that "most of the pressure to serve on EDI-related committees… comes from external sources… because of [her] profile" illuminates how racialised visibility is co-opted into a performative politics of representation, where WAC are expected to serve as both inspiration and evidence of progress, without being afforded institutional power or structural support. Even more, it unmasks the exploitative nature of diversity work. This "tax" operates at both affective and temporal levels, draining the time, emotional energy, and academic bandwidth of WAC under the guise of inclusion work.

In rejecting unpaid EDI invitations, Sophy exercises what Ahmed (2012) describes as a willful refusal—an act that disrupts the institutional expectation that WAC must endlessly perform care, representation, and diversity for others. Her refusal becomes an act of resistance against

what Spivak (1988) would identify as the colonial rendering of the subaltern as spoken for rather than speaking. By asserting boundaries and questioning the economic imbalances of institutional diversity practices, Sophy challenges a racialised division of academic labour, one that treats WAC not as scholars in their own right but as symbolic fixtures in a progressive institutional imaginary.

Thus, Sophy's resistance here is not simply a personal boundary; it is a critical interruption of the colonial legacy that perceives racialised and gendered bodies as extractable diversity capital. These demands are not only unremunerated but also invisibilised within formal academic reward structures, a point Sophy's rhetorical question makes incisively clear: "why are there expectations for women of colour to do diversity work for free?" This active form of resistance carries a similar discursive weight to Raagvi's position on doing EDI-related work, who emphatically stated:

> …I have made it clear that I will most likely not be a part of any voluntary EDI work that benefits the university…unless I'm being paid for it…I think we need to make a clear distinction between voluntary work and services that should be paid for…In my opinion, EDI-related work shouldn't be unpaid labour. And like I said, I want to be recognised for my work, my expertise, and not simply as the 'diversity woman'.

Here, Raagvi articulates a gap between institutional performativity and substantive equity. Her rejection of symbolic inclusion aligns with post-colonial critiques of how minoritised individuals are often recruited to embody institutional virtue signalling, while their epistemic authority is simultaneously marginalised (Spivak, 1988; Puwar, 2004). This refusal is both oppositional and generative; it reframes EDI work as skilled labour that must be institutionally compensated and structurally valued. Her insistence on being valued for her disciplinary expertise, rather than reduced to the symbolic function of "the diversity woman," is not only a demand for recognition but a call for a decolonised and structurally accountable academy (Ahmed, 2018).

Even more, her desire "to be recognised for [her] work, [her] expertise", rather than works merely related to inclusion and diversity, exemplifies Mugo and Puplampu's (2022) argument that the representational labour disproportionately demanded of women of colour rarely translates into academic capital. Their labour is often excluded from formal reward systems,

reinforcing a colonial economy of value that privileges white and male-coded subjectivities. Thus, Raagvi's resistance gestures toward a transformative politics of equity that demands institutions move beyond the tokenistic performance of EDI credentials and toward a material reconfiguration of resource allocation, recognition, and reward systems that effectively operationalise more equitable practices.

Such a repositioning is crucial for disrupting the racialised economy of academic labour and mitigating experiences like Raagvi's, who recounts that being perceived majorly through the lens of "diversity" constrains professional legitimacy:

> …when I contribute to meetings, I notice sometimes that my ideas are not taken seriously. To think of it, it is sad that I'm visibly noticeable when I walk into a room, but my expertise is in question when I open my mouth to speak… In fact, I have had a few instances of people talking over me perhaps [because] they assume I was not being articulate enough.

Raagvi's account surfaces a troubling paradox within institutional discourse, a visibility that renders her hyper-recognisable in the room, yet simultaneously 'inaudible' or unintelligible in her capacity to 'know' largely on the basis of her embodied identity (de Sousa Santos, Nunes and Meneses, 2007). This experience supports the findings of Settles et al.'s (2022) study on the experiences of epistemic exclusion for women faculty of colour. Her reflection, particularly around being "…visibly noticeable…but [her] expertise [being] questioned when [she] opens [her] mouth to speak…" highlights a racialised and gendered disqualification deeply embedded in the normative practices of academic legitimacy. This paradox of being seen but not heard exemplifies a form of epistemological othering whereby individuals are denied credibility based on identity markers, rather than the merit of their contributions. In Raagvi's case, it is not merely that her ideas are disregarded; it is that her speech acts are pre-discursively positioned as lacking epistemic authority.

This discrediting is enacted not only through overt dismissals but also through the subtle discursive practice of being "talked over"—a silencing that marks Raagvi as a 'space invader' or an 'outsider-within' an 'elite' professional contexts (Collins, 1986, 2022; Puwar, 2004). These discursive formations operate through racialised and gendered chronopolitics of

normativity (Felt, 2017) that preclude the possibility of certain subjects being recognised as intellectually credible, regardless of their actual expertise.

Arguing for cognitive/epistemic justice, de Sousa Santos (2007, 2014) asserts that such stereotypical perceptions call for a form of recognition that acknowledges the diversity of knowledges, the equality of knowers, and the inclusion of previously excluded sources of knowledge production. This was the crux of Láídè's (Black-British Nigerian in Microcellular Biology) reflection on her faculty dynamics with her line manager. Láídè expressed frustration with being spoken to in a subtle, condescending manner that underestimates her capabilities and makes her feel belittled:

> …I think…sometimes there's an underestimation of my capabilities based on where I come from…you know being passive and kind of polite at the same time but in a belittling way… saying things in a way, but I can read their body language and I see the way this person interacts with other people…when I say something, they need confirmation from someone else…even though they have not directly said anything negative or inappropriate to me, their actions are telling otherwise and suggest distrust… I think maybe a younger me [Láídè], freshly minted out of uni, would accept that but now I find it completely unacceptable, and I'm very vocal with pointing out negative assumptions about my person or intelligence.

Láídè's narrative foregrounds the subtleties of epistemological Othering as it plays out in the racialised and gendered everyday politics of academic interaction. Her account—"…being passive and kind of polite at the same time but in a belittling way…"—captures how power operates through seemingly benign language and body cues that circulate within faculty discourse. These instances of subtle dismissal, where her contributions are met with a need for confirmation from others, suggest more than interpersonal friction or trust issues. They signal what de Sousa Santos (2014) theorises as epistemic injustice, including a form of testimonial injustice (see also Fricker, 2007, 2013), necessitating her line manager to give undervalued credibility to her words/contributions, not necessarily for evidentiary weakness, but potentially due to underlying assumptions about her competence as a 'Black woman scientist'.

The need for her statements to be validated by someone else is thus a discursive mechanism that marks her as epistemically suspect and constructs the racialised subject as always in need of corroboration, delegitimising her voice within the knowledge hierarchy. Additionally, Láídè's recognition that her experiences are not explicitly articulated in discursive practices— "they have not directly said anything negative or inappropriate…but their actions are telling otherwise"—also illustrates a form of hermeneutical injustice as de Sousa Santos (2014) conceptualises it, causing a gap in collective interpretive resources that makes her experiences difficult to articulate and understand within her academic faculty. Her struggle to be understood and valued within academia may reflect a broader issue where non-dominant professional cultures are marginalised and where racialised and minoritised individuals often experience higher scrutiny and lower presumption of competence (Wilkins-Yel, Hyman and Zounlome, 2019).

Yet, Láídè's reflection also charts an important temporal and affective trajectory: a shift from managing exclusions to resisting them vocally. The contrast she draws between her past and present selves—"a younger me…would accept that but now I find it completely unacceptable"—is a discursive reclamation of agency and a refusal of complicity in the practice of epistemic devaluation. Her increasing outspokenness illustrates the development of an 'academic voice', a cultivated capacity to articulate one's worth and a firmer stance to name and contest structural inequities as one accrues institutional capital and professional legitimacy (Leathwood and Read, 2020).

While experience/seniority may have played an important role in enhancing her self-awareness as well as fortifying her resolve to confront the subtle complexities of professional bias and discrimination, this evolution should not be read as simply the outcome of age or professional maturity. Rather, it reflects what Adam (2008) highlights as a politicisation of experience over a timescape: the move from seeing such discriminatory practices as individualised slights to recognising them as systemic patterns of racialised and gendered epistemic violence (see also Bennett and Burke (2017). In this sense, Láídè's resistance is both affective and political, emerging not just from confidence, but from a sharpened consciousness of the historical and institutional structures that frame her experience.

Dismissed, Ignored, and Rendered (In)visible

This sub-theme exemplified the ways in which participants' opinions, voices, and ideas were routinely ignored, dismissed, and rendered (in)visible within their faculties. Jasmine (a British Afro-Caribbean woman in Veterinary Medicine**),** whose account bears semblance with Láídè's, particularly reflected on her faculty experiences with students:

> … as an associate tutor and much younger then, there were times when I felt that some students did not value my lecture or knowledge of a course… [one] student particularly proved very difficult to work with…he was very confrontational in his questioning approach and interaction with me…I think he was trying to prove that he knew the course content more than I did…I sought advice from the programme lead on how to manage the student, but they were quick to dismiss my concerns on the excuse that undergraduate students can be immature…and somehow suggesting that I needed to be less sensitive when working with young students.

Jasmine's reflections, particularly in her role as an associate tutor, have a temporal dimension of academic authority and legitimacy to it. Her recounting of a student's behaviour signals not only a challenge to her expertise but a refusal to recognise her positional authority. Importantly, Jasmine's experience highlights how early-career academics, particularly women of colour, must navigate a compounded challenge: how their age and/or relatively junior status intersect with racialised and gendered readings of competence. This temporal reading of her identity as a 'young woman', potentially inexperienced and racialised situates her outside normative expectations of academic authority, making her more susceptible to being undermined or dismissed (see Adam, 2003; Leathwood and Read, 2020). The programme lead's response to her concern, dismissing it as student "immaturity" and suggesting she needed to be "less sensitive", demonstrates an institutional tendency to individualise and deflect experience of structural bias.

Samira (a South-Asian in Molecular Pharmacology) shared a similar experience, saying:

> …working as a teaching assistant on a course with another PhD student of white background, we ran office hours fortnightly, so we took turns every week…I noticed students never turned up to mine…while my other colleague had several students in attendance…this was concerning so I spoke to the course lead, who addressed students to take advantage of both assistants on the course…the situation did not change any much…on further report…she consoled me saying perhaps the students don't need much pastoral support…I knew that was not really the case…it had more to do with how they saw me as a tutor.

Samira's experience also reflects a profound racialised invisibility that operates across structured teaching spaces. The lack of student engagement she encounters despite offering equal opportunity for office-hour support as her white peer is revealed in her words: "students never turned up to mine… while my other colleague had several students in attendance." Her initial interpretation of the disparity is racialised, and her suspicion is effectively confirmed when the course lead attempts to downplay her lack of engagement, offering a conciliatory yet dismissive response: "Perhaps the students don't need much pastoral support." Samira's narrative adds a critical and paradoxical nuance—where marginalised academics, including women and early-career academics, are often tasked with additional and unrecognised labour of care and are simultaneously excluded from being perceived as legitimate providers of it (Hoskins, Moreau and McHugh, 2023; Joseph and Hirshfeld, 2011).

This paradox complicates prevailing discourses that female academics, particularly at early career stages, are disproportionately relied upon for pastoral support—a gendered burden often termed the "gender tax" (Bird and Rhoton, 2021; Guarino and Borden, 2017). Samira's racialised positioning unsettles this assumption. Rather than being overburdened with pastoral demands (as white female colleagues often are), she is underutilised, and her expertise is disregarded. This intersectional invisibility (Crenshaw, 1991; Puwar, 2004) exposes the racialised dimensions of student-faculty interaction where the ideal academic—still imagined as white, male, or at least white-passing—is seen as more legitimate and approachable. Samira's reading that "it had more to do with how they saw me as a tutor" speaks directly to how 'race' serves to constrain recognition in academic relationality, particularly in the pastoral and pedagogical roles that are central to student engagement.

This feeds also into scholarly works (such as Gillborn, 2015; Sue, 2005, 2016) that have explored such forms of racial microaggressions and the 'conspiracy of silence', where institutional actors (such as course or programme leads) implicitly and explicitly normalise or dismiss the racialised encounters, perpetuating a culture of non-accountability particularly in relation to bullying and microaggression (see also Rollock, 2019, 2023). Importantly, these incidents also point to what de Sousa Santos (2007, 2014) describes as epistemic injustice, where credibility is selectively granted and withheld in ways that reinforce institutional hierarchies of race, gender, and academic authority.

Maya, (a Black African in Infectious Disease Biology) speaking further on the representation dynamics and her faculty experience of microaggression, described dismissive commentary about her lived experience when she shared:

> … this may seem a bit unrelated, but emphasises my earlier point around the issue of checking a colour box…so I had this experience speaking to another colleague about our experiences and the lack of diversity within the faculty when a white colleague walked into the conversation [and] you could tell by his body language that he was uncomfortable with our line of discussion. We carried on talking and at some point, he uninvitedly joined the discussion suggesting that affirmative strategy are a bit unfair to someone like himself and that everyone experiences discrimination in some ways…almost as though pitching the "all lives matter" narrative…it felt awkward to continue the conversation at that point but it was obvious that he was making attempts to dismiss and invalidate our lived experiences on top of being sexist.

Maya's experience speaks to the manifestation of intersectionality in everyday interactions, where her experience and those of her colleagues are diminished and invalidated through microaggressions. In the scenario Maya describes, the white colleague's interruption and commentary serve as microaggressions, not only dismissing the validity of the experiences being discussed but also exerting a form of hyper(in)visibility—a paradoxical situation where marginalised individuals are made highly visible in ways that reinforce stereotypes and invisibility in contexts that affirm their complex humanity (Purdie-Vaughns and Eibach, 2008). Maya's use of body language cues to interpret discomfort, combined with her awareness of the dismissive nature of the interjection, highlights the affective and embodied dimensions of discourse. Her recognition of the incident as not only racially invalidating but also sexist underscores the intersectional nature of the microaggression, where race and gender operate simultaneously to delegitimise her discursive authority.

Moreover, the colleague's interjection not only re-centres whiteness in a discussion about marginalisation but also operates as a form of discursive containment, where the specificity of Maya and her colleague's racialised and gendered narrative is watered down by appeals to an abstract and depoliticised universalism, echoing the "all lives matter" rhetoric. This rhetorical shift functions as a microinvalidation (Sue, 2016), serving to obscure systemic power differentials and reinforce the epistemic dominance of whiteness. Even more, the white colleague's discomfort and unsolicited interjection underscore a common defensiveness in response to discussions on racialised experiences and equity strategies, more as personal attacks or zero-sum scenarios, where gains for one group are seen as losses for another. DiAngelo (2018, p. 119) associates these behaviours with what she conceptualises as "white fragility, including feeling singled out, attacked, guilty, accused, angry and judged."

Such reactions serve to derail critical conversation and reflect a broader societal reluctance to engage with the realities of systemic inequities and a preference for narratives that essentialise experiences such as "everyone experiences discrimination in some ways". This erases the specificities of racialised and gendered experiences and serves to silence the voices and experiences of marginalised groups. This is what Ahmed (2012) describes as a 'non-performativity' of anti-racism, where discussions on equity, diversity, and inclusion may serve more to deflect honest engagement with racialised and gendered realities than to instigate real changes.

Central to Jasmine's (a British-Afro-Caribbean in Veterinary Medicine) account were also experiences foregrounding how ostensibly inclusionary practices in academia can mask discursive acts of misrecognition through the essentialisation and conflation of distinct yet intersecting axes of inequities under a homogenised rhetoric of "inequity." Her narrative situates this within a specific interaction:

> …while applying for a grant, my supervisor asked me and one other woman academic of colour to make short videos explaining how the research project will be beneficial as a requirement of the application [because] I suppose academics have to show that they're trying to embed inclusive practice in some ways…so she assigned the two of us to represent the project team. But then, when I was having a conversation with her about why it was important to improve diversity, she said I don't really think it's a race issue… I think it's more of a class thing. I don't think she is racist… but people need to understand that there can be two or more overlapping issues…I don't think she meant any malice by it, though.

From a post-colonial perspective, the supervisor's shift of the conversation from "race" to "class" operates as a common discursive mis-framing that reorients equity discussion toward a more socially acceptable axis of inequality, erasing the salience of racialised experience and other forms of marginalisation along intersecting axes of social positions. Such reframing draws on broader societal discourses that privilege certain explanatory categories (e.g., class) over others (e.g., race, gender) in ways that depoliticise racial inequities and render them secondary or incidental rather than acknowledging and seeking to address them as intersectional dimensions of individual experience (Bhopal and Henderson, 2021; Crenshaw, 1989, 2019). This intersectional approach, as proposed by Crenshaw, emphasises that social identities and systems of marginalisation are not mutually exclusive but intersect in complex ways that shape individuals' lived experiences (see discussion on *Intersectional Marginality* in the theoretical chapter).

This is particularly relevant here: the reduction of Jasmine's concern to "a class thing" highlights how race, gender, and socioeconomic status are not discrete but co-constitutive axes of social identity (see also Collins et al., 2021). By attributing the issue solely to class, Jasmine's supervisor inadvertently enacts a form of category collapse—a discursive move that undermines the analytical and lived significance of intersecting marginalisation.

Additionally, Jasmine's own mitigations, "I don't think she meant any malice…" and "I don't think she is racist…" reflect a common self-regulatory discourse among marginalised academics, where the affective labour of cushioning critique is necessary to maintain collegial relationships in contexts of unequal power dynamics. Jasmine's mitigating phrases thus perform a meta-discursive function, signalling both the pervasiveness and the self-consciousness of her positioning. As such, Jasmine seemingly softens her potential resistance – almost in a way of performing 'facework' which supports broader discursive patterns in which marginalised speakers pre-emptively temper their statements to manage reputational risk (Bucholtz and Hall, 2005).

Further, the request for Jasmine and her colleague to visibly represent the project's diversity, while ostensibly "good and all" for inclusive practices (as Maya pointed out), highlights yet again the non-performative nature of diversity work—acts that symbolically signal commitment to equity without redistributing power or altering underlying institutional practices (Ahmed, 2012). This can again be associated with Maya's epistemological discourse of "checking a colour box," in which racialised bodies are positioned as visual signifiers of inclusion for institutional gain, while the deeper structures that produce inequity remain unchallenged.

Present yet Silent or Silenced

Reflecting further on her experiences of negotiating the terrain of intellectual legitimacy, Láídè (a Black-British Nigerian in Microcellular Biology) offers a caveat:

> …I understand that while I'm able to challenge negative stereotypes - both actions and implied inactions- about the legitimacy of my intellectual contributions, this may not be the case for every person like myself for a number of reasons. For example, some persons may not feel confident enough to challenge superiors for fear of retributive microaggressions or because of their academic position…so it comes down to the case of: should I speak up or should I maintain a dignified silence?

Láídè's self-positioning operates within a discursive field where the subject is simultaneously constituted as agentive and constrained. Her opening clause—"while I'm able"—mobilises the discourse of individual capacity, momentarily aligning her with neoliberal academic ideals of self-determination and meritocracy. Yet the immediate qualification—"this may not be the case for every person"—marks a shift, invoking the structural regimes that regulate who can speak, when, and with what consequences. This tension reflects the operation of what Foucault (1977) terms disciplinary power, where the subject embodies institutional norms, censoring her speech in relation to the implicit surveillance and sanctioning embedded in academic hierarchies.

The gap between personal capability and systemic constraints exemplifies the circulation of power/knowledge in which racialised and gendered bodies are differentially legible as 'credible' intellectuals. Nam's (2020) metaphor of "dead bodies" in academia operates here as a counter-discourse, disrupting the dominant ideology of inclusivity by exposing the epistemic erasure that occurs even in the presence of physical participation. In Foucauldian terms, Láídè's account illuminates how the academic field enacts a biopolitics of voice—regulating not merely who is heard, but who is produced as hearable, fostering a disciplinary culture in which resistance is both compelled and penalised, and silence becomes a tool of governance and compliance rather than mere personal choice (Foucault, 1978, 1991).

Priscilla (a Black-African woman in Computing Engineering) articulates the ambivalence of reacting to racialised and/or gendered experience through the discursive lens of professional risk:

> …as an early career academic, I'm careful with defending myself at the risk of my professional reputation…I'm very aware that I have not been here long, and I don't want to bag the reputation of the 'angry black woman'…there's no going back from that.

Priscilla's statement foregrounds the intersectional pressures shaping speech in academic spaces, where race, gender, and career stage intersect to produce heightened vulnerability. The cautionary stance—"I'm careful with defending myself"—highlights an embodied surveillance, aligning with discourses of professional respectability that implicitly privilege white, male-coded modes of dissent as legitimate, while pathologising Black women's assertiveness. The invocation of the racialised-gendered trope of the "angry black woman" serves as both a citation of a pervasive stereotype and a recognition of its disciplinary force: it polices emotional expression, framing certain affective registers as reputationally irrecoverable (Ashley, 2014).

Priscilla's engagement of the phrase "there's no going back" operates as a temporal marker of this irreversibility, signalling that reputational damage, once racialised, becomes largely 'undoable' within the institutional memory of the academic field. These positions, that is, speaking up, are thus not a neutral communicative exchange but a high-stakes negotiation in which identity markers magnify the potential costs of self-advocacy. In this way, Priscilla's account exemplifies how racialised and gendered subjects are compelled to navigate a double bind: silence risks complicity, while speech risks the entrenchment of stigmatising labels within the very structures they seek to challenge.

The tension of whether to speak or remain silent is rendered with particular acuity in Maya's (a Black African in Infectious Diseases Biology) narrative of being "present but silent," a phrase that reframes silence not as absence, but as a deliberate negotiation strategy in a racially and gendered power-saturated space. In her words:

> …it's easier to be quiet if my credibility will be questioned whenever I open my mouth [to speak]…it's like being present but silent…I don't think anyone will desire this really, but then it's taking the high road…my silence does not mean I agree with the other person's point of view, but it may be misread as such…I have just chosen to be silent since they can't see past their own bias.

By framing the questioning of her credibility as an inevitability—occurring whenever she speaks—Maya invokes a discourse of structural inevitability rather than episodic prejudice. Her statement "they can't see past their own bias" resists the deficit narrative that might attribute silence to a lack of intellectual capacity, instead locating the communicative gap in the listener's epistemic frame. This discursive move reassigns responsibility for relational breakdown from the speaker to the hearer, challenging the hierarchical power/knowledge relationship embedded in academic interaction.

Even more, her reference to "taking the high road" reframes silence as an ethical and strategic act, subverting the assumption that vocal participation is always a marker of engagement, authority, or intelligence. Here, Maya's "present but silent" stance operates as a double move: she withholds the performative participation often demanded of diversity "beneficiaries" while denying the legitimacy of biased interlocutors to arbitrate her intellectual worth. This resonates with hooks' (2015) politics of silence as both imposed and self-chosen—a space that can signal oppression but also be reappropriated as a site of agency.

At the same time, it reflects Ahmed's (2012) critique of the "performative" nature of institutional diversity work, where the inclusion of marginalised voices is often conditional upon their alignment with dominant narratives (see earlier discussions on counter-hegemonic practices and the 'promise of happiness' as a regulatory tool for disciplining marginalised bodies into silence or compliance within the theoretical chapter). By mobilising silence in a space she perceives as structurally 'deaf' to her contribution, Maya disrupts the optics of diversity as performance. Her silence, therefore, is not withdrawal but a form of non-compliance—a 'refusal to perform happiness' in diversity spaces that are unwilling to confront their own biases (Ahmed, 2010).

While Maya's nuance in her discourse of silence adds depth to Láídè's discussion of how systemic biases can silence marginalised voices, even in spaces where diversity is purportedly valued, Raagvi had an interesting take on the subject of 'silence' while speaking about how she is perceived as an intellectual. She said:

> …I know this may sound a bit counter-progressive…but I don't feel the need to constantly contribute to faculty discussions or meetings just to be validated by anyone especially when I look around and there are not many of us there…because to me it will feel like a diversity exercise to always speak when I don't have any meaningful contribution…so my silence is my own way of saying 'no' to the normative diversity agenda…and if someone judges that as a lack of intellect or whatever…then that's on them.

Here, Raagvi's initial disclaimer "this may sound a bit anti-progressive…" pre-empts criticism, while re-framing silence as "[her] own way of saying no" to dominant and tokenistic practices of diversity performance. Raagvi's position of non-participation bears similarity to Maya's but extends the discourse beyond being "present but silent" or silenced to a deliberate refusal to perform for the "normative diversity agenda" of tokenism. In this reading, silence functions as counter-hegemonic praxis. While seemingly counterproductive, as participation might enhance visibility and possibly have a positive effect on career progression, Raagvi's stance challenges the normative expectations of participation and visibility, positing silence as a deliberate assertion of identity within a predominantly homogenous intellectual space.

Sophy (a Black-African in Computing Science) extends this strategic reading of silence by situating it within an affective economy of 'resilience' and temporal calculation, saying:

> …my experience has been largely positive or so I think… I feel like when things are negative… I just don't see them, if I was being bullied or harassed or something… I feel like I deliberately turned them off, I only focus on the positive…and drown the negative stuff in silence…you know silence, in its profound form, isn't just the absence of voice but a kind of strategic reserve for moments when our words can finally chart the course of change.

Sophy's account engages a series of affective-discursive strategies: the deliberate "turning off" of negativity reframes silence as an active filtering process, not as passive withdrawal. The metaphor of "strategic reserve" constructs silence as a resource—one that is consciously accumulated and temporally deferred until it can be mobilised for substantial impact. This temporal dimension echoes the construct of anticipatory politics, in which agency is exercised not in the immediacy of response but in the calculated withholding of action until structural and contextual shifts enable subversive reaction to carry transformative weight (Adam, 2005). Sophy's narrative thus reframes silence from a deficit position into a form of future-oriented activism, suggesting that resilience is not only about endurance but also about the strategic preservation of discursive capital.

Sophy's framing of silence as a "strategic reserve" can be productively read through Said's (1978) critique of the representational economy of otherness. In Orientalism, Said demonstrates how the "Orient" is discursively constructed as an object of knowledge, whose voice is either silenced outrightly or mediated through the interpretive apparatus of the West. In this regime, the Other's speech is rarely received on its own terms; instead, it is filtered through dominant epistemic frames that assign meaning according to the needs of the dominant culture.

While Sophy situates silence in the discourse of resource and deferred action, Samira (a South Asian woman in Molecular Pharmacology) extends the discourse of silence toward structural transformation:

> …breaking the barriers isn't just about being unseen or finding our voices within the very structures that claim to support diversity; it's about reshaping the dynamics and reclaiming the narrative that has long seen women like myself as not fitting the mould.

Samira's rejection of "finding our voices within" dominant structures disrupts the common institutional diversity narrative in which marginalised subjects are encouraged to speak but only in ways that leave the underlying power arrangements intact. Samira's insistence on "reshaping the dynamics" and "reclaiming the narrative" similarly challenges the structures that Said (1978) identifies as central to the production of otherness. Her rejection of "finding our voices within" dominant frameworks parallels Said's argument that the structures themselves—whether colonial or institutional—are not neutral containers but are constitutive of the very hierarchies they purport to transcend. In this reading, Samira's discourse seeks to invert the logic of Orientalist representation: rather than being spoken for or spoken about, she asserts the authority to speak from a positionality that redefines the parameters of legitimacy instead of merely gaining entry into the chrono-political structure of legitimacy.

Samira's silence when further situated within Said's (1978) epistemological construct of otherness also appears as a refusal to be absorbed into the representational economy where her voice is filtered through the interpretive apparatus of the West. By withholding speech until a moment "when [their] words can finally chart the course of change," she resists the risk of her voice being appropriated, reframed, or instrumentalised within the very systems that construct her as the "misfitting" Other. In Foucauldian terms, her silence interrupts the circulation of power/knowledge that transforms marginalised speech into a token of institutional benevolence, while in Saidian terms, it destabilises the power imbalance of the speaking–listening relationship in which the Other is permitted to speak only under dominant terms.

Discursively interpreted together, Sophy's and Samira's accounts map different but complementary orientations toward silence and speech. Sophy's strategic withholding and Samira's insistence on narrative reclamation form a dual modality of resisting otherness: one temporal and affective, oriented toward the preservation of epistemic integrity until conditions for transformation arise; the other structural and immediate, aimed at dismantling the discursive and institutional architectures that sustain the Other's marginality. Both disrupt what Said identifies as the dominant regime's power to frame, interpret, and delimit the voice of the Other, moving the analysis of silence and speech beyond individual strategy toward substantive redistribution of epistemic authority in the socio-political economy of representation.

In reflecting on the preceding analyses, I was compelled to interrogate the notion of "silence as strategy" as constructed by some participants. Is silence, in such contexts, truly strategic—and if so, who ultimately benefits from its deployment over time? While recognising that silence can function as a vital practice of self-preservation, is it not inadvertently sustaining a form of academic Orientalism—a discursive positioning that continues to "other" WAC in STEM by leaving intact the structures that frame them as marginal? These critical questions begged for answers, and in my search for them, it became apparent that the complexities lie not in choosing between the dichotomy of silence and voice, but rather in the strategic recognition and deployment of both to navigate a system that has not fully reckoned with its own biases.

Following DiAngelo's (2018) insight on strategic engagement, silence—at certain junctures—must dynamically evolve into forms of diplomatic, and at times radical, vocalisation that move beyond the confines of 'safe spaces' or conversations amongst trusted allies. Such interventions must enter and unsettle the public and institutional arenas where comfortable narratives of diversity and inclusion are most resistant to challenge. This requires a deliberate calculus: knowing when silence protects and when it enables, when speaking can be transformative, and when it risks re-production. Only through such critical discernment can marginalised voices shift from symbolic presence to active participation in (re)shaping the epistemic and structural practices that have historically served to exclude WAC, both numerically and epistemologically.

This line of reflection, though diverging in emphasis from Sophy's temporally deferred strategy and Samira's structural reframing, resonates strongly with Láídè's stance on managing relational tensions in her faculty. While Sophy views silence as a "strategic reserve", Láídè problematises its capacity to effect systemic change if sustained over time. In her own words:

> …so I think it's very important to be able to communicate effectively with in a way that is direct, but not offensive, especially during experiences of sexism or racism… and I think that's something I'm quite good at doing. When we are silent about these treatments, then people think it's okay for them to treat us that way. If I feel that someone has made an inappropriate remark about me or exhibiting a form of microaggression, I'm going to talk to them about it. And I'm going to say this is how I feel or how you made me feel…of course the manner of approach is important… and if there are no noticeable changes, then I will escalate the issue…as women, I think we need to reevaluate how we communicate these kinds of things rather than being complicit."

Láídè's critique is firmly anchored in feminist discourse traditions that position voice as an instrument of both epistemic reclamation and structural disruption. Her emphasis on addressing sexism and racism "direct[ly], but not offensive[ly]" engages with contemporary debates around call-out versus call-in cultures in anti-racist discourse. As Sian (2019) notes, these are not merely rhetorical styles but discursive strategies, each carrying implications for whether interventions are received as educative challenges for social change or as interpersonal hostilities born out of a 'grievance culture'. Láídè's preference for a measured, yet assertive, approach reflects her awareness of the social reception of championing 'race' and gender equity—a crucial element in Foucauldian terms, where the circulation of discourse is mediated by power relations.

Her stance also resonates with Ahmed's (2019) notion of the "use of use" in *Living a Feminist Life*, in which speaking out becomes a means of reoccupying and reconfiguring institutional spaces historically shaped by exclusion. In this light, Láídè's strategy is not just a reaction to interpersonal slights but a form of spatial and discursive reclamation that disrupts the consent produced by silence. Butler's (2015) conceptualisation of speech as a performative act further strengthens this reading: breaking the silence becomes a refusal to reproduce the norms that sustain marginalisation, and in so doing, transforming communicative acts into micro-practices of resistance.

The escalation pathway Láídè describes when initial communication fails signals an acute understanding of institutional discursive economies—where grievances often require formal recognition to gain traction. This echoes hooks' (2000) call in *Feminism is for Everybody* for institutional mechanisms through non-detrimental escalation and resolution procedural processes that legitimise and address the lived realities of sexism and racism. Such escalation is not simply procedural but discursively potent, reinforcing that the legitimacy of WAC's voices in STEM must be acknowledged both interpersonally and structurally if systemic change is to occur.

A Subversive "Third Space"

Sophy's (Black African–Nigerian in Computing Science) account of a "third space" situates itself as both a material and discursive site for the production of counter-hegemonic narratives. In her description, this space is not merely geographical but conceptual—a set of practices, relationships, and epistemologies through which marginalised actors reclaim authorship over their own representation. This supports Mirza's (2015) argument that marginal spaces can serve as radical locations in which women of colour enact "other ways of knowing" to resist dominant, exclusionary practices.

While speaking about faculty retention strategies, Sophy reflected on her lived experience of migrating from Nigeria to pursue an academic career in the Global North. She described how mentoring female research students of colour allows her to transform a potentially isolating faculty space into a site of mutual empowerment:

> …coming from Nigeria to pursue a PhD in the UK was both a life-changing and lonely experience…there were no PhD students like myself in my faculty at the time…but now, things are slowly changing and I'm happy to see female research students of colour and to supervise them…that opportunity to learn from their experiences and also mentor them is my way of contributing to changing things…because teaching and research within a faculty where there aren't too many women, especially those of colour, can be isolating. But when you have students with similar research interests you're working with and contributing towards their development, giving them advice, and seeing how they grow, that makes me feel fulfilled career-wise…scholars have described this as the 'third space'…that allows for mentorship and for countering stereotypical images of our identities.

Speaking further on her contributions as a woman academic of colour towards equitable gender and racial representation in computing science, Sophy shared:

> "…also, I'm one of the founding members of a [named] computer science academy in Africa which started in the year 2018 and over the course of the years, we have trained over 350 participants, but we noticed that less than 5% of that number were women… and that got me thinking, in addition to seeing the EDI push here, on some of the changes we could make…some of which were provision of child care support to nursing mothers…we were also intentional with our call for participation, expressly stating that women will be prioritised in the selection process and that made a huge difference…around 46% of applicants in this year's round of workshop were women."

Sophy's account of activism here extends transnationally through a computing science academy in Africa. Sophy (and her team) strategically increased women's participation from under 5% to 46% by embedding strategic and subversive acts of care, such as childcare provision and explicitly prioritising female applicants in recruitment practices to increase women's representation and reclaim opportunities, especially for young women. Such interventions can be contextualised within hooks' (2015) discourse of reclaiming the margin from its traditional use as a marker of exclusion to seeing it as a subtle but positive act of appropriation seeking to transform a historically exclusionary space into a site of agency and resistance.

From an analytic perspective, Sophy's "third space" operates as a form of counter-hegemonic discourse—a parallel discursive constitution that allows subordinated groups to formulate and circulate oppositional interpretations of their identities, needs, and interests (Mirza, 2015, p. 8). Within this counter-space, her acts of mentorship and programmatic redesign perform a discursive practice of "raising the race"—a praxis that appears conventional on the surface (mentorship, workshops, and micro-practices of affirmative strategies) but subversively destabilises the epistemic authority of the dominant practices by amplifying marginalised voices. The "other ways of knowing" embedded in these practices constitute a co-creation of counter-spaces and an exercise of a technology of resistance by renaming and reframing opportunity structures for women of colour in STEM (Ong, Smith and Ko, 2018).

Other participants similarly cited the importance of establishing both formal and informal trustworthy support networks as protective mechanisms against marginalisation. Láídè (Black-British Nigerian in Infectious Disease Biology) emphasised the disarming effect of "shared understanding" among peers, saying: "…things seem less intimidating when you can connect with other people, especially people like yourself…there's that sense of shared understanding." Maya (a Black African in Infectious Disease Biology), on the other hand, located her strategy in a hybrid network of professional and social relationships, sharing:

> "…a valuable strategy for me has been the support system I enjoy…this has not come only from my professional network, but from social spheres where I have forged valuable friendships and connections. It is imperative to have a circle of mentors, colleagues, friends, and mentees that you can talk to about your academic and career goals, as well as obstacles you experience that are not directly related to science."

Like Maya, other participants (such as Jasmine and Raagvi) noted the challenges in finding a support trusted network within their STEM faculties and suggested that WAC should look outside of their immediate faculty/institutions instead. Láídè suggested: "getting involved in minority/women's professional groups, where they exist". Maya recommended: "…have found social network [communities] such as FemEng and Black, Indigenous and People of Colour STEM network quite useful." Participants like Sophy also highlighted conferences and networking events as spaces for cultivating support systems and building alliances. This highlights the importance of both informal and formal peer-to-peer connections among women faculty of colour, as identified by the participants, who deemed these relationships essential for mitigating a sense of not-belonging and potentially cushioning the effects of microaggressions in their STEM spaces.

Maya's narrative, however, introduces a further discursive disruption to normative gendered accounts of academic support. She credits a male Afro-Caribbean colleague from another institution—now a co-author and confidant—as central to her persistence in STEM. When asked how she connected with the male colleague in question, she replied:

> …we were introduced by a mutual colleague during a conference and [because] we have similar research interests, we exchanged contacts and kept in touch…he eventually moved to our university…it's funny but I tell you that we have two publications together and one currently in the works…who would have thought that a man I met at a conference would become a close friend and colleague…sometimes when I feel overwhelmed by the demands of academia, I share my burdens with him…he is such a good listener and does not attempt to mansplain situations – he is both a critical and understanding friend and an ally too.

From a feminist poststructuralist lens, Maya's account problematises the gender-boundedness of support networks, deconstructing the hegemonic discourse that positions WAC as 'outsiders-within': isolated, unsupported, and necessarily reliant on homogenous affinity groups (Ahmed, 2012; Collins, 2000, 2022; Ong, Ko and Smith, 2018). Her relationship exemplifies intersectional solidarity that transcends gender boundaries (Butler, 1990) while acknowledging racialised commonalities, performing a counter-discourse to the competitive, individualistic norms of academia broadly. In Foucauldian terms, such alliances disrupt the disciplinary mechanisms that sustain marginalisation by reconstituting the relational field in ways that permit mutual vulnerability, reciprocity, and shared intellectual labour. Even more, this

provides a model for how diverse academic support networks can function as sites of empowerment, challenging the normative constructions of academic relationships and success.

Taken together, these narratives reveal that the "third space" is not a fixed location but a dynamic, discursively produced site where WAC actively (re)shape both material and symbolic conditions of participation in STEM. Whether through institutionally embedded interventions (Sophy) or unexpected cross-gender solidarities (Maya), these practices resist the discursive practices of academic exclusion, providing alternative subject positions from which WAC can speak, act, and thrive.

Conclusion

The discourse of "checking a colour box" in this chapter captures the tension between institutional narratives of diversity and the lived realities of WAC in STEM. Across participants' accounts, this metaphor functions not merely as a critique of tokenistic inclusion but as an articulation of the emotional, epistemic, and professional toll exacted by such practices. It draws attention to the paradox of (in)visibility, wherein WAC are positioned as hyper-visible symbols of diversity yet remain structurally excluded from the spaces, resources, and authority necessary for career advancement. This disjuncture underscores how representational visibility—while rhetorically positioned as markers of progress—can operate to reinforce existing hierarchies when unaccompanied by deeper institutional transformation. In this way, the practice of "checking a colour box" is not simply an administrative or symbolic gesture, but a lived condition that shapes how WAC are perceived, valued, and constrained within academic cultures. Yet, if tokenisation exposes how institutional narratives of inclusion operate through racialised practices, the next chapter turns to the gendered dimension of STEM cultures: the *masculinity of science identity*. Here, I explore how scientific subjectivity itself is discursively masculinised, shaping who is recognised as a legitimate practitioner and how WAC must negotiate, contest, or accommodate this gendered terrain to belong.

Chapter Six – The Masculinity of Science Identity

Introduction

This chapter explores the dominant theme of "The Masculinity of Science Identity", which emerged strongly from the data through the discursive patterns and recurrent phrase that participants engaged such as "it's a manly culture", "women thinking they have to act like men", "being compared to and validated by men", and "the subtle desire to stay competitive." These recurring discursive patterns revealed participants' complex negotiations with exclusion, conditional belonging, and the implicit norms that shape legitimacy in STEM. Central to these discourses was the articulation of what it means to be recognised as an academic "STEMer" which participants described as necessitating the performance of a particular kind of 'scientific identity'—one marked by the ability to speak science, do science, and embody science in ways intelligible within dominant cultural practices. Importantly, identity here is not self-sufficient or autonomous; as Butler (1997) argues, subjectivity is always constituted relationally, through acts of recognition. One cannot simply claim an identity in isolation; being perceived as a "science person" requires that others recognise and validate that identity as credible within existing discursive frameworks.

The socially constructed and relational nature of science identity is reflected in Carlone and Johnson's (2007; Carlone, 2023) influential model of science identity, which conceptualises it as constituted through three interrelated dimensions: competence (knowledge and understanding), performance (the ability to enact science in socially recognisable ways), and recognition (being acknowledged by others as a "science person"). Taken together, this tripartite model of science identity foregrounds how being a "science person" is not only a matter of internal capacity but of being recognised as such by others. While this model does not explicitly centre power, I argue that these dimensions are foregrounded in gendered and racialised discourses that idealise science as neutral, objective, and meritocratic, yet, in practice, these ideals privilege whiteness, masculinity, and disembodied rationality. Participants' accounts disclosed how perceived departures from this normative ideal produce epistemic exclusion, heightened professional surveillance, and the implicit expectation of (re)socialisation into the dominant 'science culture.'

This theme was especially pronounced in the accounts of five participants working across STEM disciplines, including molecular pharmacology, manufacturing engineering, computing science/engineering, and biomedical engineering. Occupying roles such as doctoral researcher, postdoctoral fellow, and lecturer, these early-to-mid-career academics were situated within predominantly white, male-dominated faculties. Their narratives revealed how masculinised institutional cultures extended beyond formal structures to encompass often-invisible everyday practices, sustaining the symbolic and material coding of STEM as a masculine domain (Bird and Rhoton, 2021; Carlone, 2023). These gendered discursive formations, frequently reinforced through bureaucratic routines and evaluation metrics, operate as what Antonio Gramsci (cited in Jones, 2007) terms intellectual and moral hegemony, naturalising the norms of scientific culture in ways that obscure their contingent and exclusionary nature. As such, women of colour in STEM are not only subjected to its dominant terms but are also, paradoxically, expected to embody and uphold its ideals, revealing how hegemonic power secures compliance not simply through coercion but through discursive and institutionalised practices.

"It's a manly culture even with some women"

Spivak (1988), in her landmark essay—Can the Subaltern Speak?, poses a foundational provocation that calls for an interrogation of the structural conditions under which marginalised subjects are rendered (un)intelligible or silenced within dominant epistemic and institutional frameworks. Implicit in this inquiry is the challenge of recognising how institutional norms, such as those embedded in academia, rely on historically sedimented discourses of authority, rationality, and neutrality that systematically exclude the voices and identities of racialised and gendered 'others'. This provocation prompts us to interrogate not simply what it means to become a full professor – socially and humanly, but what system produces the kinds of subject positions that are legitimised within academic cultures, particularly in STEM fields. It exposes how success in such contexts is not merely a function of merit or individual effort, but is profoundly structured by gendered, racialised, and colonial discursive formations that determine what counts as competence, legitimacy, and authority.

This is pointedly illustrated in Sophy's (a Black African in Computing Science) account, who remarks:

> …there is almost a sense of expectation for one to be grateful for being here, but also to prove every day that you belong. It's sad that some people still have those assumptions that being a person of colour means you're most likely a diversity hire… even if they have not expressly said it, you can tell these things, you know.

Sophy's reflection here captures how racialised and gendered discourses of legitimacy are encoded within the institutional grammar of academia. Her statement underscores what Foucault (1978) theorises as the technology of biopower, where surveillance not only operates through formal mechanisms but through discursive expectations that shape what kinds of bodies can be seen as naturally belonging. Her awareness of being perceived as a "diversity hire" is less about what is explicitly said and more about what is felt, reflecting the discursive space through which competence is subtly, yet persistently, contested.

This illustrates how discourse—understood not just as language but as a system of normativity operates to govern intelligibility of gender (Butler, 2004a)—positions racialised women in a paradoxical bind: hyper-visible as representatives of 'diversity', yet epistemically invisible in relation to authority and scientific credibility. Sophy's remark draws attention to a racialised subject-position shaped by conditional inclusion, in which gratitude and constant self-justification become prerequisites for academic survival. Through this essentialising gaze, non-Western subjectivities are rendered legible only insofar as they conform to the Orientalist trope – what Said (1978, p.16) describes as a "grid for filtering the Orient into Western consciousness."

Priscilla (a Black African in Computing Engineering) extends this analysis:

> I feel like I have to censor myself, especially in the way I speak and act when I'm in certain spaces. I'm not a loud person, don't get me wrong, but still it feels like I'm not being myself for the most part at work, just to match and protect an image… And whose interest does that serve?… You cannot be seen as too emotional, too ethnic, or too quiet...and the list goes on and on.

Priscilla's comment evokes the operation of what Sara Ahmed (2012) describes as the 'politics of appearance'—the affective, embodied, and linguistic labour that minoritised academics must engage in to remain institutionally legible. Her self-censorship is not a matter of preference, or simply a form of mobilised agency, but reflects a disciplining performance within what Foucault (1982) terms a productive and discursive field of power. Operating relationally and serving to act upon her actions, Priscilla's subjectivity is constituted through normative demands that silently govern which bodies, voices, and affects are recognised as credible within the apparatus of whiteness and masculinity that anchor the power/knowledge relations that define scientific legitimacy.

Crucially, the subject, as Foucault (1982) and later poststructuralists such as Arribas-Ayllon and Walkerdine (2017) argue, is not the autonomous originator of meaning or action, but rather the effect of historically situated discourses. The expectation that Priscilla regulate her tone, affect, and cultural expression exemplifies the discursive constraints that shape what can be said, by whom, and in what manner, marking the boundaries of institutional belonging. Her rhetorical question—"whose interest does that serve?"—disrupts this normative frame, revealing both her critical reflexivity and the limits of institutional inclusion, where equity discourse often conceals the reproduction of epistemic and affective hierarchies. Thus, the imperative to suppress "ethnic" markers or "emotional" expression is not merely about professional decorum; it also has to do with preserving the dominant order of who is authorised to speak, succeed, and be recognised as a "science person." In this sense, Priscilla's account does not simply describe constraint; it gestures toward a form of discursive resistance that unsettles the taken-for-granted neutrality of academic cultures and practices.

Similarly, Fifi (a Black African in Neuroscience) reflects:

> It's a very macho culture… you know, this thing about some women thinking they have to act like men to succeed… This does not mean that they are liked either, because we are obviously not men. It's not that anyone says 'act like a man,' but you can see who gets listened to, who gets funded, who gets quoted… It's subtle, but the message is clear.

Fifi's reflection incisively names the unspoken codes of gendered performance embedded within the normative architecture of STEM; the imperative to embody masculinised subjectivities (such as assertiveness, emotional restraint, authoritative speech) that are not explicitly mandated yet discursively naturalised as a prerequisite for legitimacy. Fifi's reflection that "we are obviously not men" simultaneously affirms and distances from the preceding 'machismo' that "some women think they have to act like men to succeed." This moment of discursive ambivalence foregrounds the constitutive limits of regulated embodiment. Even as women approximate the practices valorised within masculinised scientific cultures, they remain "not-quite-subjects," positioned outside the centre of authority and the symbolic order of belonging they are encouraged to embody. This double bind—act like a man to succeed, but remain always-not-quite-man—highlights the paradox of inclusion within exclusion. Discursively, these women are disciplined into being subjects whose belonging is conditional, always under review, and never fully secured.

What then emerges is not simply a masculinised demographic within STEM spaces, but a masculinised discursive structure—a regime of intelligibility that disciplines who can be heard, perceived as credible, and funded. This complicates liberal notions of inclusion by revealing that access alone cannot dismantle institutional epistemologies that continue to valorise particular ways of being, knowing, and performing. As Fifi suggests, "the message is clear"— but what needs further unpacking is the extent to which the very terms of legitimacy are themselves racialised and gendered. Her account echoes what de Sousa Santos (2007) describes as the abyssal logic of modern knowledge systems—a discursive practice that constructs invisible lines separating what is recognised as valid knowledge and whose subjectivities are deemed credible. Within such framing, dominant norms are not simply exclusionary but are enforced through processes of 'epistemicide'—the erasure and devaluation of alternative ways of knowing, being, performing, and relating (see discussions of epistemic injustice in the theoretical chapter).

In this context, Fifi's experience illustrates how women, particularly women of colour, are positioned to inhabit identities that align with masculinised and racialised codes of conduct to be heard or deemed competent. This form of epistemic violence does not merely marginalise; it actively disciplines the subject by rendering certain expressions, epistemologies, and embodiments unintelligible within hegemonic academic spaces that remain anchored in Eurocentric and patriarchal rationalities. Thus, legitimacy in STEM is not only about acquiring scientific expertise, but about embodying a historically sedimented system of intelligibility that persistently excludes those marked as epistemic 'Others'.

Níkẹ́ (a Black African in Molecular Pharmacology) offered similar reflections but extended this critique:

> …It's a manly culture even with some women, but then, can you really blame women? Because sometimes, you just have to be assertive… [and] play their [men's] game, especially when you're in a science space dominated by men… there's also that urge to demonstrate your competence and prove that you're worthy of your role.

Níkẹ́'s framing further foregrounds the structural ambivalence of institutional subjectivity. Her invocation of "playing their game" reflects what McNay (2013) identifies as the contradictory positioning of women within bureaucratised power structures—where subjectivity is both constrained and enabled by disciplinary discourses. The demand for assertiveness here is not a straightforward claim to agency but a strategically navigated performance shaped by normative expectations of what a "competent scientist" should look and perform like. The "game" Níkẹ́ referred to is thus not neutral; it is gendered, racialised, classed and also stratified along other social identity lines. To succeed within it, one must not only know science but must also perform it in ways legible to a field structured by masculinised and discursive practices of disembodied rationality, autonomy, and competitiveness.

Drawing on Butler's (1990) theorisation of gender identity as performative—constituted through reiteration of normative acts within a regulated discursive field—it becomes clearer that scientific identity is less about being and more about an ongoing process of doing legitimacy under constraint. Within this frame, identity is a contingent formation produced at the intersection of individual agency and the historical norms of institutional culture. Butler's (2015, 2025) emphasis on the performative nature of identity highlights that such performances are not freely chosen but are produced through the citational force of discourse—what must be said, how it must be said, and by whom and to what effect.

Hall's (1996, p. 3) highly influential work supports this understanding of identity as a fluid, contingent practice. As he writes:

> … identities are more about questions of using the resources of history, language, and culture in the process of becoming rather than being: not more of 'who we are', or 'where we came from', so much as what we might become, how we have been represented, and how that bears on how we might represent ourselves.

Hall's emphasis on 'becoming' rather than 'being' underscores that identity is never simply owned or transparently expressed; rather, it is constituted through and against inherited representational regimes. In his later work, Hall (2020) argues that such representational regimes are central in the production and circulation of meaning within and about cultures. Accordingly, the meaning we make of things depends on the system of concepts and images formed in our thoughts that function as forms of mental representation, enabling us to signify and interpret the world. The mental representations, enabled by historical and cultural "resources" to which Hall refers, are not neutral; they carry the weight of colonial, racialised, and gendered inscriptions that constrain what forms of 'becoming' are intelligible or legitimate. As a consequence, the analytic focus shifts from a fixed understanding of identity to a more fluid and forward-looking perspective—considering not only what individuals are or where they come from, but also what they might become, how they are represented, and how external representations reciprocally shape processes of self-representation.

Logically following from Hall's position, Carlone and Johnson's (2007; Carlone, 2023) tripartite model of science identity—comprising competence, performance, and recognition—is particularly relevant here. Within this model, women like Fifi and Níkẹ́ must demonstrate competence. But more importantly, it must be performed in ways that align with dominant normativity, and crucially, must be recognised as legitimate by others within that same discursive system. It then follows that the legitimacy of one's science identity thus hinges not only on epistemic labour but also on affective and bodily labour translated into affective restraints, linguistic conformity, and bodily comportment within an unequal politics of representation, where those marked as 'Other' are read through interpretive frames steeped in colonial, racialised, and gendered imaginaries (Said, 1978). As such, these women are required to over-perform credibility while simultaneously being denied the institutional recognition that such performances ostensibly guarantee.

This social construct of science identity holds such explanatory potential for cultural barriers within STEM that constrain women's career trajectories. Rather than being a neutral or merit-based recognition of individual competence, the 'science' identity is constituted through language, power, and social recognition. Níkẹ́'s experience exemplifies this tension. In expressing her frustration over a colleague's attribution of her prestigious academic prize to her male professor's reputation, she resists the dominant framing that positions women's achievements as derivative of male authority. As she puts it:

> …this kind of situation…makes you think, I don't want people to assume that I simply succeeded because of a man's reputation… we're not snowflakes that get all the preferential treatments and privileges simply because we are women…some of us work very hard to get here and even sometimes more than the men we are being constantly compared to or validated by.

Níkẹ́'s discourse troubles the meritocratic myth within STEM by foregrounding the discursive erasure of women's labour through masculinised narratives of scientific success. Her statement serves as a counter-discourse to expose how the normative figure of the scientific subject continues to be constituted through masculinised and racialised codes, rendering women's legitimacy conditional and subject to (re)validation. Butler's (2004b) theorisation of recognition as a precondition for liveable life is especially pertinent here: recognition is not simply a benevolent act of acknowledgement but a constitutive force that determines whose lives—and in this case, whose career labour—are rendered intelligible within hegemonic discourses. For women of colour in STEM, such recognition is persistently precarious, contingent upon normative frames such that even when competence is demonstrable, its value is refracted through interpretive grids that mark difference as deficit, thus positioning their scientific identities as under threat of devaluation or erasure.

In contrast, Rabita's narrative foregrounds the productive but unequal power dynamics of institutional recognition. While Níkẹ́ resists the attribution of her success to a male figure's influence, Rabita embraces recognition from senior (presumably male) colleagues as a key influence in her scientific becoming. Reflecting on her collaborations and co-authored publications, she shares:

> I think what gave me a sense of success at some point wasn't necessarily the fellowship awards or publications in themselves, but rather the opportunity to collaborate with and get recognition from reputable colleagues, especially my line manager, whom I look up to… I value their opinion and how they see me. I would think that they respect my science…and this means a lot to me.

Rabita's account reveals that institutional validation in STEM is not only contingent on individual achievement but is deeply relational, often mediated through the symbolic capital of senior colleagues who function as "gatekeepers" of disciplinary legitimacy. Her sense of belonging and scientific value is not merely derived from measurable outputs but from being recognised within an academic field marked by gendered and racialised hierarchies of epistemic authority.

From a discursive point of view, Rabita's subjectivity is co-constituted through relational acts of recognition, reflecting Hall's (1996) theorisation of identity as "formed and transformed continuously in relation to the ways we are represented or addressed in the cultural systems which surround us" (p. 4). Identity here is not a self-evident essence but a discursive construct shaped through ongoing processes of negotiation and (mis)recognition. Rabita's account thus underscores how recognition in STEM is not an equal-opportunity process but one inflected by institutionalised norms that regulate whose knowledge is deemed credible, and whose presence is rendered legitimate.

Talking about how she did not perceive much gendered and racialised discrimination at work, Ngozi (a Black African in Computing Engineering) spoke along similar lines:

> As a woman of African heritage, I have not really felt overtly discriminated against, but then I feel like I have to work very hard and even more than my male colleagues sometimes. I think this had to do with wanting to get ahead and that internal conflict of constantly proving that one is deserving of the role.

While Níké and Rabita's diverging reflections both underscore the prevailing masculine culture within STEM, where success is often validated by or associated with male figures' influence or reputation rather than their merit, Ngozi's account reveals the operation of what Ahmed (2012) terms the "non-performativity" of institutional diversity. That is, even in the absence of overt discrimination, the burden of proof remains prevalent, particularly requiring women of colour to engage in continuous affective and embodied labour to secure legitimacy in professional spaces that are discursively coded as white and male. Through self-surveillance and self-regulation, Ngozi navigates an institutional order that does not explicitly marginalise her through formal exclusion, yet silently mandates an over-performance of competence and commitment to compensate for her racialised and gendered positionality (Foucault, 1977).

From a discursive stance, her utterance serves as a negotiation of contradictory subject positions. On the one hand, she disavows "overt" discrimination, implying herself as resilient and/or largely unimpeded, yet she simultaneously articulates a "conflict" that reveals the affective toll of operating within a discursive space where legitimacy is precarious and conditional. This tension exemplifies Hall's (1996, p. 2) conceptualisation of identity as a "production that is never complete, always in process", shaped through cultural normativity and historical regimes of representation. As such, despite articulating otherwise, there is a subtle but impactful reference to the gendered and racialised dynamics within STEM, laden with the expectation to overcompensate or prove one's worth, potentially stemming from being on the 'outside' despite being within (Collins, 2022), a space where masculinised science identity and performance are so deeply ingrained.

Raafa, (a British-Pakistani in Manufacturing Engineering), who transitioned from academia to the manufacturing engineering industry, citing a lack of visible role models and stereotyped career advice, reflects on how gendered gatekeeping practices constrained her early career choices. Recalling an incident where she was steered toward a quality assurance role rather than a production engineering position, she reflects:

> I have a few experiences may be not very nice things in my professional life, but on the whole, it's not been all bad… But now I'm starting to really pick up on and see what's going on…back in the days, I remember being offered something related to quality assurance instead of a production engineering position. It was implied that it would be difficult for me to work there….I didn't understand QA [quality assurance] or its processes. But I thought, Okay, I'm gonna go for this…[even though] it wasn't my choice… at the time, obviously, that was discrimination 100%. But I was so inexperienced and naive, that it didn't register to me as discrimination as such… it was not till much later in my professional life, maybe after 10 or 15 years, that I started seeing these things as discriminatory. You know…the penny dropped many years later.

Although Raafa situates this experience in the late 80s, her utterance surfaces the operation of what Ahmed (2012) refers to as "institutional passing"—the normalisation of marginalising encounters that are not always legible as such in the moment, especially to those socialised into navigating exclusion silently. Her admission that the experience "didn't register… as discrimination" illustrates the delayed consciousness that often accompanies subtle forms of institutional violence. This temporal lag between experience and interpretation underscores the affective economy of minoritised subjectivity, where one's place is negotiated not only through professional competence but also through tacit exclusions that become visible only in hindsight.

Also, Raafa's narrative has a temporal complexity to it. From a poststructuralist perspective, subjectivity is not fixed but emerges within the contingencies of time, discourse, and memory. Raafa's reflection—"it was not till much later in my professional life, maybe after 10 or 15 years, that I started seeing these things as discriminatory…"—invites a deeper engagement with the temporality of meaning-making. Her belated recognition of discrimination exemplifies the latent, often unspoken mechanisms of exclusion that characterise gendered and racialised institutional cultures. What Adam (2008) calls the 'timefulness of experience'—a concept that foregrounds how events are not confined to a linear chronological sequence but gain significance through recursive reflection shaped by present positionalities and future imaginaries.

Adam (1999, p. 142) notes that "experience is time-bound not only in the moment of occurrence but also in how it is remembered, interpreted, and projected into future action". Raafa's earlier agreement to institutional redirection into a QA role—accepted without overt resistance—was shaped perhaps by her entry-level position, a lack of subversive 'voice' and socio-cultural awareness at the time. However, her current positionality, shaped by years of professional practice and accumulated interpretive resources, allows her to (re)read the past through a different discursive lens. What once appeared as a neutral or benign career redirection now becomes legible as an experience of structural exclusion—a temporal shift in how the past is discursively understood. This discursive reworking of past events aligns with Felt's (2017) insights into how temporalities of experience are not given but are instead actively constituted through epistemic, institutional, and affective structures. As such, Raafa's "penny dropped" not

merely as a personal epiphany but as a discursively significant reordering of the relationship between past and present, self and system.

A Double-edged Knife

Elaborating on the tension embedded in the imperative for women to "act like men" within STEM culture, Níké (Black-African in Molecular Pharmacology) engaged the discourse of a "double-edged knife" to articulate the contradictions inherent in gender performance within institutional spaces dominated by hegemonic masculinities. As Níké shared: "It's like a double-edged knife for us…We don't want to be seen really as acting like men, but there's that subtle desire to show…that you can be as competitive or as successful (or even more) than your male colleagues." Her words highlight a discursive terrain where women's legitimacy is contingent on an alignment with masculinised tropes of authority (assertiveness, competitiveness), while simultaneously being constrained by normative expectations of femininity (Seron et al., 2018). This embodied tension between doing masculinity to gain institutional recognition and undoing femininity in ways that provoke perceived social consequences is what Butler (2004a) constructs as (un)doing gender within an unequal institutional terrain.

The metaphor of the double-edged knife becomes a discursive lens that serves to unpack not only the dual cost of visibility and invisibility but also the disciplinary mechanisms (Foucault, 1977) embedded in STEM institutions. On one end, the demand for assertiveness and competitiveness is a demand to conform to dominant discourses that valorise neoliberal, masculinised ideals of productivity and individualism (Goldberg, 2009). On the other end lies the threat of discursive sanction: the risk of being read as "too aggressive," "unnatural," or "unfeminine," particularly when such performances emanate from Other female bodies already subjected to racialised and gendered stereotypes (Mirza, 2015; Collins, 2022).

Ladi (a British-Nigerian in Microcellular Biology) extends this discursive contradiction by underscoring the affective toll of embodying a professional self that is legible within institutional norms yet distant from one's embodied sense of identity. "…you want to be a bit assertive to get the respect you deserve…but at the same time, you don't want to lose touch of your kind personality…so you're not seen as less approachable, especially to other female faculty members…" Her statement suggests that performing assertiveness as a mode of securing professional respect exercises a form of discursive tension, where the subject is caught between competing norms of respectability and relationality. Even more, Ladi's account exemplifies how subject positions are not freely chosen but are taken up—or resisted—within specific discursive regimes that define what counts as professionalism, collegiality, or authority. Her use of "kind personality" is particularly revealing: it points to how femininity is naturalised through discourses that frame it as a moral imperative (Butler, 1990), serving as a regulatory ideal that disciplines women's comportment and communication.

Moreover, Ladi's reflection points to a relational surveillance that operates within institutions, not only from male colleagues or superiors but from other women, suggesting that gendered norms are not simply imposed from top down but are reiterated laterally through peer dynamics. This speaks to Foucault's (1980) understanding of power as diffused and networked, functioning through the disciplining of norms and their reproduction across social relations. Both Níké's and Ladi's thoughts highlight the nuanced negotiation that female faculty members experience in STEM, particularly in terms of asserting themselves to gain professional respect influenced by patriarchal structures and expectations, while simultaneously grappling with broader societal expectations of femininity, which often include kindness and approachability.

This sort of negotiation in gender roles within STEM can be understood as a performative act with women faculty of colour expected to navigate the tensions arising from the inherent contradictions in societal expectations – by which women are constrained to be both assertive and professional yet nurturing and approachable enough not to lose their feminine appeal (O'Connell and McKinnon, 2021). Casad, Petzel and Ingall's (2019) study supports the contradictory positioning and tension that women broadly experience in relational affairs within STEM, arguing that women are having to master the art of navigating the hostilities of higher education by consciously integrating the dominant disposition of middle-class academics into their own working practices, including a meticulous performance of themselves and a crafting of their communication styles. This is exactly what Kaminski and Geisler (2012) term "survival strategy" for faculty retention of WAC in STEM.

Ngozi's (a Black African in Computing Engineering) commentary adds depth to the trope of "a double-edged knife", unpacking the micro-practices through which gendered communication norms are both constituted and disciplined. She spoke of the hyper-reflexive self-monitoring she engages in, carefully weighing her speech, conduct and even email tone to mitigate negative interpretations while maintaining professional authority. She went on to also identify a double standard in what she considered an acceptable range of emotions and communication styles for women compared to men, saying:

> …I feel like men can get away with being more assertive compared to us women…for example, as little as sending an email. If a man sends a straightforward email without all the 'hi' and the 'I hope you're keeping well' stuff, it's seen as just wanting to get things done. But if a woman does the same, it might come across as being aggressive.

Ngozi's example of email etiquette illustrates the gendered affective labour embedded in professional communication, where women adopt a softened and excessively polite tone to be perceived as agreeable rather than "aggressive". Further reflecting on the identity labour women engage to present their thoughts without coming across as too assertive, Ngozi said:

> I find myself overthinking every time I have to say something or reply. I end up spending lots of time on an email that should ordinarily take 5 minutes. Because if I'm direct, like saying 'please do this or that,' it could be read as being too demanding. But if I throw in a 'Good morning, hope this email finds you well, if you don't mind... thanks, have a great day,' maybe even a smiley face, I notice it's perceived as friendly and I'm more likely to get a positive and quick response.

Drawing on Ahmed's (2012) construct of affective economies, such discursive practices of linguistic code-switching reflect how emotions and the performance of emotional tone become instrumental in shaping women's professional legitimacy and acceptance. Ahmed argues that emotions do not simply reside within individuals but circulate within and across social and institutional spaces, working themselves in particular ways that align with or deviate from normative expectations. In this context, Ngozi's meticulous modification of her written communication through phrases such as "I hope this email finds you well" and the like, or the use of emoticons, can be understood as a form of affective and identity labour (Mirza, 2015), where the stakes of being misread are high. This disproportionate self-monitoring contributes to the need to anticipate and regulate how one is perceived to maintain epistemological credibility and institutional belonging.

Rabita's experience echoes this systemic issue, revealing how gendered communication practices impact not only women's careers but also their confidence. As Rabita puts it:

> …in my experience, it often appears that women, particularly in earlier stages of academic careers, must go to considerable lengths to get their points across and have their contributions taken seriously in formal meetings or presentations. And if you're a person of colour, there's the added layer of intense scrutiny. Whereas for men, especially those highly placed in the faculty, this does not always seem to be the case. In my opinion, I think they get off relatively lightly without much grilling as such. So yes, I think women have to justify themselves a whole lot more, especially if you're an early-career woman and a person of colour. It's not necessarily overt, but the effect of having to pre-empt questions and constantly defend one's position can be quite dispiriting over time.

Rabita's reflection reveals the discursive space within which institutional legitimacy is both negotiated and unequally constituted, particularly at the intersection of gender, race, and career stage. Her observation that early-career women, and more specifically, women of colour, must go to 'considerable lengths' to have their contributions recognised in formal academic settings points yet again to the dynamics of what Collins (1986, 2022) theorises as the outsider-within status. Within this position, Black and racialised women are hyper-visible as tokens of diversity (Ahmed, 2018) yet structurally marginalised in the epistemological core of academic institutions. As such, Rabita's narrative, read through Butler's (2004a) lens of the normative order of gender intelligibility, reveals how institutional recognition is performatively aligned with dominant discourses of social viability and legitimacy through embodying masculinity, reproducing whiteness, and occupying senior positions.

Her articulation that men, particularly those occupying senior or hegemonic positions, are subject to less scrutiny is not merely a personal observation but a reflection of the institutionalised discourses that construct certain 'voices' as authoritative by default and others as in need of self-justification. The imperative to "pre-empt questions" and "constantly defend one's position" becomes a form of epistemic labour that is inequitably constituted and exacerbated along the axes of race, gender, and academic hierarchy. Even more, Rabita's description of the "dispiriting" cumulative effect of this performative vigilance signals not only emotional exhaustion but also the affective disciplining of minoritised faculties through institutionalised discourses of competence and civility. In this way, Rabita's reflection offers a vivid example of how power circulates within the academy—not merely through institutional policy but through everyday discursive acts that render legitimacy inequitably accessible.

"It's like a different world of its own."

Building on the preceding discursive framing, the sub-theme of negotiating belonging in heterotopic spaces becomes salient to understanding how meaning is constructed, contested, and inhabited by minoritised academics within the university. Drawing on Foucault's (1984) concept of heterotopia (see also Read, 2023; Wong, 2024 and the theoretical chapter on the discussion of university as spatially heterotopic), university cultures and practices may be understood not as a coherent or uniform institution but as a layered, contradictory space that simultaneously mirrors, distorts, and subverts broader social orders. As heterotopic, the university encompasses multiple, often incompatible discursive regimes—sites where dominant epistemologies coexist with, and are at times destabilised by, counter-discourses and marginalised knowledges.

In this context, the everyday practices of WAC in STEM illuminate how institutional cultures both reproduce and interrupt normative logics of belonging. While the university ostensibly positions itself as a meritocratic space of knowledge production, its disciplinary structures—rooted in colonial, patriarchal, and racialised histories—reinforce exclusions through implicit modes of intelligibility and recognition. Thus, these institutional settings operate as spaces of epistemic tension, wherein minoritised subjects must navigate the contradictions of visibility, legibility, and authority.

Fifi (a Black African woman in Neuroscience) and Láídè (a Black British woman in Microcellular Biology), offer instructive accounts of how subjectivity is negotiated within such heterotopic spaces. Their narratives do not simply reflect the notion of cultural reproduction in the conventional sense as passive transmission (Bourdieu and Passeron, 1990) but rather point to a dynamic and discursive engagement with the institutional norms and material architectures of academic science in relation to the contextualisation of science identity (Carlone, 2023; Leonardo, 2004). Scientific identity, in their accounts, emerges not as a stable or freely chosen position but as a site of contested becoming shaped by processes of institutional surveillance, affective labour, and epistemic gatekeeping, yet also marked by moments of resistance and resignification and subversion.

For example, Fifi (a Black-African in Neuroscience) articulates this tension in clear terms:

> It's like the faculty wants you to feel like you belong, but only in certain ways. I walk into lab meetings and everything from the tone, the way people talk about research, the jokes they make… It's like a different world of its own, I'm supposed to adapt to. I find myself translating, not just the language but the ways of thinking. And when I talk about research that connects neuroscience to community or… health disparities, it's subtly brushed aside, like it doesn't 'fit' here.

Her account highlights the contradictory discourse of inclusion within the university as a heterotopic space: a space that simultaneously reflects and displaces the dominant social order, while simultaneously sustaining exclusionary norms and creating the illusion of openness and diversity. While formally 'belonging,' Fifi remains discursively positioned as the 'Other'—her research interests, linguistic choices, and epistemic orientations are marked as 'out of place', revealing the layered spatial, discursive, and ideological contradictions (Wong, 2024). The need to translate rather than contribute underscores a politics of containment: her belonging is conditional, under surveillance, and ultimately circumscribed.

This dynamic is further illuminated in her reflection on how she perceives herself versus how she suspects other colleagues perceive her in relation to the embodied competence of a scientific identity:

> …speaking about how I see myself as an academic, I would use the word impressive, because of my personal circumstances and with all I have going on…work, and family, I think I'm doing very well...so, I perceive myself as resilient, hardworking, and pushing against all odds…And in terms of how other colleagues perceive me, who knows? I would assume they think I'm doing well, maybe even surprised with how well I'm juggling all the things in my life.

Fifi's narrative exposes the dual gaze through which she is both self-defined and externally perceived within her university's faculty—a gaze structured by discourses of otherness and institutional normativity. Her self-articulation of being "impressive" and "resilient" foregrounds a counter-narrative of agency in the face of intersecting personal and structural challenges. Yet, this self-definition is shadowed by the presumed "surprise" of her colleagues, a reaction that signals latent expectations of inadequacy and underperformance often projected onto racialised and gendered others within academic culture.

In this instance, "surprise" operates as a subtle form of discursive Othering (Said, 1978; Spivak, 1988). Rather than affirming her competence on its own epistemic terms, the presumed responses mark her excellence as exceptional, inflected with a sense of anomaly and implying that her success defies normative expectations of who should belong and thrive in academic spaces. The racialised woman, in this reading, is thus not simply a competent academic but a competent academic despite "all odds." This affective response, as subtle as it may be, serves as a discursive signal of racialised otherness: a racialised affective economy that highlights and undermines Fifi's presence as the other precisely at the moment of apparent recognition (Ahmed, 2004).

This dynamic must also be situated within the Foucauldian conception of the university as a heterotopic space—a space that reflects, displaces, and contests the social order while simultaneously reproducing its epistemic hierarchies (Foucault, 1984). Within this heterotopia, Fifi's presence is marked as both legitimate and exceptional, an unstable positionality that underscores the contradictory praxis of inclusion. Consequently, her account does more than highlight individual resilience (which in itself is problematic for masking structural issues); it surfaces the epistemic othering embedded in the institutional conditions of her recognition. Her success becomes legible only through the lens of exceptionality, a framing that sustains rather than disrupts the racialised boundaries of normative academic subjectivity. In this way, Fifi's experience illuminates how the university, as a heterotopic and post-colonial site, disciplines difference under the guise of inclusion, rendering minoritised excellence both hyper-visible and provisionally accepted, constituting what de Sousa Santos (2007, 2014) calls a form of 'epistemicide': the symbolic and structural erasure of alternative knowledges and epistemologies under the guise of inclusion.

Láídè (a Black-British Nigerian in Microcellular Biology) articulates a parallel yet distinct experience of racialised surveillance and epistemic doubt, particularly around a form of microaggression necessitated by unwarranted assumptions about her competence:

> …it is almost like being babied… that assumption that you are too fragile to handle constructive criticisms…a common example I can think of is getting asked frequently when I present my lab results - are you sure you've not got the results of your lab work mixed up? You know…that thing about she must have done it wrong…and when I insist that this is my outcome after multiple trials, one is seen as that angry woman…

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This moment of being questioned about her lab result reveals how institutionalised microaggressions are not simply interpersonal slights, but expressions of discursive regimes that situate women of colour in STEM as the racialised other. On one level, the infantilisation she describes—"being babied"—operates as a subtle yet potent form of epistemic disqualification, where the assumption of fragility displaces the possibility of intellectual rigour. Her scientific outputs are not only scrutinised but subjected to a politics of suspicion, where error is presumed, and correction becomes a performance of both racial and gendered control.

Here, Foucault's (1977) concept of disciplinary power becomes salient: Láídè is not necessarily excluded from her faculty, but rather included under constant surveillance, where even the expression of confidence or assertion is liable to be recoded through a disciplinary gaze that polices both emotion and competence. Consequently, failure to be disciplined (re)produces racialised and gendered stereotypes—such as the trope of the "angry Black woman." This is the workings of heterotopia in practice: an ostensibly inclusive academic space that accommodates racialised bodies while simultaneously governing their legibility and affective comportment (Foucault, 1984). The lab meeting becomes a microcosmic site where these heterotopic dynamics are enacted and where knowledge claims are not judged solely on epistemic merit but filtered through embodied assumptions of who counts as a legitimate knower.

Even more, Láídè's experience supports the theorisation of the Orientalised Other as the necessary counterpoint through which the dominant, 'rational', and 'civilised' West defines itself (Said, 1978). In this context, Spivak's (1988) notion of the "subaltern" also find relevance, insofar as Láídè's epistemic authority is both invoked and denied, she is permitted to speak, but not necessarily to be believed, nor her speech recognised as legitimate knowledge. Her voice enters the academic space through mechanisms of scepticism and misrecognition. This is what Spivak describes as an epistemic silencing: a mechanism of power in which the subaltern cannot speak, not because she lacks voice or agency, but because her speech cannot be recognised as what counts as legitimate knowledge.

This interplay between recognition and regulation is not merely anecdotal but speaks to what de Sousa Santos (2007, 2014) terms the epistemologies of the South: a construct that critiques the dominance of Eurocentric knowledge systems and the deliberate production of ignorance/erasure of 'subordinated' knowledges—what he conceptualises as epistemicide. Laide's intellectual contributions thus become a discursive site upon which Eurocentric assumptions about rationality, rigour, and emotional restraint are projected and tested through micro-practices that undermine her authority at the moment of expression. The repeated questioning of her lab results exemplifies how institutional doubt becomes a strategy of epistemic erasure: a form of epistemological violence that masks itself as rationality and rigour.

Building on her previous reflection, Láídè gestures toward a complex form of resignification, articulating a positionality that both acknowledges and strategically subverts the discursive practice of otherness:

> … the way the world reacts to me shapes how I approach any issue…But then again, it's like this weird mix. I feel a bit boxed in by the whole 'black' and 'woman' thing, especially at work, but at the same time, it's like a ticket to freedom. I know this may sound contradictory, but hear me out – not being the so-called 'normal' means I can break away from what people think is the 'norm'. I'm not what people expect, which gives me a sense of freedom to do things in a way that someone fitting the 'normal' might not get to do, if that makes sense.

Láídè's statement reframes her racialised and gendered Otherness as a paradoxical resource—what hooks (2015) theorises as a "third space of subversion", where the fixity of dominant categories is dismantled by hybrid, emergent subjectivities (see also Mirza 2015). Láídè mobilises the very epistemological violence projected onto her as a strategy of agency to challenge and reimagine scientific identity. By not conforming to normative expectations of scientific identity, she occupies a position from which she can innovate, resist, and reconstruct the boundaries of what scientific subjectivity can entail in such ways that deconstruct the binarised construction of normativity and deviance.

Crucially, this is not a naive or romanticised construction of marginality, as her use of the phrase "boxed in" denotes an awareness of the structural limitations and expectations imposed by institutional discourses of 'race' and gender but a form of reclaiming the narrative in such a way that the condition of not being the "norm"—can also serve as a space of subversive agency. It is in this space that Láídè subverts the mechanism of otherness by asserting an alternative science identity that is neither wholly oppositional nor assimilative, but creatively negotiated.

In this light, Láídè engages what Mirza (2015) conceptualises as the exercise of agency and subjectivity by racialised and minoritised women who can strategically decolonise the academic margins they are often relegated to. Her refusal to be contained by the coloniality of knowledge—the epistemic hierarchy that prescribes who is authorised to speak, produce knowledge, and innovate—constitutes the possibility of post-colonial praxis (Subedi and Daza, 2008). Rather than occupying the margins as sites of exclusion or epistemologically orientalised Other, Láídè transforms them into spaces of intervention, reclaiming the capacity to define, reimagine, and inhabit scientific identity on her own terms.

Extending this discursive trajectory, Maya (a Black African in Infectious Disease Biology) advances the interplay of marginality and agency by reflecting on how her visible presence as a senior lecturer simultaneously subverts dominant expectations within the scientific community and serves as a powerful symbolic resource. Her narrative exemplifies how visibility, when historically denied or misrepresented, can be reappropriated to challenge entrenched assumptions and inspire other minoritised scholars to envision themselves as legitimate actors in the production of scientific knowledge and institutional transformation.

> …As a visibly black woman with a relatively small stature [with a light smile], I'm not exactly what students expect as an senior lecturer in my field, I could sometimes read the surprise on their faces especially when I'm meeting them for the first time…but then once we get on, some of them aspire to achieve a similar level of career success…which is something anyone would be proud of.

Maya's reflection embodies what Spivak (1988) theorises as the paradox of strategic essentialism—the use of one's minoritised identity as a representational tool while simultaneously challenging the essentialist assumptions that underpin it. Her presence in a senior academic role is not simply a marker of progress but a disruption of normative assumptions around who holds epistemic authority in parasitology and the biological sciences more broadly. The "surprise" she observes on students' faces is not incidental; it is an affective response conditioned by racialised and gendered imaginaries of scientific authority.

In this case, Maya confronts what Ahmed (2007) calls the phenomenology of whiteness—the unmarked, taken-for-granted norm that frames all others as deviation. That her success is met with astonishment underscores the persistence of epistemic and symbolic violence: she is recognised not on her own terms, but as an exception to the rule. And yet, rather than retreating from this moment, Maya reframes it as an opportunity to inspire: a quiet but significant act of discursive subversion. Maya's ability to convert symbolic hypervisibility into aspirational influence reflects a form of counter-hegemonic practice. Within her heterotopic faculty, she operates not simply as a subject of diversity but as a subject who reclaims the terms of her visibility. The institutional space that constructs her as Other becomes a site for producing new imaginaries of academic success that are not bound to whiteness or masculinity, but emerge from embodied difference.

Moreover, Maya's "light smile" in the context of her self-description "as a visibly Black woman with a relatively small stature..." functions as a subtle but potent discursive act. It exemplifies the use of humour as subversion—a means of momentarily destabilising the normative assumptions embedded within dominant racialised and gendered imaginaries of authority in STEM. In this instance, the smile is neither an expression of passivity nor mere politeness, but an affective gesture mirroring a moment of misrecognition that Gilbert and Tompkins (2002) describe as post-colonial humour—a form of "laughing back" to dismantle hierarchical norms while reasserting her place within the academic order. As such, her smile is a form of embodied critique that highlights the dissonance between appearance and legitimacy in racialised academic spaces.

Conclusion

In this chapter, I have analysed and discussed how the identity of the academic 'scientist' is constructed and disciplined through masculinised norms that operate both discursively and institutionally within STEM cultures. Participants' narratives revealed that recognition within academic science is often socially constructed in line with discursive practices that are coded as masculine subjectivities, such as emotional detachment, competitiveness, assertiveness, and individualism. For women of colour, particularly, legitimacy as a STEM academic often entailed navigating a complex space in which they must perform these embodiments to gain recognition, while simultaneously resisting or reshaping them to maintain a sense of self. Whether through Láídè's articulation of a subversive freedom in her non-normativity, Fifi's account of epistemic marginalisation during lab meetings, or Maya's visible disruption of stereotypical expectations, it is clear that recognition in STEM is neither neutral nor universally accessible. Instead, as Butler (1997a, 1997b) argues, subjectivity is contingent upon performance of intelligibility through a dominant discursive regime that, in this context, remains deeply gendered and racialised.

Central to these negotiations lies the masculinisation of scientific identity as a heterotopic regime of truth—a Foucauldian space that simultaneously reflects, contains, and contests broader social power relations. STEM faculties and academia more broadly, as a heterotopia, both legitimise the figure of the normative scientist and discipline deviation from that figure through practices of epistemic exclusion, affective containment, and conditional inclusion. In the next chapter, this analysis is extended through an exploration of how the intersection of academic culture with normative expectations of gender and care labour further complicates the professional trajectories of WAC in STEM. Specifically, I explore how the discursive practices of productivity and availability intersect with the socially constructed meanings of partnership and motherhood, producing the partnership and motherhood penalty and, more broadly, the feminisation of work-life imbalance.

Chapter Seven – The Partnership and Motherhood Penalty

Introduction

This chapter explores the theme 'The Partnership and Motherhood Penalty,' which emerged as a dominant and affectively charged narrative in my thematic and discourse analysis. Through repeated patterns in the data, this theme was constructed around participants' reflections on the competing—and often conflicting—demands of academic labour and domestic responsibilities. Thematic codes such as "sacrificing career for family," "succeeding in your work," "invisible labour," "everything else should be secondary," and "time poverty" captured the experiences of some of the participants in negotiating professional ambition alongside familial and relational commitments, and how they discursively construct meanings of these tensions.

The theme was most strongly expressed by six participants who self-identified across a wide range of racial and ethnic categories, including Black African (Ghanaian, Kenyan, Nigerian), Black British (Afro-Caribbean), British-South Asian (Pakistani heritage), and South Asian (Indian) and across a range of STEM disciplines, namely biomedical science, neuroscience, veterinary medicine, infectious disease biology, and computing science and engineering. All were either early to mid-career academics, and three of them were mothers, one, I later found out, was an expecting mother, and the remaining two were either in or considering partnership. Their reflections foregrounded the complex negotiations between academic aspirations and the emotional, physical, and temporal labour of care and partnership—labour that remains disproportionately gendered and racialised.

I now turn to integrate thematic patterns and discourse analysis (discussed in sub-themes) to critically explore how participants articulate, comply with, and subvert dominant gendered and racialised discourses around care, time, and legitimacy in ways that expose the institutional and affective costs of embodying multiple, often conflicting, subject positions. Drawing on postcolonial feminist and Foucauldian poststructuralist lenses (Spivak, 1988; Butler, 1990; Adam, 1995, 2013) and scholars (such as Hoskin, Moreau & McHugh, 2023; Moreau and Robertson, 2019a) whose works are around care in academia, I show how discursive constructions of time, legitimacy, and care work operate not only as gendered, but also as racialised technologies of power—ones that defines what it means to be seen as an ideal and committed academic while mothering, partnering, or caregiving.

"There's no winning": The Politics of Availability

The narratives of Fifi, Raagvi, Kikelomo, and Priscilla here offer nuanced insights into the lived contradictions that structure academic life for women navigating intersecting racialised, gendered, and postcolonial positionalities. These accounts chronicle personal struggles, but more importantly, unpack the discursive technologies through which the academy governs the subjectivities and temporalities of racialised women and academic bodies.

Fifi (a Black African in Neuroscience), in her late 30s and a mother of two, offers a striking reflection of this tension:

> …you have to be twice as good, but also twice as available at home. There's no winning, really. When I'm writing, I'm thinking about what to cook. When I'm parenting, I feel some guilt for the many things I've left undone at work…so it's not just simply about sacrificing career for family or the other way around…it's more complex.

This "complexity" that Fifi describes and embodies is central to how power materialises through the everyday life of working women with familial and caring responsibilities. In Foucauldian terms, Fifi's reflection signals the disciplinary workings of biopower, which governs life not by overt coercion but through the subtle regulation of subjectivity via temporal discipline and self-surveillance (Foucault, 1977). The figure of the 'unencumbered academic'—disembodied, hyper-productive, and infinitely available—thus functions as a 'regime of truth' as Foucault (1980, p. 131) puts it, rendering caregiving, domestic labour, and emotional labour invisible within institutional metrics of excellence.

For Fifi, the imperative to be "twice as good" is not simply a racialised politics of colonial respectability (Said, 1978), but a demand that is further intensified by the gendered moral economy of care, wherein maternal availability is constructed as natural and non-negotiable (Moreau and Robertson, 2019a). Her reflection disrupts the normative temporality of academic life, exposing the precarious positioning of racialised women whose lived realities exceed and resist the temporal notions of institutional success.

Raagvi (a British-Indian in Infectious Disease Biology), who disclosed she is partnered, echoes this unease with the institutionally inscribed impossibility of family life:

> …so, I have a partner, but there's this unspoken thing that you should always be available, publishing, applying for grants, networking…I sometimes wonder if choosing to have a family would mean that I'm not fully committed.

Raagvi's reflection makes visible the affective economy of neoliberal academia, where commitment is measured by hyper-visibility and relentless productivity. Butler's (2004) discourse of vulnerability, as constitutive rather than oppositional to agency, is instructive here: Raagvi's ambivalence around motherhood emerges not from individual indecision but from her subjection to a discursive field in which care, interdependence, and embodied maternal or potentially maternal body are implicitly constructed as incompatible with the idealised academic selfhood. In this sense, choosing to have a family is not a private matter—it is a public, politicised act that renders her vulnerable to symbolic exclusion (Butler, 2004).

Even more, Raagvi's anxiety is not merely anticipatory; it emerges from a structurally temporal tension that Mendez and Watson (2024) identify as central to the masculinised chronopolitics of STEM—where institutional timelines naturalise linear, disembodied, and uninterrupted career progression, pathologising the cyclical, care-oriented, and often non-normative reproductive timelines of women (Felt, 2025). In cross-reading with Adam (2005), the timescape of modernity in STEM settings operates as a disciplinary matrix, producing certain subjectivities as legitimate while rendering others as deviant or disruptive. Within this frame, the "unspoken" pressure Raagvi names is not a discursive absence but an active modality of power—invisible as governance—yet regulates belonging through what is left unsaid. It is precisely through these silences, as Butler (2004) suggests, that vulnerability becomes politicised: the desire for a life not wholly colonised by academic temporality is rendered pernicious and unintelligible, especially for racialised women in STEM.

This sense of temporal precarity—the embodied experience of being perpetually out of time, of doing many things simultaneously yet feeling as though nothing is ever enough was expressed by Kikelomo (a Black African in Biomedical Engineering) who noted: "the clock is always ticking louder for us…you can't afford to slow down, but you're always being slowed down by things others don't even see as work…the invisible labour…" Here, Kikelomo articulates a form of temporal precarity—marked by overloaded demands in the present and a structurally uncertain future, rooted in racialised and gendered experiences of time. Her use of a "louder" ticking clock captures what scholars identify as the temporal politics of contemporary labour, where time pressure is inequitably distributed and differentially experienced (Adams 2005; Felt, 2025) along racialised and gendered lines. The phrase "the clock is always ticking louder for us" can thus be read as a metaphor for racialised urgency—an "invisible" mechanism that serves to cultivate temporal disposition to navigate spaces that are not structurally designed for racialised women's bodies. Scholars such as Bhopal (2018) discuss how whiteness structures not just space, but time—through the politics of surveillance, and the constant demand for hypervisibility within academia (see also Mirza, 2015).

Within this neoliberal context, where time is commodified and hyper-efficiency is valorised, Kikelomo's experience exemplifies that time is not a neutral backdrop but a socio-politically charged construct through which racial hierarchies and epistemic exclusion are reinforced and reproduced. Her time—governed by the invisible workings of racialised professional and gendered familial expectations—requires proof of worth, productivity, and resilience on both ends—the family and work. Adam (1995, p. 95) exemplifies this in her argument that "time is not a given, a neutral framework within which action occurs. Rather, it is created through social practice, imbued with values, and structured to serve specific interests." Kikelomo's reference to "invisible labour" underscores this dynamic and extends it further. It implicitly names the unacknowledged, racialised, and gendered work that both sustains institutions and yet remains unrecognised within dominant metrics of productivity and value. In this way, the "louder ticking" of the clock becomes an auditory metaphor for racialised temporal compression—the intensifying demands on minoritised bodies to constantly do more while being structurally constrained from doing so (Felt, 2025).

This was also reflected in the thought of Priscilla (a Black African in Computing Engineering), who articulated the tensions of navigating the moral economies of care, especially for WAC academics. Her statement foregrounds how the affective and emotional labour of care can be problematic, particularly due to institutional expectations that socially construct racially minoritised women as perpetually available for unpaid pastoral and diversity-related labour (Ahmed, 2012; Bhopal, 2018). As Priscilla shared: "…everyone assumes you will be the one to look after the students, to be 'understanding'. And then I go home and do the same thing. There's no boundary when the care work never ends." Priscilla's words lay bare the racialised gendering of care work as both an institutional demand and a cultural expectation. Drawing on Ahmed's (2012) critique of institutional diversity work, Priscilla's narrative exemplifies how racialised women are constructed as the symbolic bearers of "diversity"—wherein their presence is paradoxically both celebrated and exploited. Institutions profess commitments to equity, diversity and inclusion, but often outsource the emotional and pastoral demands of such commitments onto the bodies of racialised women, rendering them responsible for sustaining the illusion of institutional care.

The racialised woman, in Ahmed's (2018) terms, thus becomes the "diversity worker" by racialised and gendered subjectivity—unpacking what Joseph and Hirshfield (2011) conceptualise as 'cultural taxation'—the discursive and disproportionate weight of invisible labour, including mentoring students of colour, participating in diversity committees, and being hyper-visible symbols of inclusion which are seldom recognised, value or rewarded. Priscilla's "no boundary" between institutional and domestic spheres points to a structural spectrum of care—a continuum where the affective labour expected at work mirrors and extends into racialised familial and communal expectations, perpetuating what might be called trans-institutional care fatigue—the cumulative exhaustion of racialised women who are expected to perform care labour continuously across professional and personal space without clear boundaries of recognition.

These reflections analysed above are thematically consistent, but more importantly, carry discursive implications. A closer reading revealed that participants' language both reproduces and contests dominant cultural norms of care, ambition, and academic legitimacy. In particular, these participants found themselves navigating contradictory realities. On one hand, the neoliberal temporalities of the 'unencumbered academic'—self-disciplined, infinitely productive, temporally flexible, and disembodied from care work, emotional labour, or time constraints (Adam, 1999, 2003). And on the other, the moral imperative of intensive motherhood (Hays, 1996) – which socially constructs mothering as naturalised and morally obligatory for women while also valorising constant presence, sacrifice and selflessness.

"I just want to be with my family": Reframing agency

A few participants articulated a moment of existential pause—where the personal and affective cost of staying in academia began to outweigh the institutional rewards. These moments of contemplation emerged at the intersection of care, exhaustion, and racialised gendered performance. Though such decisions may be framed as autonomous or agentic, a postcolonial-feminist and Foucauldian discourse reading provides lenses to understand the conditions under which these "choices" are constructed. Kikelomo (a Black African in Biomedical Engineering), for instance, stated: "…I know people that have completed a PhD and are like, that's it, there's no more, I'm not doing anything else, I just want to go and be with my family."

At face value, this statement may be read as a simple privileging of family over career. However, read through the lens of Said's (1978) critique of how dominant Western knowledge systems classify and subordinate the Other, Kikelomo's account reflects more than fatigue—it reflects exclusion from a symbolic order. The academy, operating through racialised and gendered practices, constructs the woman academic, particularly those racially minoritised and at early career stages, as contingent, peripheral to the imagined universal norm of the ideal academic: white, male, unencumbered (Jones and Floyd, 2024; Moreau and Kerner, 2015; Thébaud and Taylor, 2021). While this statement does not necessarily reflect Kikelomo's decision, the very utterance of "I just want to be with my family" from her citation of other colleagues becomes a discursive resignation from a space that has persistently marked them as the Other.

This narrative supports Moreau and Robertson's (2019a) argument that women in academia, especially mothers, are produced as non-normative or "impossible subjects" within a neoliberal regime that rewards linear, uninterrupted productivity. Women's desires to remain in academia are thus disciplined through "technologies of the self" (Foucault, 1988b), in which they mobilise agencies that align with the demands of the institution: visibility, constant output, and competitive edge, or quit altogether.

In a similarly affect-laden reflection, Raagvi (a British-Indian in Infectious Disease Biology) noted: "There are days I think about what I'm doing. Not because I can't do the work, but because it feels like a lot with everything else…being a daughter, a partner, a person with ambition." Raagvi's comment resists the dominant discourse that equates struggle with incapacity. Instead, it gestures towards an ontological burden, where the strain lies not in academic labour alone, but in the erasure of competing and coexisting subjectivities. Her use of "everything else" is neither incidental nor extraneous; it is indicative of a broader discourse of care obligations and familial responsibilities that exceed the Western liberal ideal of the self-governing academic.

Also, from a postcolonial feminist perspective, Raagvi's words challenge the Eurocentric construction of the academic as a disembodied, atomised subject—a notion historically tied to Enlightenment epistemologies and colonial governance structures (Mohanty, 2003). The roles of "daughter," "partner," and "person with ambition" do not simply compete with her academic identity—they co-constitute it. The problem is not that Raagvi cannot succeed, but that the terms of success are defined within an individualist, masculinist, and Western institutional imaginary that renders care and relationality invisible (Moreau and Robertson, 2019b).

In Foucauldian discourse, Raagvi's dilemma reflects a biopolitical regime that produces docile academic bodies through regimes of surveillance and internalised responsibilisation (Foucault, 1977, 1991). The "ambition" she references is not at odds with care, but the institutional discursive practices of competitive academia insist that it must be. Her reflection, therefore, does more than reveal personal struggle; it surfaces the epistemic violence of academic norms that disqualify alternative modes of being, knowing, and belonging (Said, 1978; Spivak, 1988). In this way, her words contribute to a growing critique of the academy's complicity in reproducing exclusionary imaginaries of merit, success, and professional identity—ones that remain aligned to a Eurocentric vision of academic success (Seron et al., 2018).

This envisioned success for academic faculty is what Kikelomo (a Black African in Biomedical Engineering) problematises when she reflected that: "…the decision to stay and succeed or leave here or anywhere else...is not in most cases because one is not good enough; sometimes, it's because there's hardly space for the rest of your life in it." Her comment disrupts dominant narratives of individual failure, competence, or merit and instead foregrounds the structural and affective exclusions embedded within academic life. Even more, Kikelomo's quote echoes Moreau and Kerner's (2015) critique of the myth of meritocracy within academia, where success is ostensibly based on performance and ability, yet is underwritten by gendered, racialised, and classed exclusions.

Also, her phrase "there's hardly space" can be read both materially and discursively: as a lived experience of spatial and temporal realities, and as a commentary on the symbolic order of the academy that renders care, kinship, and embodied vulnerability as disruptions to institutional norms. Her experience reveals how motherhood, relational life, cultural obligations and other life uncertainties such as illness and grief are both marginalised and actively disciplined out of the idealised academic trajectory. Foucault's (1991) notion of governmentality is particularly salient here: the neoliberal academy governs not by force, but by shaping what is intelligible, desirable, and liveable within its institutional rationality. In this sense, opting out becomes paradoxically an embodied critique—a form of self-preservation foregrounded in the refusal to inhabit a space that demands one's erasure in favour of an idealised, disembodied, and masculinised figure of the scholar.

These feelings were echoed by Fifi (Black African in Neuroscience), who shared: "…people often say you can have it all. But I think what they mean is [that] you can work like you don't have anyone to look after or a life other than your job. That's not having it all—that's being torn apart." Fifi's observation incisively reveals the affective and epistemic violence of the "having it all" discourse—a neoliberal myth that promises boundless opportunity while obscuring the structural and embodied costs of such ideals. Her experience critiques what Mendez and Watson (2024) describe as the 'double bind' high-achieving women experience in academia, particularly in STEM: the expectation to perform at peak productivity while seamlessly managing intensive care and relational labour in such ways that it does not weigh on work productivity (see also Miller and Roksa, 2020; Tooley, 2024).

From a post-structuralist feminist perspective, this narrative signals the discursive impossibility of the neoliberal academic subject. Fifi is not merely "torn" by competing roles; rather, she occupies a subject position that is internally contradictory constituted by discourses that deny the legitimacy of dependency, corporeality, and relationality. The violence lies not just in the workload, but in the incoherence of being hailed as a subject who can and must "do it all" while being systematically denied the material and institutional conditions to do so. This speaks to what Butler (1997b) describes as the psychic effects of social power, which constitute the subjects in reproducing norms that ultimately undo them, as well as discipline the very condition of the subjects' existence and the trajectory of their desire.

Following Foucault's (1988a) discussion of power in relation to 'self' and agency, it will thus appear that discourses around "just being with family" may be an inevitable response to systemic, racialised, and gendered exclusions, where agency is not simply the capacity to choose freely, but is produced within power/knowledge regimes that shape what choices are possible, and for whom. Thus, in reframing academic "choice," I am compelled to ask: who gets to stay without penalty, and who must negotiate, justify, or relinquish their academic ambitions to live fully? As these women's voices highlight, the cost of belonging often becomes high, not because of personal deficiency, but because the academy remains structured by the exclusionary patterns it seeks to address.

"You have to keep going": Temporal Precarity and the Costs of Care

Under the neoliberal agenda of the academy, the imperatives of productivity, speed, and linearity give rise to what Adam (2003) calls "temporal precarities"—conditions in which time is not only commodified and compressed but also disciplined, controlled, and colonised in ways that disproportionately affect marginalised scholars. These precarities operate as mechanisms of epistemic governance, rendering certain temporal rhythms, especially those shaped by care work, interdependence, and embodiment, as incompatible with academic success. This complements Said's (1978) theorisation of Orientalism, wherein knowledge systems render the lives of racialised subjects, particularly women, intelligible only through Western paradigms that erase structural constraints and individualise struggle.

It is within this precarious terrain that Fifi (a Black African in Neuroscience) situates her experience of academic motherhood, offering a narrative of navigating motherhood under financial and temporal strain. In her words:

> I…have a 10-month-old baby. And I've got a colleague I'm working with, he's in Belgium and is on the same funding as myself. And if you look at his progress compared to mine after having the baby, there's a huge difference. I couldn't officially take any maternity leave, because I'm funded by [a named] body. Taking a break will mean I have to suspend my studies, and I might lose my funding. With a baby and everything, I've had to continue research…nursing an infant and still having to write papers, attend important conferences and get on with work is enormously challenging to balance.

Fifi's account lays bare the affective cost and often structural inflexibility of a university system that positions care as an externality—a personal burden rather than a systemic concern. Her inability to take leave, despite the physical and emotional demands of early motherhood, speaks to what Foucault (1977, 1980) theorises as the biopolitical governance of life itself: the disciplining of bodies to conform to institutional norms that demand ceaseless visibility, productivity, and detachment from embodied realities. The maternal body, within this regime, is discursively produced as an excess—an interruption in the seamless flow of institutional time.

Fifi's position as a racialised and migratory scholar intensifies this precarity, further situating her within what Butler (2004b) identifies as "politically induced" vulnerability. *In Precarious Life*, Butler argues that precarity is not merely the product of economic systems but is ontologically imposed through regimes that stratify whose lives are liveable, whose needs are recognised, and whose interruptions are tolerated (see also Butler, 2009). Fifi's precarious positioning becomes clear, in this sense, particularly when viewed from findings of studies that suggest that women of colour in UK academia are statistically less likely to hold permanent, full-time academic positions and therefore often lack access to entitlements such as paid maternity leave, sick pay, or parental accommodations (Rollock, 2019; UCU, 2016, 2021a, 2023). In this sense, Fifi's inability to pause or care without institutional penalty is not an isolated experience but a manifestation of a broader structural issue – racialised, classed, and gendered temporality of contracts in which certain subjects are discursively and materially permitted to pause, parent or retreat without professional cost while others are systemically penalised for doing the same. The inequity, as Fifi articulates, lies not simply in care itself, but in whose care counts as disruptive.

Her comparison with a male colleague—similarly funded but less encumbered by care work—further underscores how temporality itself is gendered and racialised. His career follows the idealised arc of linear progression that academic institutions reward; hers is marked by disruption, care, and exhaustion, all of which fall outside the temporal frame of meritocracy. This disparity reflects what Moreau and Kerner (2015) critique as the masculinist structuring

of academic time—one that normalises continuous productivity and marginalises those who must navigate cyclic, interrupted, or relational forms of time.

The point is made yet more incisively when Fifi interrupts her own narrative to acknowledge:

> …you can perhaps hear the baby crying already in the background for attention. We will have to take a break and continue later. This is exactly the point I was making. Obviously, I won't neglect my crying baby else I will be taken as an irresponsible mother.

This unplanned interruption serves as a discursive moment of embodied disruption, deconstructing the professionalising norms of academic discourse itself. It disrupts the myth of the disembodied, ever-available academic and reclaims space for care within the dialogic frame. In doing so, Fifi not only reveals the costs of performing impossible ideals but also demonstrates a refusal (although constrained by it) of the neoliberal subjectivity that demands self-sacrifice in the name of success. Her experience thus calls for a deliberate rethinking of academic temporality, care, and inclusion—one that does not merely accommodate difference but reimagine the discursive practices that render some lives perpetually precarious.

Yet, Fifi's account brings to the fore the often invisible and unacknowledged costs of care in line with the temporal politics of reproduction. In her further reflection, she said:

> …in my personal experience, the challenges of having children as a professional woman are a harsh reality. From the moment you consider starting a family, the costs begin to accumulate. First, you have to be strategic about the birth period…once the baby arrives, the costs of childcare become a larger part of our budget… finding suitable and reliable childcare is both expensive and crucial since I don't have extended family members around to assist.

Through a Foucauldian lens, Fifi's account again exemplifies how neoliberal regimes of academic governance operate through the regulation of normativity, producing self-regulating subjects who must strategically align their reproductive and affective labour to the idealised trope of institutional productivity (Foucault, 1980). Her narrative is not simply about the cost of childcare, but about the biopolitical disciplining of maternal subjectivity, including time, where life itself must be strategically managed in accordance with institutional logics of efficiency and availability. The strategic timing of childbirth is thus not a free choice, but a

calculated act within spaces that Others the embodied realities of motherhood as I have discussed in the literature review in the sub-section of 'May babies and Managed lives.'

This othered embodiment is what Said (1978) describes as the epistemic violence of Orientalism, simultaneously romanticising and disavowing the 'Other.' Through this lens, parenthood—especially maternal care—is often culturally idealised and symbolically celebrated, yet rendered materially unsupported and institutionally framed as incompatible with the demands of academic life. Fifi's experience, marked by the absence of a familial network due to her migratory status, exemplifies how this romanticisation/disavowal logic operates, casting care as a valorised ideal while denying the structural conditions necessary to sustain it.

Indeed, the cost of care is not merely financial. As Fifi implies, and as scholars such as Ahmed (2004) and Moreau and Hook (2024) note, there are deeply affective, embodied, and often emotional and unvoiced costs tied to fertility issues, miscarriages, including the sense of pain and loss associated with such realities—experiences that remain unspeakable within masculinist academic cultures that value disembodied rationality and linear achievement. The silence around these intimate disruptions represents what Spivak (1988) describes as the structural conditions under which certain 'voices', particularly those of racialised women negotiating care and professional labour, are rendered inaudible within dominant epistemic and institutional regimes. In this context, the unspeakability of maternal loss and reproductive struggle within academic discourse reflects not only the institutional devaluation of caregiving but also a deeper epistemic violence whereby certain forms of embodied knowledge are systematically excluded from what counts as legitimate academic subjectivity.

"Everything else should be secondary": The Weight of Exceptionalism

As feminist scholars of higher education have argued (and I have discussed through the literature review), gendered expectations around care and academic labour remain deeply entrenched within the discursive practices of the academy. For instance, Moreau and Kerner (2015) and Hoskins, Moreau, and McHugh (2023) highlight how these expectations are not incidental but structurally embedded in the neoliberal university, which—as Jones and Floyd

(2024) contend—operates as a form of governmentality that privileges uninterrupted, linear, and visibly productive career trajectories. These ideals often stand in stark tension with caregiving responsibilities.

Such disciplinary norms are exemplified in the account of Raagvi (a British-Indian in Infectious Disease Biology), who described the culture of academic labour as "robotic." She reflects: "…that unspoken expectation that you should work all the time, as this is your prime, your main focus should be succeeding in your work, and everything else should be secondary." According to Raagvi, her typical work schedule consists of 8-10 hours a day, including working the weekends occasionally. This, she explained, was not simply a personal choice but a disciplinary demand—resonant with Jones and Floyd's (2024) framing of neoliberal academia as a technology of governmentality. Her repeated references to visibility, productivity, and competitiveness reflect discursive practices of hyper availability that frame life outside work as either a private burden or professional liability. She spoke of the need to "keep pace" with a senior professor, a masculine figure of academic excellence, around whom the field's norms seem to orbit. Raagvi's account is indicative of the time-pressured academic culture within STEM, which often signals negative professional consequences for bodies that fail to embody these cultures.

This discursive tension becomes especially apparent when viewed through the lens of Rabita's (a South Asian in Biomedical Engineering) testimony, which recounts the departure of a colleague who is also a South Asian woman in STEM academia due to intensifying role conflict between home and work. According to her:

> …you can't help but think of trade-offs especially when we are talking about how racial and ethnic minority women manage to stay on top of their careers and at the same time fulfil their roles as spouses, mothers and caregiver…[a named colleague] of mine is a practical example, she had to resign, she had a second child who should be close to a year now and I think she was really struggling with keeping up with everything, especially, I think because our work involves a lot of lab sessions… I think women who are able to combine both roles are geniuses.

Here, the use of the word geniuses is analytically significant. It signals that balancing motherhood and academia is not only difficult but framed as exceptional – so extraordinary an achievement that those who manage it are constructed as outliers rather than reflective of a possible norm. Post-structurally, this framing underscores the pervasiveness of dominant social discourses that naturalise caregiving as women's responsibility, while simultaneously rendering the successful navigation of care and career as anomalous. When these norms are defied—when women manage to 'balance it all'—the reaction is not to question the norm, but to elevate the individual as a genius, thus individualising success and masking the structural marginality underpinning academic life.

Rather than highlighting the institutional failures—such as inadequate maternity support, inflexible work structures, or androcentric conceptions of career progression—the discourse of exceptionalism privatises the problem. The use of terms like "trade-off" further normalises this ideology, suggesting that sacrifice is an inevitable and personal negotiation, rather than a symptom of exclusionary systems. Such framing draws on Edward Said's (1978) analysis of exceptionalism as a discursive strategy: one that simultaneously reaffirms the norm by celebrating the few who manage to succeed in it. In this way, the genius framing operates as a discursive containment—praising individual women for enduring structurally marginal conditions while deflecting critique from the very systems that necessitate such endurance. This reinforces what Ahmed (2012) describes as institutional non-performativity—where institutions claim to value diversity and care, yet sustain conditions that make the capacity to thrive contingent on extraordinary self-management (see also Ahmed, 2022). The maternal body, then, remains positioned as 'out of place', only rendered temporarily visible through the discourse of astonishment.

Such discourse corroborates Fifi's remark, who had this to say about how impressed she thought of women who are able to manage work and family in STEM, using herself as an example.

> …I just look at myself, and I wonder how I'm getting things done. If we're looking at the two genders… It's easier for men for one or two reasons, but then it's definitely harder for women to get far ahead with family and all.

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While Fifi later discussed issues of motherhood and care dynamics for women in academia in relation to social patterns that should change, her remark—"I just look at myself, and I wonder how I'm getting things done… It's definitely harder for the woman to get far ahead with family and all,"—corroborates a recurring discursive pattern in the narratives of women in STEM. Her account, which both marvels at her own endurance and implicitly contrasts the gendered experience of academic progression, reflects the pervasive structuring of the neoliberal academy through the idealising power of the unencumbered worker.

On one level, her reflection affirms a well-documented reality: women in STEM and academia broadly continue to shoulder disproportionate caregiving responsibilities, often in institutional contexts that render care invisible or irrelevant (Miller and Roksa, 2020; Moreau and Kerner, 2015). Fifi's astonishment at her own capacity to cope thus emerges within a discursive field where care is not only devalued but positioned as antithetical to academic success, especially for women and racially minoritised mothers.

However, on another level, particularly from a poststructuralist lens, Fifi's discourse—"it's easier for men… harder for the woman"—risks essentialising the very gender binaries it appears to critique. While rooted in her lived experience, such framing may slip into essentialist narratives that naturalise women's caregiving labour rather than interrogate how such roles are socially and institutionally constructed. Butler's (1990, 2015, 2025) concept of gender as performative finds relevance here, providing nuanced insight into the construct of gender not as a fixed, essentialist, or biologically determined notion of identity, but as discursively constituted and performed through iterative practices of signification—a repeated exercise governed by regulatory and normative discourse.

As such, Fifi's statement must be read as part of a broader apparatus of gender normativity. Her narrative, while highlighting the imbalances, leaves unquestioned the institutional mechanisms that produce such inequality, thus potentially reinforcing a heteronormative division of labour in which care remains women's domain. In urging feminist narrative to remain epistemologically vigilant of how critique itself can become complicit with the systems it seeks to undo, Ahmed (2004, p. 120) cautions that we must resist stable groundings that foreclose critique; rather than stabilising the category of "woman" as caregiver, we must embrace it as an idea that may be deconstructed and reconstructed on shifting terrain and thus interrogate the

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fluid cultural and institutional discourses that make such roles gendered and seemingly 'natural'. In this light, Fifi's remark can be read not only as a reflection of structural inequities, but as a performative citation of dominant discourses—those that frame women who manage both academia and care as exceptional, while leaving unchallenged the systemic conditions that make such balancing appear extraordinary.

In elaborating her earlier point around constancy and being "always available" while partnered, Raagvi (a British-Indian in Infectious Disease Biology) shared:

> The idea that you may lose your edge if you slow down even for a moment—say you take maternity leave—is mind-boggling…isn't this what makes us human?[…]I mean our ability to take breaks, live life, look after ourselves, and continue without the fear of consequences.

This statement foregrounds a complex reading when situated within the Saidian lens of epistemological Orientalism (Said, 1978). Raagvi's racialised embodiment positions her as a subject historically marked by the Orientalist legacy, already constructed as potentially less legitimate. Within this lens, her labour—as her body—is at risk of being interpreted through a colonial lens of deficiency. The possibility of taking maternity leave or "slowing down" becomes not a matter of bodily necessity or care but is instead read through a racialised metric of risk: the risk of confirming colonial assumptions of unreliability, inefficiency, or lack of discipline, pathologised as a deficit of character (see also Adam, 1999, 2003). Temporality here becomes colonial—linear, 'progressive' and capitalist, and Raagvi's desire to live at a human pace disrupts this imposed temporal ways of being.

"It's a woman's thing": 'Clocks' and the Reproductive Bind

The intersecting challenges that span professional and personal spheres for women in academia—particularly in STEM—are frequently misrepresented as individualised or exclusively gendered issues, as I have touched on earlier in this analysis. This domestic essentialism narrows the frame of analysis as well as downplays the structural, racialised, and classed conditions that underpin such inequities. Framing these tensions as private struggles or "women's issues" sustains a liberal fiction of gender equality, while leaving intact the ideological and institutional workings that normalise the invisibilised care labour women perform, especially in domestic and affective domains.

Kikelomo (a Black-African in Biomedical Engineering) articulates this tension with striking clarity, saying:

> … I have granted a few of this type of interviews in the past where I spoke about my experiences of balancing work-family demands…especially how I struggled with managing work when I had my first child…how I stopped working at some point to attend to family responsibilities…no one pays you for these things, especially at home… it is just seen as one's duty…interestingly, my husband works in IT and in all of his years of work experience, I don't think family-work balance is really a question… at least, not on the subject of balancing…it's not really a thing for men…being a father does not seem to weigh on his [science] career.

Kikelomo's narrative reveals the gendered imbalances embedded in contemporary academic life and across the wider society, particularly around the demands of care as both 'cultural' and constitutive of an ongoing technology of power—discursive, material, and institutional (Foucault, 1988a)—which reproduce a gendered biopolitics of time and work to feminise care labour. The notion that unpaid domestic labour is "just seen as one's duty" exemplifies domestic essentialism, wherein care is rendered both invisible and morally obligatory for women, delegitimising it as labour within neoliberal academic economies that valorise productivity, autonomy, and disembodied professionalism.

Yet, Kikelomo's account also draws attention to a second and equally critical unequal power relation: the structural absence of care expectations for men. Her husband's career in IT is seemingly untouched by questions of "balance," reflecting the temporal immunity and institutional privilege accorded to masculinised academic subjectivities whose bodies and life-worlds are often not regulated by similar constraints. Research studies substantiate this structural critique, indicating that as men progress in their STEM academic careers, they are more likely to be perceived as attractive partners and to benefit from what Glauber (2008) terms the "fatherhood premium"—a symbolic and material boost wherein fatherhood is interpreted as a sign of stability, competence, and maturity (see also Frevert, Culbertson, and Huffman, 2015; Kelly and Grant, 2012; O'Connell and McKinnon, 2021). In contrast to the motherhood penalty, which marks women as unreliable or distracted, the fatherhood premium enhances men's career mobility and reputational capital (Correll, Benard and Paik, 2007; Kachchaf et al., 2015).

From a postcolonial feminist lens (particularly through Spivak's 1988 inquiry into the 'speakability' of the subaltern), this gendered division of labour is inseparable from the colonial history of knowledge production that enshrined white, male, Western epistemic authority as the normative model for scientific and academic legitimacy. For racialised women, particularly Black and Brown women in the UK academy, this produces a double bind: they are positioned outside both the white maternal ideal and the masculine professional norm, inhabiting a precarious space where care is demanded but devalued, and career legitimacy is never fully secured. As such, Kikelomo, like other women, experiences intersectional exclusions wherein their maternal identities, professional commitments, and racialised subjectivities become entangled in a matrix of institutionalised precarity.

This dynamic is further exemplified in Raagvi's account. As Raagvi (a British-Indian in Infectious Disease Biology) inhabits a subject position doubly vulnerable to intersecting disciplinary regimes (of gendered and racialised academic precarity) that govern who may legitimately aspire to academic contract permanency, and that is intricately tied to the competing chronologies of reproductive and professional life. Raagvi's expression of this moral panic, despite not actively desiring children in the immediate future, makes visible the anticipatory pressures that women in academia broadly—especially in their late 20s and early 30s—must navigate. In her words:

> …I am not looking to have kids now… but there has to be a timeline, which is a bit scary. if I decide to stay in academia, I need to do…one or two postdocs ... and then I will be 36 already or around 37. [by this time] I should be thinking of maybe settling down… but then, because I don't have a full [faculty] position, I'm on a temporary contract… it's a mess.

Raagvi's phrase—"I need to do… one or two postdocs … and then I will be 36 already or around 37"—points to the ways in which the temporal architecture of academia structures career trajectories to produce protracted periods of professional liminality, particularly for early-career researchers. This form of temporal precarity (characterised by a series of postdocs - extended periods of employment insecurity, frequently involving poorly paid work and geographically mobile academic labour; Henderson and Moreau, 2020) not only delays but actively shapes life course decisions such as "settling down" or pursuing parenthood—decisions that are often biologically and socially time-sensitive. Raagvi thus finds herself caught in a chrono-political bind—a concept that may be drawn from Felt's (2017, 2025) reworking of chrono-normativity—where normative temporal expectations surrounding reproduction and stability become misaligned with the institutionalised timelines of academic advancement (see also Adam, 2003, 2013).

Moreover, Raagvi's admission that "there has to be a timeline, which is a bit scary" gestures toward the gendered dimensions of this temporal misalignment. As scholars such as Mendez and Watson (2024), Moreau and Robertson (2019a), and Moreau and Hook (2024) have documented, the interplay between precarious academic labour and reproductive responsibility disproportionately constrains the trajectories of women, particularly in male-dominated fields such as STEM. The seemingly offhand phrase "it's a mess" carries a potent affective charge, bearing the emotional labour involved in negotiating contradictory demands of career progression and familial aspiration. This articulation of "messiness" signals a breakdown between culturally sanctioned life-course norms and the material conditions of academic work, revealing the extent to which institutions privatise structural risk. In this context, Raagvi's experience exemplifies the neoliberal responsibilisation of early-career scholars, who have to personally manage systemic contradictions—such as the imperative to remain constantly productive while navigating profound uncertainty about future stability and family life.

Raagvi's "career clock" and "biological clock" thus do not exist in neutral parallel; rather, they are shaped by gendered notions of chrononormativities which serve to align women's professional legitimacy with linear, uninterrupted productivity, while rendering care, reproduction, or temporal divergence as deviations from the idealised academic subject. This tension also foregrounds what Ahmed (2023) conceptualises as an "affective cost"—a structure of feeling that weighs on those whose bodies (for e.g., the racialised other) are seen as potentially interruptive to institutional timelines and thus perceived as 'getting in the way' of progress for their misalignment with temporal norms of academic life. As a consequence, the moral panic Raagvi articulates around settling down or missing the maternal window extends beyond the institutionalised pressures (of starting a family at a time considers crucial for career advancement and when fertility might be a significant concern) to a form of anticipatory biopolitical governance (Foucault, 1978; Foucault, Davidson and Burchell, 2008)—the regulation of women's trajectories through disciplinary discourses of time (risk and delay), productivity, and reproductive value.

As with other professional academic domains, STEM-related faculties typically require academics to complete a doctoral degree, followed by one or more fixed-term postdoctoral positions spanning anywhere between one to five years or sometimes longer, further prolonging the temporal investment required to establish a stable academic career. Within this extended trajectory of career permanency, women (desiring family) are expected to make reproductive decisions, particularly in socio-cultural contexts where familial aspirations are not culturally deferred, disproportionately leading them to navigate multiple, often competing temporal regimes of productivity, care, and reproductive normativity.

Kikelomo (a Black African in Biomedical Engineering) further exemplifies this tension when she spoke around the representational dynamics of her faculty. She shared that:

> …the majority of the staff in my faculty are men, either without a partner or partners outside academia, where work pressure is less intense… There are also a few women with partners but no childcare responsibilities…For someone like myself, working for up to 8 hours or more and under intense pressure was incredibly difficult to manage with family. I had to take a break while having my kids…Many of my colleagues back then have gone to become professors…I understood that those periods were crucial for my career development, but I couldn't keep up with everything while attending to family responsibilities.

In retrospect, Kikelomo's account unpacks the emotionally charged discursive subject that many women—particularly WAC—in STEM negotiate when navigating the overlapping pressures of career development, reproductive and family life. Her reflection constructs the painful ambivalence between two temporal demands—the biological clock and the career clock—each presented as individually legitimate, yet structurally incompatible within the dominant academic timeline. Her statement, "Many of my colleagues back then have gone to become professors," conveys a retrospective consciousness of professional loss, marked by an unspoken grief that verges on a sense of failure. Crucially, this loss does not stem from a lack of ability, but from of care obligations that remain institutionally devalued in academic cultures.

This tension is not reducible to a matter of clash in personal priorities; rather, it reflects how affective economies organise institutional life (Ahmed, 2004). The university, as an affective space, operates to circulate emotions such as guilt, aspiration, regret, and disappointment through normative temporal scripts. The "promise of happiness" (Ahmed, 2010)—whether tied to the satisfaction of maternal fulfilment or the pride of professional accomplishment—thus functions as a disciplinary mechanism, socialising subjects toward imagining that happiness lies at the end of both timelines—both simultaneously considered desirable and compulsory. Yet, as Kikelomo's narrative underscores, the pursuit of one form of happiness often entails the foreclosure, in part or in whole, of the other.

The structural weight of either decision—delaying or foregoing motherhood to preserve academic momentum, or stepping away from the profession to attend to familial life—can produce a form of affective debt. To "choose" either is to risk living with the regret of what might have been: the deferred or unrealised career, or the absence of a family life one might later long for. Crucially, neither path guarantees happiness, though both are foregrounded by the culturally reinforced idea that it should.

Moreover, Kikelomo's account troubles the liberal-individualist notion of agency that often underpins institutional diversity discourse. Her decision to "take a break while having [her] kids" was not 'freely' made but situated within a field of unequal expectations—where men, particularly those without caregiving responsibilities or with partners outside the academy, continue on uninterrupted, accruing symbolic and material capital. In contrast, her own deviation from linear progression rendered her professional trajectory discontinuous, less legible within the idealised narrative of academic meritocracy. It is here that the affective force of comparison also comes into play. Her observation that "many of [her] colleagues have gone on to become professors" reaffirms that institutional time is not just a neutral measure of experience or expertise but is gendered, raced, and classed. The affective cost is complicated when one's temporal rhythms—governed by care, reproduction, or health—diverge from the high-speed, uninterrupted tempo valorised in academic culture (Felt, 2017).

This is further illustrated through Maya's (Black African in Infectious Disease Biology) observation that:

> …I think the responsibility of looking after family, at the same time, being in academia is also something that is not talked about enough…it almost feels like you have to put one on hold, to be successful in the other… it takes a lot of work to find that balance and excel in both and as you know, this affect women more.

Maya's phrase—"you have to put one on hold, to be successful in the other" reveals how care and academic work are constructed as mutually exclusive domains. Her utterance not only reflects the institutional silencing of caregiving but foregrounds the gendered labour of negotiating competing temporalities. The epistemic framing—"this affects women more"—produces gender as a discursive site where institutional inflexibility is naturalised as an individualised and feminised issue.

The biological realities of fertility—for example, the statistical decline in conception likelihood post-age 35 (Office for National Statistics, 2021) as well as the increased risks of developing complications during pregnancy including miscarriage, foetal chromosomal abnormalities and gestational diabetes after age 35 (Berrington et al., 2015; Fitzpatrick et al., 2017)—are not simply scientific findings but become institutionally salient, particularly when mapped onto institutional temporal structures that fail to accommodate embodied variability. The tension, then, is not merely between biology and career, but between how institutional time constructs and responds to reproductive timelines: as an inconvenient interruption rather than an infrastructural concern.

It is therefore unsurprising that Maya, Fifi, Kikelomo, Priscilla, and Raagvi particularly perceive the disconnect between the biological clock and how institutional clocks work to respond to gendered and racialised temporalities more as a serious concern and not simply as "a woman's thing". This is not to say that men faculty are unaware of these dynamics. However, as reproductive and caregiving responsibilities remain unevenly distributed, such concerns are rarely foregrounded in the imaginaries or career planning of men in academia as they are for women. This dynamic is further exposed in the response of Callum (a White and male British Faculty Head), who generously offered to "put me in contact with some women in [his] faculty," while simultaneously disavowing experiential or discursive ownership of "women's experiences." In his words:

> …I'm happy to put you in contact with some women in the faculty who might be of help to your research but I can't speak much around women's experiences within STEM, I would think that the problem of woman's underrepresentation in STEM faculties is embedded in complex intersectional issues, with those of WAC as a subset of the broader issues…there are institutional issues and…[also] personal aspirational issues like starting a family, a woman's body clock and so on…which is not much of an issue for us [men].

His distancing language from purported feminised issues—"not much of an issue for us" (loosely interpreted as a 'woman's thing')—inadvertently performs gendered boundary-work, reinforcing caregiving and reproductive labour and care responsibilities as private, feminine concerns and reinforcing the neutrality of male subjectivity within institutional discourse. Although acknowledging broader issues, his framing reduces women's underrepresentation to a blend of institutional and "personal aspirational" issues, inadvertently individualising structural failures.

On further prompts to discuss some of the broader, complex, and structural issues contributing to the underrepresentation of women, including racialised women, Callum shared:

> …on the structural side of things, I'd say the pressure from funding requirements, publication targets, and the prevalence of short-term contracts all contribute to quite a demanding environment. It's highly competitive, really, and I'm not sure it always takes personal circumstances into account. The system does tend to favour uninterrupted productivity, which, if we're being honest, isn't always realistic for everyone.

Even as Callum acknowledges broader structural constraints (such as the precarity of short-term contracts and the rigid metrics of output-driven cultures), his framing subtly displaces responsibility by framing such issues as generic institutional pressures rather than as phenomena with differential impacts across gendered and racialised lines. This discursive shift—from personal disavowal to vague structural critique—highlights what Ahmed (2012) describes as non-performative speech acts, in which institutional acknowledgement of inequality functions as a substitute for transformation. While Callum names structural impediments, such as the pressure to publish and secure grants, he does so without interrogating how these pressures intersect with embodied, gendered, and reproductive temporalities. In this sense, the invocation of neutrality—"the system rewards uninterrupted productivity"—obscures how this system is premised on the idealised, masculinised academic subject: disembodied, always available, and temporally sovereign.

Moreover, his identification of "personal aspirational issues like starting a family" alongside institutional factors reproduces an individualised narrative of career interruption. By positioning caregiving as an aspirational choice rather than a structurally embedded expectation, the reproductive clock is framed as a voluntary divergence from the norm, rather than a temporal condition that institutions are structurally ill-equipped to accommodate.

This is contrasted with the more reflexive, though still partial, insight offered by Neeraja (a senior British-Indian institutional Head), who shifts the analytic focus toward the pervasive culture of hyper-availability:

> I think sometimes the issue gets narrowed down to maternal timelines and dual-career dynamics… which remains an important aspect to consider, don't get me wrong, but I'm not sure we always look enough at institutional cultures that reward a kind of obsessive availability—maybe that's the more pervasive issue.

By naming "institutional cultures that reward a kind of obsessive availability," Neeraja points to an under-theorised form of normativity—signalling a discursive shift from biological determinism to institutional temporality, gesturing to what Adam (2003, 2005) and Felt (2017, 2025) have conceptualised as chrononormativity: the organisation of time in ways that privilege certain bodies and temporal rhythms over others. She exposes the expectation of temporal hyper-availability as the benchmark of academic legitimacy.

Yet even this critique risks abstraction. While it de-naturalises maternal timelines as the sole explanatory frame, it still falls short of attending to the specific racialised and gendered bodies disproportionately affected by these institutional norms. Without this intersectional grounding, the critique remains at the level of structure without fully tracing its embodiment. Together, these narratives illustrate how institutional actors variably engage with the discourse of temporality, gender, and care. Callum's response exemplifies how structural issues can be both acknowledged and depoliticised, while Neeraja's critique opens space for deeper reflections— yet risks floating above the material realities of those it most affects.

Conclusion

This chapter has explored how the intersection of caregiving, reproductive labour, and institutional expectations constructs 'the partnership and motherhood penalty' in academic STEM spaces. Across the narratives of participants such as Maya, Fifi, Kikelomo, Priscilla, and Raagvi, we can see how gendered and racialised temporalities become sites of tension— where the pursuit of academic legitimacy is continually negotiated against the demands of care, partnership, and structural architecture of the academy. Importantly, the analysis has shown that the so-called "choice" to pursue motherhood, or to delay it, is embedded in institutional cultures and practices that reward temporal sovereignty and penalise embodied disruptions.

Yet, as the discussion has also shown, participants were not merely passive recipients of these norms. They navigated, resisted, and, at times, internalised institutional logics, with their responses shaped by both structural constraints and agentic strategies. While this chapter and the previous chapters have foregrounded gender and race as critical organising frameworks, they have also begun to signal more diffuse experiences of contradictory discourses—experiences that, while entangled with identity/subjectivity, are not always explicitly articulated through it.

Thus, the final analysis chapter, "Out of Place Yet Unrelated to Gender or Race Identities," to which I now turn, takes up this thread. It explores forms of contradictory discourses among participants that do not map neatly onto conventional categories of gender or racial marginality. Participants in the next chapter describe a sense of disconnection tied less to visible identity markers and more to cultural dynamics, disciplinary norms, and the implicit values embedded in academic life. These observations, while appearing to affirm meritocratic ideals, may also be understood as a form of mobilised agency to structural exclusion and as ways of subverting marginal discourses. Crucially, they gesture toward a more complex negotiation of selfhood—one that, while informed by feminist values, both resists being reduced solely to narratives of marginalisation but also inadvertently reproduces hegemonic discourses.

Chapter Eight – Out of Place Yet Unrelated to Gender or 'Race'

Introduction

This chapter explores the last theme—Out of place yet unrelated to gender or race identities—emerging from the thematic analysis. The accounts in this chapter foreground how participants' narratives both corroborate and contest dominant discourses of gender and 'racial' equity and inclusion in STEM. Participants repeatedly (implicitly and explicitly) articulated contradictory discourses—of being "out of place"—while simultaneously resisting the attribution of such experiences to gendered or racialised identities. Phrases such as "diversity is great but you want the best people", "I sometimes feel out of place, but I don't think this necessarily has to do with being a woman or a person of colour", "When you are really good at what you do, it is almost impossible not to get the recognition you deserve" amongst others reflects the contradictory nature of participants discourses, emphasising the primacy of individual competence over interpersonal dynamics.

These statements reveal the workings of hegemonic meritocratic discourses that emphasise individual skill, resilience, and self-reliance in a way that suggests success as attainable regardless of structural inequities. At the same time, their selective acknowledgement of exclusion—whether in subtle microaggressions or social omissions—signals an underlying contradiction with equity discourses that highlight the persistence of systemic barriers. This interplay between affirmation and resistance to dominant narratives suggests that meritocracy operates here both as an ideological praxis in response to marginal experiences and possibly as a form of strategic and mobilised agency to reclaim identity from deficit framings.

In situating these narratives, this chapter draws on strands of feminist thought such as hooks' (2015) and Mirza's (2015) call to shift from purely marginalisation-focused accounts toward subversive, counter-hegemonic discourses. In engaging these articulations, the chapter seeks to unpack the layered complexities they entail. While oppositional strategies—whether framed as subversive practices or counter-stories—can disrupt hegemonic narratives, they also carry risks. When overly individualised, such approaches may obscure the structural inequities that shape women's experiences, essentialise femininity, or inadvertently position underrepresented groups as agents of social reproduction rather than structural transformation, as the discussions in this chapter reveal.

While this theme is illustrated here primarily through the accounts of Ngozi and Sarita, similar and yet more fragmented or contradictory expressions were discernible across other participants' narratives. Some spoke directly to structural inequalities, while others wove together meritocratic and equity-based discourses in ways that resisted neat categorisation. Focusing on this theme, even if voiced more explicitly by a minority of participants, is important for two reasons. First, it highlights the discursive strategies by which individuals navigate tensions between personal agency and systemic inequities, revealing how dominant meritocratic narratives can be both adopted and contested. Second, its minority status underscores the "messiness" of qualitative research: data seldom aligns into uniform patterns, and valuable insights often emerge from points of divergence or ambiguity. These divergent articulations do not, in any way, undermine the thematic coherence of this analysis; instead, they enrich the analysis by situating it within the broader, complex interplay of alignment, resistance, and negotiation within participants' accounts.

"I feel out of place but…"

…I sometimes feel out of place, but I don't think this necessarily has to do with being a woman or a person of colour…some people are just naturally introverted and there's really nothing you can do to get them to relate with others…that's just who they are…and I'm not going to let that affect me (Ngozi – a Black African in Computing Engineering).

…I notice some subtle microaggressions that try to put me in 'my place', like not getting invited to some faculty social gatherings but for the sake of my sanity, I don't overanalyse people's behaviours. I take the interaction or its absence for what it is... I think when you are really good at what you do, it is almost impossible not to get the recognition you deserve. I just focus on my work and don't invest much time or energy on who said what or on how someone behaved or reacted…I think that's a killjoy (Sarita – a South Asian in Solar Astronomy and Engineering).

These were the words of Ngozi and Sarita who both articulate a stance that seemingly downplays or disassociates their feelings of being "out of place" from their identities as women and people of colour. As these quotes suggest, both participants share a discursive orientation that downplays the salience of gendered and racialised exclusion. Both speakers employ a form of disclaimers and deflection strategies—moves that acknowledge a potential inequity but then immediately distance it from identity categories, "I don't think this necessarily has to do with being a woman or a person of colour"; "I take the interaction or its absence for what it is". This positioning serves to reframe their experiences away from systemic explanations and toward individualised, internalised, and ostensibly apolitical interpretations. In doing so, both participants draw on meritocratic discourses prevalent in STEM, where personal competence, work ethic, and resilience are constructed as the ultimate arbiters of recognition and belonging. Sarita's formulation—"when you are really good at what you do, it is almost impossible not to get the recognition you deserve"—functions as a myth that implicitly reinforces the belief in the impartiality of academic reward systems, corroborating dominant ideologies that marginalisation can be overcome solely through individual excellence.

A further reading of these excerpts also reveals subtle traces of contradiction and tension. While the surface narrative resists linking exclusion to identity, the choice of words "microaggressions," "put me in my place" highlights an awareness of the very power dynamics they seek to neutralise. This gap between recognising and downplaying inequity exemplifies an interpretative tension—where speakers draw upon competing cultural normativity in the same account, producing discursive "work" to reconcile them (Bhopal and Henderson, 2021). Underpinning these discourses are constructs that capture the complexities of positioning within academia and the wider professional working spheres.

The complexity can be understood through Collins' (1986, p. 17) notion of the "outsider within"—a condition in which individuals are embedded within a system, contributing to and succeeding in it, yet simultaneously positioned at its margins due to systemic racism and sexism (see also Wright, Thompson and Channer, 2007). From this standpoint, the participants' apparent disassociation from identity-based explanations might be read not simply as the ideology of meritocratic praxis, but also as a strategic stance—a form of discursive agency that manages the risks of being over-identified with narratives of victimhood in professional spaces that prize autonomy and objectivity (Mirza, 2015). This dynamic not only underscores the complexity of cultural fit in academic and professional STEM spheres but also illustrates the multi-layered negotiations women of colour in STEM undertake in narrating their experiences within, and sometimes against, the dominant discourses that frame their work and worth.

This was the crux of Ngozi's observation, which touched on a crucial aspect of cultural differences in social interaction and introversion. Sarita's narrative, on the other hand, introduces another dimension to the discussion—professional recognition and the social dynamics within workplace environments. Her experience reflects findings, suggesting that exclusion from social groups or activities can significantly impact an individual's sense of belonging and well-being, even when they do not attribute the exclusion to their gender or race (Williams, 2007).

Sarita's strategy of "focusing on her work" while consciously avoiding overanalysing social interactions can be understood as a form of strategy for managing social relations. This supports the findings of Seron et al.'s (2018, p. 5) study, which found the "hegemony of meritocratic ideology" with women in engineering. Despite recognising their marginality, these women reportedly rejected their construction as feminists in addition to being critical of their own experiences, rarely recognising structural inequities or linking these matters to their own intersectional identities. Instead, they argued that fulfilling the need for competence through professional achievement can mitigate the marginal effects of social exclusion. Sarita's stance also mirrors broader discussions about the role of meritocracy within her professional space, raising questions on how excellence and competence are framed and serve as nuanced micro strategies for mitigating social biases or exclusionary practices (Castilla and Benard, 2010).

Sarita's argument can be understood through my earlier analysis on the interconnectedness of meritocratic ideologies with the masculinity of science identity, which I will briefly touch on here for context. In its commitment to empirical science, rational thinking, merit, and individualism, many STEM-related faculties continue to uphold a depoliticised culture that sees gender inequities – and other related issues such as racial inequalities/discrimination – as a prerogative of the social science research/interventions and off-limits for what is taken as the 'hard' sciences. It is not surprising, therefore, that many STEM faculties still operate degendered spaces where issues that may be of social concern to women (including racialised statuses) are not given much attention in practice. And whether women interpret negative experiences through a socially conscious or an apolitical lens is influenced, to a large extent, by how they understand and embrace the hegemonic cultural values of their faculties (Cech, Blair-Loy, and Rogers, 2018) including how they make sense of the interlinks between personal successes, meritocratic processes and systemic barriers (Bird and Rhoton, 2021).

Hegemonic meritocracy

Speaking about how other colleagues perceived her as an intellectual in Solar Astronomy and Engineering, Sarita said:

> … you can see the surprise on people's faces when I introduce myself as a researcher in solar astronomy, which makes me proud in a way…It's almost like they're in disbelief…like, are you sure about that?…there's that belief that you really have to work very hard as a woman to be in a field like mine…I think more of the fascination comes from being a woman and those social expectations that somehow suggest that it is more natural for men to be in this kind of field…I think this kind of stereotype contributes to the low numbers of women in solar astronomy.

Yet, she goes on to comment on the need for gender and racial equity, sparking a 'reverse discrimination' debate foregrounded in an ideal of meritocracy:

> It would be great to see more racial diversity and gender balance in the faculty, of course—but at the end of the day, we want the best people here. I mean, I hope I got here because of all the hard work I've put in, not just because of my gender or race. I'd like to think I've earned my place.

Sarita's account draws on two interwoven interpretative discourses: one foregrounding gendered stereotyping and its impact on women's representation in solar astronomy, and the other affirming a meritocratic ideal that resists identity-based framings of achievement. Her initial reflection engages with and critiques socially constructed expectations. In this case, the "fascination" and "disbelief" at a woman occupying a highly specialised and male-dominated role. By attributing this reaction to "social expectations" and the perception that "it is more natural for men to be in this kind of field," Sarita recognises the persistence of gendered occupational stereotypes and links them closely to the underrepresentation of women in her discipline.

Yet this gender-conscious critique is immediately followed by a shift towards a meritocratic discourse, where the ideal of "the best people" serves as a gatekeeping norm for inclusion. In Foucauldian terms, this shift illustrates a subject positioning in which Sarita simultaneously occupies the role of a critic of structural barriers and a subject of the neoliberal STEM regime that legitimises hierarchy through ostensibly neutral criteria of excellence and self-regulation (Foucault, 1977). Her insistence that she hopes she has earned her position because of "hard work" rather than "gender or race" performs a meritocratic disclaimer to disavow the influence of equity measures and protect her professional legitimacy. As such, her framing positions meritocracy as both a site of resistance, protecting professional identity from the taint of "special treatment", and a mechanism through which systemic inequities are rendered less visible, reinforcing the very hierarchies her earlier critique sought to challenge.

Still on the discussion of gender and racial equity in representation, Samira (South Asian in molecular pharmacology) shared a similar perspective, somewhat questioning the underlying intention behind EDI efforts in STEM. Her line of argument suggests that tokenistic diversity performance inadvertently essentialises underrepresented faculty as less competent and perpetually disadvantaged, saying:

> …I think there's lots of emphasis on equity in STEM as a whole to the neglect of other fields…there's that assumption that all other disciplines are doing relatively well in terms of representation, which might not be the case…and to talk about women, especially racial minority women in STEM…why such special efforts for women to get into academic positions?...If the work conditions and space are conducive and welcoming, and recruitment is fair and square, to begin with, I don't think such 'special reservations' would be necessary…In fact, I think they are counterproductive [because] in the long run, they end up framing minority faculty as less capable and qualified.

Samira's narrative, when read through the lens of Said's (1978) analysis of *Orientalism* as a representational discourse, highlights how institutional equity initiatives can inadvertently reproduce dynamics of othering. In her account, the "minority woman in STEM" is positioned less as an academic in her own right and more as a symbolic marker of institutional progress. While intended to advance inclusion, such efforts risk framing racial minority women as subjects of intervention rather than as scholars whose legitimacy derives from their own expertise. This 'representational gaze' parallels the Orientalist tendency to define the Other through externally imposed categories, thus essentialising difference and undermining claims to equity. Sarita's critique that equity initiatives risk "framing minority faculty as less capable and qualified" echoes the Orientalist dynamic where the subject is not simply included but included as Other, marked by the very discourse that claims to empower her.

From a Foucauldian analytic perspective, Samira's rejection of "special reservations" and her emphasis on meritocratic ideals—"fair and square recruitment and conducive work conditions" can be understood as a form of subjectivation, where she positions herself within the field of power-knowledge relations by adopting the language of institutional neutrality. This stance both resists and reproduces dominant power structures: it resists by challenging the paternalistic framing of underrepresented academics as in need of rescue, yet reproduces by legitimising the discourse of meritocracy that obscures the systemic inequities such policies aim to address.

This ambivalence is supported by studies showing that some women in STEM, including women of colour, express discomfort with feminist or equity-based frameworks when these are perceived as antagonistic towards men, or as diminishing individual achievement by attributing success to structural support rather than personal capability (Reggiani, Gagnon and Lunn, 2024; Seron et al., 2018). Reggiani, Gagnon and Lunn's (2024) study, grounded in systemic inclusion analysis, highlights how women and LGBTQ+ academics often resist institutional equity discourses when such frameworks feel externally imposed or dilute individual merit, particularly when they seem to threaten professional legitimacy or autonomy. In this way, Samira's account participates in a strand of the wider discourse of post-feminist and post-racial narratives that redefine equity discourses in terms of personal ethos and distance from collective identity politics.

Ngozi's (a Black African in Computing Engineering) account, while acknowledging the intentions of equity frameworks (such as the Athena Swan Charter—a UK-based accreditation scheme designed to recognise and promote gender equity in STEM and higher education more broadly), extends Samira's reflections by foregrounding a critical interrogation of their discursive and material effects. She observes:

> …we still have a long way to go if we are talking about equity [and] representation for women or people of colour in general…no doubt, progress has been made but I think we are still far from it…when you look at some recent reports and the website of the Athena Swan for example, you see the disparities as well as so many beautifully crafted statements about incremental progress and hopes for progress…with images representing diversity…but I constantly question the underlying assumptions that come with that sense of pride [because] in reality… at least, I can speak for my faculty, we are nowhere close to achieving equity in representation… so, is this a strategy to encourage more women in STEM? if so, how productive has that been? Are we actually celebrating progress or reinforcing the idea that it's extraordinary when women excel in STEM field? especially with those beautiful images of those [minoritised] women that are [usually] displayed.

Ngozi's narrative disrupts the celebratory tone characteristic of institutional diversity discourse, a tone often sustained through what Ahmed (2012) calls non-performative speech acts—statements about diversity that serve to signal institutional virtue without substantively transforming structural inequalities. Her repeated questioning ("Is this a strategy…?"; "Are we actually celebrating progress…?" etc.) serves as a meta-discursive critique that exposes the tension between symbolic representation (for e.g., curated diversity imagery) and the persistent underrepresentation of women, particularly women of colour, in STEM faculties.

Both Sarita and Ngozi mobilise what can be identified as a critique of the discourse of exceptionalism and its entanglement with the "meritocratic myth" (Castilla and Benard, 2010; Miller and McNamee, 2013)—the ideological stance that recruitment, promotion, and recognition are solely determined by individual ability and achievement, detached from systemic inequities or power relations. This discourse constructs success in STEM as the product of extraordinary individual talent, thus reinforcing women, especially racialised women, as outliers rather than integral members of the disciplinary community, especially when present and visible in certain STEM spaces.

In doing so, such meritocratic narratives obscure the operation of structural disadvantage by naturalising unequal outcomes as merit-based. As Castilla and Benard (2010) argue, what is counted as "merit" is itself shaped by institutional norms and evaluative biases that privilege particular trajectories, performances, and subjectivities. However, a further reading of these transcripts (in particular) reveals that these women view themselves as having played by the 'rules' of meritocracy and/or exceptionalism. Within this framing, Ngozi's self-positioning—"…I've had to be exceptional, not just good, but outstanding… this faculty rewards those who outperform… your work has to speak for itself"—is revealing. It reflects a contradictory framing where she negotiates between two competing discourses: an awareness of structural inequity and a reproduction of STEM's dominant individualist-meritocratic ideology.

This self-ascription of exceptionalism is again supported by existing research, such as those of Seron et al. (2018), showing that women in male-dominated fields often reject equity quotas or overt affirmative action measures, favouring instead the belief that advancement should be tied to demonstrable excellence (see also Bird and Rhoton, 2021; Seron, 2016). The result is a complex subject position that simultaneously acknowledges marginalisation while reproducing the dominant, ostensibly apolitical epistemologies of "hard" STEM disciplines. Such positioning illustrates how equity discourses can be appropriated into hegemonic narratives that valorise the individual over collective structural change, limiting the transformative potential of initiatives such as the Athena Swan Charter.

Rabita's (South-Asian – Indian in Biomedical Engineering) further captures this sort of contradiction of acknowledging marginality and responding to it partly with hegemonic meritocratic discourse:

> …on the issue of underrepresentation in STEM, I don't think in any way that women have lower aptitude to do and thrive in STEM…that's definitely not the case…[and] I don't think also that it is solely a gender socialisation issue or continuous cases of discrimination…I think the issue is complex…and to address it, we also need to take account of individuals' motivations, aspirations, and willingness to remain and succeed in their faculties…how are women competing for their own spaces and asserting themselves in these roles? I mean, we shouldn't be seen as entirely powerless or not worth our salt…I know I am good at what I do, and I do it well. You know, we need to be playing by the rules of the game to beat those practices that are determined to put us in smaller 'boxes'…I think this way, things will gradually change instead of waiting for institutional action and interventions, which have not served us much.

Similar to Sarita, Rabita's account frames inequitable representation in STEM as a "complex" issue, yet her discursive orientation appears to respond to marginality not through a direct critique of structural inequities, but via an articulation grounded in individualist and exceptionalist ideologies. In doing so, her narrative shifts the analytical gaze from institutional arrangements and embedded power relations to the attributes, aspirations, and efforts of individual actors. This repositioning echoes a broader trend in diversity and inclusion discourse that, as Ahmed (2012) argues, risks reconstituting systemic exclusion as a matter of individual motivation, resilience, or self-confidence, rather than seeking to address the organisational norms, policies, and evaluative practices that reproduce inequality.

Such an orientation can implicitly sustain meritocratic ideals by suggesting that diversity-promoting interventions may overlook—or even undermine—what is construed as 'merit', reproducing scepticism toward equity initiatives. While it is important to recognise that women's career trajectories are shaped by an array of intersectional issues (Collins et al., 2021; Crenshaw, 2013; McGee et al., 2021), essentialising the explanation for inequitable patterns of representation as attitudinal or aspirational deficits reproduces the "fix the women" paradigm (Clarke, Hurst and Tomlinson, 2024; Ryan and Morgenroth, 2024). This paradigm effectively individualises responsibility for navigating 'chilly' or exclusionary spaces, while leaving unchallenged the cultural and structural architectures of inequity.

Yet, Rabita seems to be optimistic that things "will gradually change," and that progress lies not only with institutions but more with WAC, whom she called upon to "compete for their own spaces" and "assert themselves". One issue with this line of thought is that it falls into the essentialist trap of being overly focused on issues at the individual level at the expense of interrogating broader institutional influences, including gendered and racialised power dynamics (Robinson, 2022). It also perceives the issue as uncomplicated and diametrically opposite categories, with a linear relationship, where addressing issues of competence, competitiveness, and assertiveness would bring about more equitable representation for minority women faculty in STEM. In Said's (1978) terms, such reductionism risks creating oppositional simplifications that obscure the intersectional nature of the representational dynamics.

Even more, her line of questioning, suggesting that "women [should compete] for their own spaces and assert themselves …" without a concurrent emphasis on broader institutional commitments to socio-cultural changes, are very likely to reinforce inequalities rather than produce equitable changes as they are foregrounded in individual-meritocratic praxis (Blair-Loy and Cech, 2022; Hill, Corbett and St. Rose, 2010; Nielsen, 2016). While her notion of "playing by the rules of the game" may be a pragmatic short-term strategy and, in some cases, a lever for gradual change, it can also be critiqued for underestimating the resilience of structural inequities—particularly when such practices are embedded in epistemic norms, evaluation criteria, and informal networks that are highly resistant to reform through individual agency alone. As Morimoto and Zajicek (2014) emphasise, over-reliance on individual self-assertion risks obscuring the necessity for collective action, organisational accountability, and structural reforms that are essential to dismantling systemic inequities in STEM.

Although this positionality can be critiqued for downplaying the seemingly intractable nature of structural inequities, it can also be understood through strands of feminist scholarship that highlight the transformative potential of agency. For instance, Hess, Gault and Yi (2013) argue that institutional change is often catalysed by women's active (re)shaping of their professional trajectories, rather than passively awaiting reform from above. As such, Rabita's caution against over-reliance on institutional interventions, while problematic, is not entirely without merit, given that systemic issues are very unlikely to become the focus of institutional change efforts except when they become highly visible to faculty or publicly delegitimised (Morimoto and Zajicek, 2014).

Yashi's (a South Asian in Astrophysics) thought also exemplifies this sort of resilience in individuals' agency. Despite experiencing marginalisation, she partly holds the idea that success is also a matter of personal choice and effort. Her recommendations for faculty retention and advancement are thus predicated on these ideas, reflecting a belief in the power of individual determination and meritocracy. As part of her concluding remarks, she said:

> ...as someone who works within the astrophysics faculty, I understand that the barriers are real and often seem insurmountable, but we need to work towards changing the status quo…we must also think of ways to seize opportunities and redefine what is within our control…when we champion this type of causes, we're paving way to greater equity in representation…it's a tough choice but then if we're committed to it, we can bring about the change.

Embodying a perspective infused with discourses of individualism, Yashi's recommendation for equitable representation foregrounds an enduring appeal in personal determination, self-discipline, and meritocratic advancement. She acknowledges the existence of systemic barriers—racial, gendered, and institutional—yet frames her recommendations for faculty retention and advancement primarily in terms of personal choice, effort, and the strategic "seizing of opportunities". This framing operates within a field saturated by discursive practices, where the regime of neo-liberal discourses privileges narratives of personal responsibility over dismantling broader structural issues.

Her concluding remarks, emphasising that "we must… think of ways to…redefine what is within our control", serve as an articulation of agency through the micro-technologies of the self that Foucault (1988b) identifies, including self-regulation, self-improvement, and self-optimisation as modes of resistance. While such a stance can be read as a seemingly empowering narrative, in that it locates a measure of transformative potential in the individual, it simultaneously reproduces a disciplinary mechanism that shifts the burden of overcoming systemic inequities from institutions to the marginalised themselves.

In Foucauldian terms, Yashi's discourse illustrates how power is not simply repressive but productive: it produces certain kinds of subjects—the resilient, self-managing, entrepreneurial academic—whose legitimacy is measured by their ability to 'do' and succeed within existing institutional norms (Foucault, 1982). By aligning success with perseverance and personal merit, her stance draws on and reproduces the claims of meritocracy, which function as a normalising discourse in STEM and higher education more broadly. Such discourse, while recognising structural barriers, can obscure the systemic nature of exclusion by framing inequality as an individual challenge to be overcome, rather than a collective condition requiring institutional transformation.

This discursive positioning is not without tension. On one hand, it offers a narrative of discursive agency that resists the determinism of structural inequities (McNay, 2013); on the other, it risks reinforcing the very inequities it seeks to challenge, by recoding structural inequities as a personal deficit in determination or capability. In Foucauldian terms, this represents the entanglement of resistance and compliance: the same practices of self-discipline that may enable equitable practice within an exclusionary system also perpetuate the epistemic and institutional conditions that make that advancement exceptional rather than universal.

Such meritocratic belief was conveyed by Níké (a Black African in Molecular Pharmacology), who somewhat suggests that success could be achieved irrespective of one's gender or ethnic background. In her discussion about the motivations behind pursuing STEM programs at a higher education level and her subsequent decision to enter the STEM academic field, Níké expressed that her academic achievements had significantly shaped her self-perception as a qualified pharmacologist whose excellence had been largely recognised. She provided an account that illustrated how her intellect, rigorous efforts, and significant research contributions were instrumental in her professional success. Reflecting on her motivations for engaging in STEM, she attributed her success not only to her own dedication but also to the substantial support she received from family, teachers/academics, and mentors throughout her educational/career journey. According to her:

> …I've always liked the sciences…it came easy to me. I had a particular interest in biology as far back as my secondary school days. I had an older cousin living with us. And she was… in secondary school at the time…she had these biology textbooks, and they were just interesting. Seeing my interest in biology, my dad bought me lots of textbooks… I gravitated towards biological science naturally. I found my courses pretty easy. I aced most of the science-related subjects, especially biology...Despite resuming my PhD programme late, my main supervisor was particularly supportive throughout my research. When I reached dead ends, he was very helpful with making suggestions on the way forward with my research...I won a [named prestigious prize], and both my supervisors were very impressed by my ability to handle the lab work and the quality of my research.

Níké's account, while inspiring, may inadvertently downplay the systemic barriers that many individuals from underrepresented groups face in STEM. Research has consistently shown that women and ethnic minorities often encounter both overt and subtle biases in these fields, which can impede their progress regardless of their personal commitment or abilities (McGee and Bentley, 2017; Ong, Smith and Ko, 2018). While Níké attributes part of her success to the support from her family, teachers, and mentors, this acknowledgement also highlights that success in STEM (as in any other field) often requires external assistance, which may not be as readily available to all individuals. The need for such support complicates the notion of pure meritocracy, as it suggests that having a network of encouraging mentors and access to educational resources (as indicated by the provision of textbooks by her father) plays a critical role in one's success.

More so, Níkẹ́'s experience, particularly her winning a prestigious academic prize and the specific praise for her capabilities, may position her as an outlier rather than a typical case. Her story, while undoubtedly commendable, may not be generalisable to all individuals in similar demographic categories who face systemic hurdles that cannot be overcome by personal merit alone (Ong et al., 2011). This meritocratic discourse has the potential to put pressure on individuals, especially from marginalised groups, to perform at exceptionally high levels to receive recognition and success, perpetuating a cycle where only the 'exceptional' among these groups are celebrated, potentially reinforcing stereotypes about the general capabilities of these groups.

"It is exhausting to go looking for bias and discrimination."

In the quote below, Ngozi (a Black African in Computing Engineering) substantiates her earlier point, wherein she disassociated her identity from her perceived feeling of isolation. Nevertheless, she argued:

> I don't constantly think of myself as a woman or as someone of colour or with an immigrant background when it comes to work…I think that's one way to shut out feelings of discrimination where they exist…I think it's wisdom in a way not to fall into that trap of being consumed by the negative stuff…so, I'm not constantly thinking or worrying about it…or letting it affect my well-being or pursuit.

Rabita (a South Asian in Biomedical Engineering) spoke along similar lines while describing her faculty experiences, noting:

> "…It's an absolute waste of energy, and it's definitely exhausting to go around 'looking for' potential gender bias or discrimination…if you do that, you will find them, and they will make you bitter; instead, why not channel that energy into becoming successful to defy the stereotype?"

From a Foucauldian perspective, the narratives offered by Ngozi and Rabita exemplify the ways in which discursive regimes of meritocracy and individual responsibility shape the subjectivities of women in STEM, particularly those from racialised and immigrant backgrounds. In both accounts, the speakers resist the discursive positioning of themselves as subjugated subjects of bias by downplaying structural inequities and framing potential experiences of discrimination as matters of personal choice, resilience, and strategic focus. Such self-positioning is not merely an individual preference, but reflects the operation of disciplinary power—a form of self-surveillance (Foucault, 1977) in which individuals embody dominant narratives that equate professional legitimacy with detachment from identity-based grievances.

Ngozi's assertion that she avoids "constantly thinking" of herself as a woman, a person of colour, or an immigrant functions as a self-regulatory practice that pre-empts the risk of being constructed as an "overly sensitive" subject within a predominantly white, male, and meritocratically framed STEM space. Similarly, Rabita's description of looking for bias as "an absolute waste of energy" not only echoes neoliberal discourses valorising productivity and self-optimisation, but also mirrors the Foucauldian notion of governmentality (Foucault, 1991): here, power is exercised not through overt prohibition but through the shaping of conduct such that individuals govern themselves in alignment with dominant institutional norms.

Clarifying further, Rabita noted:

> "…don't get me wrong, I'm not saying these issues don't exist altogether because even if I claim not to have experienced this sort of discrimination, I know of women who have been outspoken about the 'chilly' climates of their faculties and how the faculty dynamics are so toxic."

Notably, Rabita (as well as Ngozi) employ disclaimers when acknowledging gendered and racialised patterns—recognising, for example, "chilly climates" or "toxic dynamics" reported by others—yet carefully disarticulating these from their own personal experiences. This rhetorical caution suggests an awareness of the risks associated with naming structural inequities, particularly within professional settings where such a reaction may be read as disruptive to the collegial order. In Foucauldian terms, this can be read as a technology of power and as an effect of the 'confessional economy' that obliges subject to tell their 'truth' within an institutional culture that privileges certain narratives (e.g., perseverance, self-reliance, individual merit) while others (e.g., systemic discrimination, racialised exclusion) are rendered risky, and even delegitimised (Foucault, 1978, 1980).

On further probe of any possible career barriers she may have encountered or is currently experiencing, Ngozi provided a clear example of a pay gap in her previous institution, noting that:

> …it's crucial to tread carefully here…and not simply generalise...I understand that not everyone's efforts may be perceived equally and that we all have different experiences…but an example that comes to mind is a pay gap at my former uni. I worked with less experienced colleagues, both men and women, and they got paid very close to what I was getting, if not more.

When asked how she responded to this situation, Ngozi elaborated by saying that:

> "it is hard not to be angry in such instances…I thought long and hard about how to address the issue but then again, I thought to myself…it isn't purely a gender or race issue…I mean, it could happen to anybody…I should have negotiated better…I mean, I should have asked for more but I didn't…perhaps because I knew I was leaving that uni soon."

Ngozi's account of the pay gap at her previous institution is consistent with findings of persistent pay gaps (see, for e.g., McGee et al., 2024) but more importantly, performs a discursive self-regulation. Rather than situating the disparity within a broader matrix of structural inequity—one shaped by gendered and racialised hierarchies—Ngozi reframes the incident as a personal failure in negotiation. This displacement of structural critique onto an individualised framing serves to maintain the legitimacy of the meritocratic order by suggesting that the problem lies not in systemic discrimination, but in her failure to leverage opportunities effectively. Such discourse performs a dual ideological function: first, it recodes structural disadvantage as personal responsibility, thus aligning with neoliberal ideologies of self-enterprise; secondly, it risks reinforcing victim-blaming discourses that implicitly hold marginalised individuals accountable for the inequities they experience, and that everyone has equal opportunity to negotiate for better pay and working conditions.

From a Saidian perspective, one might add that this reluctance to articulate identity-linked discrimination also speaks to the burden of representation placed on racialised professionals in 'elite' spaces. By refusing to foreground their race, gender, or immigrant status, both Ngozi and Rabita resist being reduced to the 'Othered' identity markers through which institutional diversity discourse often frames them (Said, 1978). Yet, paradoxically, this refusal also leaves the dominant narrative of STEM as a neutral, merit-based, and universally accessible space largely intact.

This "equal playing field" ideology was also discernible in Sarita's (South Asian Indian in Solar Astronomy and Engineering) narrative, which centres on the purported 'neutrality' of promotion and grant criteria, while downplaying broader structural issues relating to recruitment, access, and the uneven distribution of opportunities within STEM academia.

> "…as far as I know, the criteria for promotion and for securing grants are not in themselves gendered or racially biased – may be judgment and decision-making processes for assessing these grants and applications could be, but it may be hard to find tangible evidence to substantiate this claim… so even when workspaces or colleagues are not exactly friendly or welcoming, the more important things that can accelerate promotion or progress should be more of the focus… [and] they largely rest with the individual."

Sarita's account foregrounds the perceived procedural neutrality of promotion and grant allocation criteria, while simultaneously acknowledging, though cautiously, the possibility that discrimination may infiltrate the interpretive and decision-making stages of evaluation. This discursive structure, where bias is admitted as a hypothetical yet positioned as evidentially elusive—"hard to find tangible evidence"—serves to contain the scope of her critique. This reflects how institutional legitimacy is safeguarded by privileging forms of evidence that are formally recognisable within dominant epistemic norms that often exclude experiential and qualitative accounts of inequity as insufficiently 'objective' (Morimoto and Zajicek, 2014).

By prioritising the "more important things" that accelerate career progression, framed here as largely within the individual's control, Sarita's narrative verges towards the neoliberal discourses of self-responsibility. This framing effectively individualises the conditions of advancement, positioning structural barriers as secondary to personal agency. In doing so, it enacts a form of governmentality, whereby she is encouraged to self-regulate, adapt, and invest in her own capital rather than interrogate or challenge the institutional structures that shape her career opportunities (Foucault, 1977, 1991).

Raafa (a British-Pakistani in Manufacturing Engineering), in excusing instances of differential treatment, similarly resisted framing aspects of faculty relational dynamics as inherently inequitable. Instead, she characterised such behaviours as the result of inattention or unreflective habit, remarking that "…people are not just thinking much of their actions and how they affect others, or they are just being themselves". When probed further, she elaborates:

> …I mean, no doubt, women have definitely had to work harder. Not necessarily because they are always given more work but more to do with proving themselves and the labour of self-presentation – to be seen as confident, but not as arrogant or aggressive especially when they disagree…these things happen on very subconscious levels…you cannot necessarily blame anyone for this, if you understand what I mean… they are mostly very subtle…and more of a culture thing and how people have been raised to think and act.

Raafa's account somewhat acknowledges the possibility of women encountering gendered or potentially racialised barriers in workplaces, yet she situates these primarily in the realm of the subtle and subconscious rather than in overt, intentional acts of discriminatory slights. This frames systemic patterns of inequities as a consequence of carefree colleagues without ulterior intentions, and as such are constructed as minor infractions, which are discounted as not necessarily gendered or racialised. Her emphasis on the "labour of self-presentation"—balancing confidence with the risk of being perceived as arrogant or aggressive—echoes literature on the gendered double binds that shape professional communication and authority (Britton, 2017). However, by attributing such patterns to "culture" and to the way "people have been raised to think and act," Raafa frames inequities as unintended consequences of social conditioning rather than as active reproductions of systemic power relations.

While such a perspective suggests that individuals may not be intentionally discriminatory, it constructs these dynamics as minor infractions, implicitly downplaying their cumulative and structural effects (Bird and Rhoton, 2021). Raafa's reluctance to name individuals or assign explicit blame can be understood as a dominant institutional norm that privileges collegiality, allowing her to navigate her professional space without overtly confronting or creating enmity with colleagues. This perhaps helps explain why she (Raafa) locates her argument in a discourse that exonerates people's actions as unintentional, even as it complicates scholarly works (e.g., Casad et al., 2021; Ceci et al., 2014) suggesting that women, more than any other gender categories, shoulder greater service obligations alongside administrative and professional responsibilities within STEM and academia more broadly.

Saachi (a South-Asian in Solar Astronomy) holds a similar position regarding workload. Reflecting on the question of possible disproportionate professional work responsibility as a woman and an academic of colour, Saachi recalled when her student load was far heavier than that of her other colleagues. She could think of no other plausible reasons for this, according to her, other than her gender, minority status, and potentially her position within the academic hierarchy. Still, she disclaims that the differential treatment was not "deliberate" and that her faculty was generally fair in distributing responsibilities, stating:

> It's challenging to fully understand the motivations behind certain actions or decisions…generally speaking, the faculty seems okay on the surface in terms of social relations, but certain issues arise that, frankly, make one question to what extent the faculty is really equitable. For example, there was a time when I was responsible for more students than anyone in the faculty. Why was this so? Was this because of my 'two X chromosomes'? Or was it because of my relatively lower position in the faculty? Or because I was in the minority? Or was that because I'm all three combined? I couldn't really tell or neatly separate these things… whatever the possible reasons were, they were more likely to have been based on judgments or assumptions – which may not have been deliberate - rather than my professional qualifications or expertise that should have been the main focus at the time.

Saachi's account foregrounds the interpretive complexity of disentangling the motivations underlying organisational decisions and everyday practices. At a surface level, her faculty representation appears seemingly equitable; however, her narrative signals latent inequities that become visible through closer discursive scrutiny. Her recollection of being assigned a disproportionate student load serves as a key narrative episode in which inequity is made material. The several questions she posed—"Was this because of my 'two X chromosomes'? … Or was it because I'm all three combined?"—operate discursively to resist a single causal explanation and instead foreground the simultaneity of multiple, intersecting identity positions.

This complexity of intersectionality—where the interplay of race, ethnicity, gender, class, and other axes of social positioning resists simplistic or singular categorisations of marginalisation—has been theorised by scholars not as additive categories but as mutually constitutive, producing distinctive intersectional dimensions of inequality (Collins et al., 2021; Crenshaw, 2013). Rather, Saachi's experiences embody the intersections of multiple marginalisation along several social identity lines, which, as Crenshaw (2013) argues, create dynamics that are "greater than the sum of racism or sexism" (p. 110). Moreover, Saachi's inability to "neatly separate these things" reflects the lived entanglement of identity within a matrix of domination, where structural power is articulated across multiple and overlapping axes of social identities (Collins et al., 2021).

Within a Saidian frame, this dynamic can be read as part of a broader epistemic order in which institutions, consciously or otherwise, mobilise categories such as gender, ethnicity, and minority status to position certain individuals as the peripheral "Other," and/or in need of managerial control (Said, 1978). Her observation that such judgments or assumptions "may not have been deliberate" is particularly telling: it gestures toward the subtle, internalised forms of Orientalist thinking of institutional spaces with classificatory practices that naturalise hierarchies while appearing neutral. In this reading, the ostensibly bureaucratic process of workload allocation is not merely administrative but participates in a symbolic economy in which difference is continuously produced and managed, reinforcing the centre–periphery binary that sustains institutional inequities.

Performing multiplicity

This concept of intersectional multiplicity finds further resonance in Jasmine's account. As a British-Afro-Caribbean academic in Biodiversity and Veterinary Medicine, Jasmine narrates a series of seemingly minor, everyday exclusions that cumulatively undermine her sense of belonging and legitimacy. These moments, though subtle, reveal the affective and embodied dimensions of intersecting systemic inequities:

> …You know, it's really the small stuff that sometimes hits hard. Like, when you walk into a lecture room and it's mostly white and Asian students, you start wondering if you even picked the right career. Like, maybe this isn't where I belong. Where's everyone else? And when you go into the meetings as well, it's almost all white men and just a few women…you totally feel those eyes on you, like what's she doing here? It's pretty subtle, really. I don't think it's the university as a whole doing it on purpose, I think it's more about the people there.

From a post-structuralist discursive perspective, Jasmine's repeated deployment of second-person pronouns ("you walk into…", "you totally feel") works to centre her experience, subtly inviting me (the researcher) and perhaps the readers to inhabit her position. This strategy, in a way, transforms her individualised encounter into a shared, recognisable phenomenon of marginality. Her description of "those eyes" exemplifies what Puwar (2004) conceptualises as the space invader: a subject whose body is read as anomalous or out of place within a historically white, male-dominated professional space. In such settings, the presence of racialised and gendered bodies is hyper-visible, marked not merely by physical appearance but by the discursive and affective responses they produce.

Throughout her narrative, Jasmine articulates the dual dimensions of her marginality—as both a woman and an ethnically minoritised academic, producing what can be read as a contradictory discourse: on one hand, resisting exclusion through professional persistence, and on the other, acknowledging the exhausting negotiations of 'self' required to remain in place. While she reports that her earlier preoccupation with "fitting in" has diminished in her role as a lecturer, this shift appears less about structural transformation and more about the personal strategies she has developed to assert presence and credibility within the veterinary medicine faculty.

When prompted to reflect further on her identity, Jasmine offers a nuanced account, situating her racial and ethnic background within a broader genealogy:

> …my mom, [now passed away], was Black British, born right here in England. Her mom was British and her dad was Nigerian, so I've got a pretty mixed background. And on my dad's side, he's half Black, half Caribbean. So, I'm not just all black. But since my skin is darker than white, most people just label me as black… I actually have to put in some effort in my hair to get it this curly—it doesn't just naturally curl up like this. It's more nappy than curly…

While, at first reading, this latter part of Jasmine's account may appear to have gone off tangent in relation to institutional equity, on a closer interpretive reading, it performs significant identity work; the intricate and underlying processes by which she constructs her 'complex' identity through conscious self-presentation and a performance of an 'Afro-Caribbean-British' woman identity. By narrating the complexity of her heritage and the intentionality of her physical presentation—hair styling, attire, and mannerisms—Jasmine embodies what Butler (1990) constructs as performative identity: the ongoing, embodied reiteration of social categories. In her case, these performances are interlinked with the epistemologically Orientalist power dynamics of her faculty, where 'difference' is both a marker of exclusion and a site of strategic self-fashioning (Said, 1978). Her choice to foreground visible cultural markers—traditional dress, afro curls—functions simultaneously as an assertion of presence and an act of self-definition in a context where racialised women are often spoken for, categorised, or rendered invisible.

Additionally, Jasmine describes her practice of linguistic and experiential code-switching, which involves shifting "from her reserved middle-class persona…to that of a stereotypically loud 'Black' woman" (Fordham, 1993, p. 3). This shift extends beyond a mere change in demeanour; it constitutes a deliberate act of resistance. Whereas Fordham frames the "noble quiet ethnic character" as a form of "silent rebellion," Jasmine resists such containment by embodying an assertive, vocal identity. Her choice aligns with broader scholarly debates about strategic identity performances (Lewis and Neville, 2015), echoing earlier discussions of Maya's and Láídè's contrasting takes on the subject of "silence as a strategic reserve".

Situated at the intersection of competing discourses, Jasmine actively exercised the technology of a hybrid academic and cultural self (Foucault, 1988a). By amplifying her "otherness," she enhances her visibility in ways that defy the normative expectations of what an astrophysicist should look or sound like. Yet this heightened visibility is ambivalent. In adopting the persona of the 'loud Black woman,' she simultaneously resists conformity and risks reinforcing a familiar stereotype. For her colleagues and students, her performance might register less as subversion and more as what Foucault (1977, p. 533) terms "spectacle"—a recognisable departure from the norm that can be observed, constitutes a reference point of entertainment, and even celebrated without destabilising dominant power structures. From this perspective, her strategy risks reinforcing deficit-oriented perceptions of Black women in academia rather than dismantling them (Ong, Smith and Ko, 2018).

Nonetheless, this reading presents the complexities of Jasmine's agency. Despite the perceived contradiction in Jasmine's account, I argue that her identity work represents not simply contradiction but negotiation: a navigation between competing imperatives of visibility and belonging. Over time, Jasmine shifted from seeking seamless integration into a white, male-dominated field to asserting her intersectional identity as an Afro-Caribbean woman astrophysicist. Crucially, this identity was not static but consciously mobilised as a resource. Through the lens of Collins' (1986) notion of the "outsider within," Jasmine's performance valorises elements of her British Afro-Caribbean womanhood, reclaiming them as sources of authority and resilience. In this sense, she joins a small group of minority faculty who have found creative ways to leverage embodied difference as a means of establishing credibility and even professional advancement.

In further articulating her perspective, Jasmine foregrounds a discourse of strategic resilience, positioning racialised and gendered visibility not as a burden to be concealed but as a resource to be mobilised, as illustrated in her reflection:

> …when you're within a black community or in an all-female space, your identity does not immediately render you different… But being a 'black woman' in a predominantly white and men space is the very thing that marks you out…your race and gender become very visible…so much so that you are left with very little choice but to resist being seen as the other woman…For me, this resistance is not about retreating into silence or simply performing my identity, but about consciously standing out because, quote and unquote, it is most likely going to be an issue – so why not play it to my advantage? I choose to make my presence even more visible…to embody that difference unapologetically, and to do so without a victim mindset.

Yet, Jasmine's narrative falls into the "chilly climate but…" discourse, in which acknowledgement of gendered and racialised barriers is tempered by an emphasis on resilience and self-determination (Miner et al., 2019). Rather than frame her trajectory as one of victimisation, Jasmine highlights strategies of empowerment and visibility, urging minoritised faculties in STEM to "make [their] presence even more visible" rather than adopt "a victim mindset" which Mirza (2015) claims is counterproductive in addressing issues of invisibility and negative stereotypes deeply embedded in broader societal perceptions. Underlying this discursive positioning is the framing of structural inequities less as obstacles to be dismantled and more as challenges to be met through confidence, strategic performance, and self-assertion. While this reframing provides an empowering counter-narrative to discourses of marginalisation, it again risks individualising the burden of resistance, obscuring the systemic nature of racism and sexism as challenges to be met with strategic and confident responses or reactions.

Performing Scientific Superiority

Such confidence was what Samira (a South-Asian in Molecular Pharmacology) identified as initially lacking in her career. Reflecting on her experience as a post-graduate researcher (PGR) working alongside fellow PGRs in the lab, she recounted her struggles with self-perception and the pervasive fear of being seen as the "unintelligent other", positioning her within a hierarchy of intelligibility where whiteness and masculinity remain the unspoken norm.

> …being the only woman of colour in my lab group and driven by the fear not to be seen as intellectually inferior, I was very self-aware and hesitant to contribute to lab discussions for the most part…I had this idea that all these people are way smarter than me – they knew most of the procedures well and articulately communicated their work and results during our group meetings…so I find myself thinking too much than I actually talked…the dynamics of the group discussions is particularly important especially in my field for knowledge sharing and complex problem solving but because I wasn't contributing much, I felt like I was failing and so I was gradually withdrawing.

In this account, Samira foregrounds discourses of intelligence, competence, and articulation—subjectivities valorised in the neoliberal academy as markers of legitimacy. Her silence operates discursively as both a performance and a withdrawal: by withholding speech, she performs the norm of the "capable academic" who does not openly admit difficulty, while simultaneously positioning herself as deficient within the same framework. The phrase "thinking too much than I actually talked" highlights the tension between embodied knowledge and external performance, foregrounding the centrality of communicative display in STEM cultures of evaluation.

Samira's withdrawal illustrates what Foucault (1972) terms the regulatory force of discourse. Here, silence is not absence but a performative act that sustains the fiction of universal competence. Within STEM, this is tied to what Ong (2005) calls the 'body project' of women of colour, loosely interpreted as the performance of scientific superiority, where belonging is secured not by merely having knowledge but by demonstrating mastery within competitive discursive spaces such as lab meetings (see also Carlone, 2023).

According to Samira, her withdrawal negatively affected her sense of competence, particularly in relation to others' understanding of her lab work. However, her subsequent reflection marks a discursive shift:

> …what I didn't realise at first was that most of my lab mates were also struggling with their projects, but nobody really talked about it much. But when I brought it up with my supervisors, they totally reassured me that I wasn't the only one having these issues and that I was actually doing pretty well. They even praised my written work a couple of times... and that totally was a game-changer for me. my PhD was highly commended by my examiners and supervisors with very minor corrections. That whole experience really boosted my confidence.

Here, the repetition of "nobody really talked about it much" underscores the silencing effect of dominant discourses of competence. Struggle exists but is rendered unspeakable, relegated to the private rather than the shared domain (Spivak, 1988). As such, to claim membership in the context of STEM disciplines, women of colour must conscientiously perform scientific superiority and maintain the appearance of belonging to a culture of "no culture"- the very myth of cultural neutrality. The former potentially explains Samira's hesitation to reveal her struggles within her lab group, mirroring a common tendency in competitive academic spaces to perform competence even amidst difficulties. This silence can be viewed as a performative act in itself, where Samira upholds the expected norms of a capable and self-sufficient academic. Butler's (1990) theorising of gender performativity suggests that these acts are not merely individual but are embedded within a network of norms and expectations that define what constitutes idealised performance within institutional contexts.

The intervention of her supervisors, however, functions discursively as a performative act of reclassification. Praising her written work and assuring her that her difficulties were normative re-positioned her from 'struggling outsider' to 'confident insider' (Collins, 1986). Moreover, this feedback loop can be seen as an instance of performativity, where external validation produces embodied transformation, reinforcing Butler's (2004a, 2025) notion that gender identity is not simply a private affair but is fundamentally shaped through discourse and social interaction. This external recognition provided the discursive resources necessary for Samira to re-narrativise herself:

> …not minding that I may look different or be perceived differently, I walk into any room with my head held high, ready to engage in discussions and debates, knowing I'm just as good as anyone there. If anything, I'm becoming a better version of the woman that I am.

The metaphor of "walking into any room with my head held high" highlights a reconstitution of identity through embodied discourse. For Samira, confidence ultimately came with performance—the performance of both her competence and her status as a woman of colour. Confidence here is thus more performative, more of an act that materialises belonging in space through repeated acts, gestures, and utterances that are legible within dominant discourses of gender, race, and 'scientific' authority (Butler, 1993). From a discursive perspective, Samira's story also illuminates how the myth of cultural neutrality in STEM is linguistically and socially sustained. Her initial silence can be read as a 'doing' of this myth, wherein voicing struggle risks marking oneself as culturally or intellectually deviant. Conversely, her later active participation embodies the discourse of scientific superiority, which Ong, Smith and Ko (2018) note can allow women of colour to strategically offer counter-hegemonic discourses of identity within the very margins that seek to exclude them.

Crenshaw's (1989) insight into intersectionality underscores the invisible labour embedded in such performances. Racially minoritised women, as she argues, are positioned to hold together multiplicities of selves while simultaneously doing the invisible work of lending unity to hegemonic structures that serve to marginalise them. In Samira's case, her silence and her later found confidence to challenge marginalisation signify a reconstitution of her identity as well as discursive negotiations shaped by intersecting racialised and gendered norms. Her claim of becoming "a better version of the woman that I am" illustrates the transformative potential of performativity but also signals the ongoing pressure to continuously prove oneself against hegemonic standards of competence. Nevertheless, her narrative, like others, risks essentialising the issue to an attitudinal barrier - a lack of confidence in her case, which somewhat (and perhaps inadvertently) masks the unequal gender and racial power dynamics that might have been at play with her colleagues.

While writing my analysis of this chapter around the contradiction in participants' discourses, I found myself often reflecting on the ethical dilemma of whose voice to privilege within my write-up. As with most research, the challenges of doing ethical research with and for marginalised groups are imbued with difficult knowledge formations constituted by networks of institutional, community, and personal values and practices (Sanjakdar et al., 2022). As such, I wrestled with and attempted to reconcile the difficulties of knowledge inclusion, equity, as well as a personal obligation with a wider social justice agenda, even within my own research.

As I explored stories of inequitable representation and knowledge otherness and considered different frames of reference, I thought of how to subsequently construct meaning of WAC's gendered and racialised experiences. And if there is one significant thing I have come to learn through the write-up and the research process as a whole is that the narratives in the study foreground the complexities of knowledge production and research as a paradox; both empowering in their capacity to generate action in individuals and communities and yet controlling because regimes of knowledge, values, and ethics can limit and prescribe those actions.

Research aims and designs are, more often than not, based on our personal beliefs about knowledge as well as reflective of wider knowledge systems within the community of research practice. Even more so, questions framing our research are often influenced by what others in our respective fields are writing (or fail to write) about these communities in parallel with our beliefs and understanding of the world around us. As such, understanding this paradox becomes significant when I think about how to be ethical in my research with and for a marginalised group.

While exploring the terrain of difficult knowledge formations, I have observed that such challenges have spurred the development of more personalised ethical frameworks within research methodologies. Communities of research practice have emerged robustly, demonstrating how researchers reconcile their subjectivities with the knowledge of others, dynamics aptly articulated by Zembylas (2014). For example, instead of privileging one's 'academic voice', Zembylas argues along the interpretivist onto-epistemology, emphasising that researchers can create dialogical spaces where competing perspectives are held in tension, allowing for the co-construction of meaning that acknowledges difference without 'erasure'. Such practices exemplify arguments that reconciliation is less about achieving harmony and more about plurality and sustaining a productive negotiation that respects the alterity of others while reflexively situating the researcher's standpoint (Burkette, 2022; Dean, 2018).

This introspective engagement resonates with the evolving dialogues on qualitative inquiry within educational research, particularly around equity, which is often characterised by its non-linear, complex, and 'messy' nature. Such complexities demand a reflective and critical role of the researcher in the research process (Berger, 2015; Denzin, 2017). In reflecting on the personal, social, and institutional contexts that frame my research, I identified numerous challenges throughout the analytical and methodological stages, some of which have been discussed in the methodology chapter. These challenges typify the intricate intersection of positioning 'ethics in practice' (Guillemin and Gillam, 2004) alongside gender and cultural sensitivity (Scheyvens and Leslie, 2000) in the interpretative phases of my analysis. My aim has been to negotiate these dimensions in ways that neither reinforce existing power imbalances nor negate ongoing scholarly endeavours to address intersectional issues of gendered-racial inequity (Collins et al., 2021; Crenshaw, 2017) in STEM fields.

Such navigation places me at the heart of a critical dilemma: the potential privileging of marginalised 'voices' over those that either negate such experiences or adhere to dominant meritocratic narratives to frame their experiences. This tension suggested that this aspect of my work might remain as 'unreported data.' However, I contemplated the inherently constructed and subjective nature of knowledge production through research, shaped by various personal, political, economic, and social convictions. This reflection led me to embrace the inherent contradictions and 'messiness' within my data, recognising that such engagement is crucial for a deeper understanding of the 'ethics of self'—how my personal experiences and day-to-day realities influence my research interpretations, agendas, and decisions (Guillemin and Gillam, 2004; Yarrow, 2018). Even more so, it emphasises the importance of embracing the complex realities of the subjects under study, and how these realities resonate with or diverge from my own, thus enriching the research outcomes and contributing to a more nuanced understanding of the interplay between researcher subjectivity and ethical practice in qualitative educational research.

Conclusion

In conclusion, the narratives examined in this chapter reveal a complex and, at times, contradictory positioning in relation to discourses of gender and racial equity in STEM. While participants articulated experiences of being "out of place," many simultaneously distanced such experiences from their gendered or racialised identities, instead aligning with meritocratic discourses that foreground individual competence, resilience, and self-reliance. This positioning reflects not only the pervasiveness of meritocracy as a legitimising framework within STEM cultures but also the ways in which participants negotiated their belonging by selectively endorsing and resisting aspects of dominant narratives. Such discursive manoeuvres underscore the intricate balancing act required to demonstrate legitimacy in professional spaces that prize objectivity and individual achievement, while navigating subtle yet persistent forms of exclusion.

At the same time, these accounts demonstrate the limits and potential risks of overly individualised counter-stories. While subversive in resisting deficit framings of women and racialised minorities, they may inadvertently obscure the structural inequities that continue to shape experiences in STEM, essentialise notions of femininity, or even contribute to the reproduction of exclusionary norms. By engaging participants' accounts of counter-hegemonic discourse, the chapter highlights both the possibilities and tensions inherent in such narratives. The "out of place yet unrelated to gender or race" stance, though not representative of all participants, serves as an important analytic lens for understanding how individuals navigate, reframe, and sometimes reconcile competing discourses—an interplay that reflects the messiness of lived experience and the ambivalent, often non-linear, ways in which equity and belonging are discursively constructed in STEM.

Chapter Nine - Conclusions

Introduction

In this study, I mainly explored the ways gendered and racialised barriers, including epistemological hegemonic cultures and practices, contribute to the seemingly intractable underrepresentation of WAC in STEM faculties within British academia. Beyond charting systemic constraints, I explored how WAC subvert the power of dominant discourses through micro-practices of resistance and technologies of self/power (Collins, 2022; Foucault, 1988). In particular, what Ong, Smith and Ko (2018) describe as counter-space narratives highlight how WAC construct and give meaning to their everyday experiences within STEM faculties, articulating discursive strategies that both expose and contest the gendered and racialised conditions shaping their career trajectories.

As such, this study underscores the importance of addressing intersectional barriers not through ambivalence or the superficial performance of diversity—that attends the growing popularity of decolonisation discourses in higher education—but through sustained and strategic engagement with the uncomfortable realities of systemic inequities. Such engagement requires critically interrogating and dismantling both structural forms of inequities, including discursive practices that serve to naturalise exclusion, misrecognition, and underrepresentation within STEM faculties. In this sense, the study contributes to ongoing debates about what it substantively means to 'decolonise' STEM academia: not by ways of symbolic gestures, but through transformative practices that reshape institutional cultures and epistemic hierarchies.

This concluding chapter draws together the insights produced across the thesis and revisits the research questions to synthesise how the findings extend existing scholarship on inequality in STEM. It does so in five stages. First, I restate the research aims and questions and reflect on how they have been addressed through the study. Second, I outline the key implications of the findings for higher education policy and institutional practice, with particular attention to recruitment, retention, and progression structures in STEM. Third, I make recommendations for meaningful interventions that move beyond superficial diversity performances towards transformative institutional change. Fourth, I identify avenues for further research, particularly in relation to comparative and longitudinal studies of WAC across international higher education systems, and in exploring the shifting intersections of race, gender, class, and migration within STEM. Finally, I discuss the lessons learned through a reflexive account of my own positionality as a male PhD researcher of colour conducting feminist research. This reflexive discussion considers both the epistemological and ethical dimensions of doing intersectional feminist research from a position of partial outsider/insider status, and how my identity has shaped the research encounter, analysis, and interpretive framing.

Revisiting the Research Questions

Guided by three specific research questions, I explored ways in which the experiences of WAC in STEM faculties are related to particular power relations and dynamics inherent in academic cultures and practices.

Firstly, I sought to question the extent to which orientalist perspectives of WAC's gender and racial/ethnic identities intersect to constrain their progression and retention in STEM – and by extension, perpetuate an inequitable pattern of representation within academia more broadly. This is summed up as **Research Question 1:** *To what extent do dominant academic cultures and practices—particularly those embedded in discursive construction of 'otherness'— intersect with gendered, racialised and classed dynamics to influence and constrain the career experiences of WAC within STEM academia?*

Findings related to this question reflected the complexities surrounding the experiences of this underrepresented group of women in STEM, highlighting how gendered and racialised power dynamics, embedded in academic cultures and practices, shape their subjectivities and influence their academic and professional trajectories. In part, the theme of "checking a colour box," as articulated by Maya (a Black African in Infectious Disease Biology) and echoed by other participants, provides compelling narratives through which to explore this issue. This theme unpacks the contradictory positioning of women academics of colour (WAC), who were reportedly caught in a paradox of (in)visibility – within which they are made hyper-visible due to their race and gender identities, yet simultaneously rendered invisible within academic discourses and practices. Even more, their representation is superficially tokenised as diversity markers, while their epistemological contributions are often deemed academically short of the perceived science 'standard.' These constructed experiences underscore a pervasive issue within academia, and particularly in STEM faculties - the delegitimisation of expertise based on racial and gendered marginalisation and the superficiality of diversity efforts that prioritise diversity performance over the recognition of diverse intellectual contributions.

Such experiences, as reported by the participants, manifest through recurrent instances where their expertise is excessively scrutinised and subtly or outrightly questioned – what Mirza (2018) describes as the politics of containment. This underscores the racialised and gendered dimensions of their professional experiences. As a consequence, the narratives of the participants revealed the persistence of the 'lone genius' trope foregrounded in discursive practices of (un)doing their gender in conformity to a more assertive demeanour (by ways of strategically performing masculinised science identities and subtle competitiveness) to gain professional recognition. These discourses dovetailed into yet another theme – "the masculinity of science identity" - analysing unequal power dynamics within discourses of 'science identity.' Participants' narratives call into question the performative nature of science identity, which implicitly frames non-conforming bodies/performances as 'outsiders-within', requiring additional support, surveillance, and (re)socialisation into the science culture. This framing not only reinforces exclusionary practices but also perpetuates the marginalisation of WAC by maintaining the hegemony of a masculinised science identity.

Secondly, I explored the implications of intersecting gendered and racialised experiences for WAC's career trajectories in relation to their progression and retention in STEM faculties, summed up as **Research Question 2:** *What are the implications of navigating gendered and racialised academic terrains for WAC's career trajectory in relation to their progression and retention in STEM faculties?*

A somewhat unexpected thread of discourse emerged from this aspect of inquiry, revealing that in addition to performing their intellectual legitimacy and embodying a masculinised culture of competitiveness and assertiveness, WAC's family dynamics and/or desires for partnership or family complicate their career progression and possible decision to remain in STEM academia. These sorts of discourses were captured under "the partnership and motherhood penalty" theme, in which I analysed how societal expectations regarding gender roles in partnership/motherhood act as significant barriers for WAC in STEM academia. Participants, within this theme, articulated the associated challenges with negotiating the complex interplay of not just two but three significant 'clocks': the demands of their biological clock, career clock, and their partner's clock. According to these women, managing the conflicting demands of three 'clocks'—interlinked with unequal gender power dynamics within family structures in terms of childcare and domestic responsibilities—renders them "time poor", particularly during periods considered crucial for career advancement and when reproductive fertility might be of significant concern (for those desiring to start families).

These discussions dovetailed into my last and equally important research question, which questions how WAC exercise technologies of resistance to counter marginal experiences in their STEM faculties, informing an analysis of the ways in which discursive practices, interlinked with epistemologically orientalist power dynamics, shape and influence the conduct of WAC in STEM. This is summed up by my final question - **Research Question 3:** *How far are WAC mobilising technologies of resistance - whether they are discursive, embodied, or institutional - to subvert marginalising experiences in their STEM faculties?*

Answers to this question facilitated a greater understanding of how WAC engage with the construct of counterspaces and negotiate intellectual legitimacy, including how issues of power relations are not statically held categories but are discursively produced and fluid. Within the theme titled – "Out of place yet unrelated to gender or race identity", I first explored WAC's strategies of "reshaping the dynamics and reclaiming the narratives that have long positioned [these] women as not fitting the mould (Sophy, a Black African in Computing Science)." Participants described their efforts to create and inhabit counterspaces—both physical and conceptual—that provide support and validation in an otherwise exclusionary environment.

Discourses here centred around the strategic engagement of call-out vs. call-in culture as a powerful tool for reclaiming spaces that have traditionally been marginal. These counterspaces, described by some participants as "third spaces," focused on subversive acts of care and co-creating supportive and mentorship relationships. Additionally, they employed the use of silence as a "strategic reserve," highlighting both its potential and its limitations. Such subversive approaches, while forming oppositional discourses or what Ong, Smith and Ko (2018) describe as counter-stories to the prevailing hegemonic narratives, run the risk of masking structural inequities, reducing them to merely aspirational and attitudinal barriers. In a way, this critique suggests that such subversive acts, though well-intentioned, may inadvertently contribute to the perpetuation of social reproduction, as discussed in the final analysis chapter.

As such, I observed various forms of contradictory discourses, particularly in the exercise of technologies of resistance. A number of participants–not necessarily denying 'racial' and gendered experiences–excused and/or downplayed these experiences based on arguments foregrounded in cultural practices and dynamics. Such arguments were intertwined with hegemonic meritocratic discourses—emphasising the importance of focusing on work and striving for professional excellence to gain deserving recognition. This emphasis on meritocracy can be understood as a form of mobilised agency in response to gendered and racialised experiences.

Contributions of the Study

This thesis makes a number of contributions to the study of WAC in STEM academia and STEM education scholarship more broadly. Conceptually, it offers an innovative theorisation of racialised–gendered power relations by bringing Saidian postcolonial theory (supported by feminist post-colonial constructs) into dialogue with Foucauldian poststructuralist feminism; complementary analytical lenses that are rarely applied within scholarship on underrepresentation in academic STEM. These frameworks enable a reframing of exclusion beyond numerical disparities, towards how epistemic and discursive practices constitute WAC as knowing subjects within enduring binaries of orientalism and the fluidity of power relations.

Methodologically, the research advances decolonial qualitative inquiry through the combined use of timeline mapping and semi-structured interviews. The timeline maps enabled participants to chart barriers and enablers with a high degree of agency and reflexive authorship, generating relational narratives that centre resistance, identity negotiation, and meaning-making. This approach departs from more conventional interview-led methods by allowing participants to shape the narrative frame rather than responding solely to preformulated questions, and thus offers a methodological contribution for scholars seeking participatory, decolonial methodological alternatives.

Empirically, the study extends the growing body of literature on WAC in STEM by foregrounding their experiences as situated within wider colonial, institutional, and epistemic structures. It contributes to ongoing debates on decolonising STEM by demonstrating that marginalisation operates not only as a diversity deficit but also through discursive, spatial, and structural processes that continue to position WAC at the peripheries of academic leadership and authority. The analysis also sheds light on the ambivalence of resistance, showing how participants' everyday strategies simultaneously contest and, at times, inadvertently reproduce dominant institutional norms.

This thesis also offers a reflexive contribution through my exploration of my positional ambiguity as simultaneously an insider and outsider. This reflexive engagement can provide insights to other scholars into navigating complex identities in research and underscores the epistemic significance of positionality within qualitative inquiry.

Ways Forward in Relation to Policy and Practice

This study carries significant implications for practice and policy. In line with the Advance HE's Athena Swan Charter and the United Nation's SDG 5.b – both aimed at advancing gender equity in STEM academia and empowering women more broadly in technology and science-related disciplines – my study (re)echoes the global and national calls to 'decolonise' STEM academia by addressing inequitable patterns of gendered and racialised underrepresentation, especially for WAC in British STEM academia. The recommendations arising from this research work are primarily directed at Equity, Diversity, and Inclusion (EDI) units, Athena Swan initiatives within UK universities, and all relevant stakeholders such as Universities UK; bodies that have the responsibility of advocating and regulating cultural practices and furthering equity among academic staff in STEM faculties and academia more broadly.

Yet such responsibility cannot rest solely with faculty heads, EDI champions, or designated institutional bodies charged with responsibilities for promoting equity in STEM and academia. The imperative of 'unsettling' allied work toward decolonising solidarity for cultural and social changes has been extensively theorised and cannot be overstated as requiring the active engagement of all academic staff (Kluttz, Walker and Walter, 2020; Simpson, 2017; Tuck and Yang, 2012). Such collaborative commitments are essential if universities are to dismantle entrenched inequities and foster academic environments where WAC can thrive as legitimate and valued practitioners.

In their widely influential piece, Tuck and Yang (2012, p. 3) argue that "decolonisation is not a metaphor", urging solidarity in the pursuit of decolonial praxis (see also Mohanty, 2003; Kennedy, 2016). This form of decolonial solidarity, they describe, is inherently 'messy'; unfixed, and challenging, requiring continuous (re)thinking, acknowledgement, and self-reflection on issues of positionality, power, privilege, guilt, and colonial legacies (see also

Kluttz, Walker and Walter, 2020; Subedi and Daza, 2008). As such, the intention of advancing these recommendations is to challenge STEM 'gatekeepers' and faculty heads to actively champion efforts and deploy policy initiatives aimed at enhancing equitable representation and the epistemic recognition of WAC's contributions - not in a tokenistic fashion - but in strategic ways to support their progression, success, and retention within their STEM faculties.

Discursively, the findings of this study highlight the imperative of increasing awareness of gendered and racialised dynamics, including hegemonic cultures and practices that serve to marginalise WAC and exacerbate their disproportionate underrepresentation in STEM faculties. However, the essence of these recommendations will be defeated if policy processes and interventions simply carry on sessions of conscious and unconscious bias or diversity training alone. Assessment of such training by Atewologun, Cornish and Tresh (2018) of the Equality and Human Rights Commission reveals mixed results regarding their efficacy in addressing implicit bias, with potential back-firing effects. More so, these trainings are fast becoming tick-box exercises that university staff simply complete (bi)annually to satisfy institutional requirements rather than facilitating substantive changes to the cultures and practices that have long exacerbated the disproportionate representation of minoritised faculties.

On the subject of why diversity programs fail to produce lasting cultural changes, Dobbin and Kalev (2016) argue that diversity training programs must be accompanied by broader institutional reforms to be effective – shifting attention more to 'fixing the institution' rather than trying to fix members of underrepresented groups while avoiding 'negative messages and incentives' (see also Dobbin and Kalev, 2022). This may take the form of revising policies and procedures to embed diversity and inclusion into STEM faculty culture and practices, thereby promoting accountability and transparency. Without these systemic changes, diversity training risks continuing superficiality, failing to address the deep-seated issues that contribute to inequities in STEM faculties and academia more broadly.

This challenges EDI units as well as Athena Swan faculties to deploy strategic and innovative processes to engage with gendered and racialised issues in staff representation beyond the performative implementation of diversity. Such efforts require some profound cultural shifts – more to do with what wa Thiong'o (1998) describes as a continuous process of 'decolonising the mind' from a colonial matrix of power, a marginal system of social classification that invented Occidentalism and created the conditions for Orientalism with all its historical, political and ethical consequences in terms of gendered and racialised assumptions including discriminatory practices (See also Mignolo, 2009; Said, 1978). This mind space—open and safe—which wa Thiong'o speaks of is one wherein STEM faculty members can engage in honest conversations about the uncomfortable realities of how intersecting axes of social identities—of race, gender, class, and others—serve to constrain the career experiences of WAC in STEM faculties and by extension exacerbate inequitable representation and epistemic otherness.

This implies that while sexism, racism, classism, and other forms of marginalisation along social categories may never be completely eradicated, there is a pressing need for the engagement and commitment of faculty members and university communities at large to foster meaningful changes. Beyond projecting positive images and success stories of underrepresented groups, STEM faculties and academia broadly must first acknowledge and lean into the 'discomfort' of discussing the intersecting consequences of being a woman and a person of colour in STEM academia. Acknowledging the multifaceted nature of these issues involves creating safe spaces for open dialogue about the pervasive and often insidious effects of intersectional marginalisation. Collins et al. (2021) underscore the importance of this approach, emphasising the critical need for intersectional awareness in understanding and addressing the complexities of marginalisation. Ignoring the intersecting nature of gender, race, and class dynamics not only perpetuates existing inequalities but also constrains efforts toward equitable changes. More so, a failure to acknowledge these dynamics is a failure to act upon them and to instigate enduring changes. As Crenshaw (2013) articulates, the unique experiences of individuals at the intersections of multiple marginalised identities must be recognised to address systemic inequities more effectively.

This recognition necessitates the creation of tailored institutional frameworks that translate into concrete actions and policies within STEM academia, including robust monitoring mechanisms for addressing gendered and racialised experiences. Such measures are crucial to ensure that discriminatory practices and systemic biases are not dismissed as mere bad behaviours or clashes of personalities but are understood and addressed within their broader social and institutional contexts. According to Ahmed (2012), the development of comprehensive policies and practices that actively address these issues is essential for fostering equitable representation across STEM academic faculties.

Recommendations

As much as I would like to refrain from being prescriptive or read as engaging in simplistic recommendations writing without sufficient understanding of context or nuances, it is crucial to recognise that decolonising STEM academia is not merely a matter of theoretical discourse but has significant implications for meaningful social initiatives seeking to create lasting change (Atewologun, Cornish and Tresh, 2018). As such, it is essential to acknowledge the subjective nature of its application along with the undeniably discursive potential that a decolonial perspective offers in addressing issues of inequitable representation (Said, 1978). This is because the accomplishments brought about by decolonial praxis are not always applicable in every context. Instead, a nuanced understanding of its reach and implementation can be achieved by paying close attention to how subjective experiences shape women's career trajectories and, as such, deploy contextually contingent measures to address barriers to inequitable representation. This approach recognises that the dynamics of power, privilege, and otherness are context-specific and require tailored interventions.

However, to avoid being read as vague, I make the following recommendations, first as a summary and subsequently discussed in detail, informed by an understanding of the complexities involved in decolonising STEM academia:

- Continuous targeted recruitment efforts and comprehensive equity training for all staff involved in promotion and recruitment panels.
- Increased representation and visibility of Black and minoritised ethnic women in senior decision-making roles to enhance diversity in STEM faculties.
- Accountability mechanisms for persistent lack of diversity within STEM faculties with little or no diversity, leveraging data from the HESA, Advance HE, the Royal Society, and the Athena Swan Charter to address disparities.
- Systematic data analysis and utilisation to develop targeted and data-informed interventions to improve diversity and address systemic barriers within academic institutions.
- Inclusive and collegiate mentorship programs and support networks tailored to support the career progression and retention of WAC in STEM.
- Clear and transparent pathways for promotion within STEM faculties, including constructive feedback mechanisms for unsuccessful applicants and regular publication of promotion outcomes by gender and ethnicity.
- Collaborative engagement between EDI units, Universities UK, and research/funding institutions to recognise a diverse range of contributions and celebrate the achievements of WAC in STEM.
- Equity in salary structures across UK universities, supported by transparent frameworks and advisory services to assist individuals in negotiating equitable remuneration.
- Active enforcement of a zero-tolerance culture towards sexism and racism within STEM faculties and academia broadly, incorporating measures to address microaggressions and encourage anonymous whistle-blowing practices.
- Periodic and mandatory gender and racial equity training with a focus on power, privilege, and microaggressions, especially for academics in managerial and leadership positions.
- Flexible work policies, including non-detrimental maternity, paternity, and parental leave provisions that explicitly recognise and support single-parent academics, LGBTQ+ family structures, and those embedded within extended or chosen kinship networks as much as heterosexual family structures. Such policies should be

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complemented by remote work options, flexible scheduling, and extended leave opportunities to accommodate the diverse familial and caregiving responsibilities of women academics of colour.

Firstly, universities should take bold steps in targeted recruitment efforts, supporting all staff involved in promotion and recruitment panels to receive comprehensive equity training to optimise these processes. Additionally, there must be an intentional increase in the visibility of black and minoritised ethnic women in senior decision-making roles. Such representation is crucial for the specific recognition and valuing of diversity across STEM faculties. STEM faculty with very little or no diversity should be held to account for their lack of representation. Institutions are already equipped to identify these disparities through the regular and systematic analysis of staff profiles, as mandated by the Athena Swan Charter. This wealth of data, encompassing gender, race, ethnicity, age, under- and over-representation, staff levels, contract types, promotion, and progression, provides a comprehensive overview that can be leveraged to develop targeted strategies to address the underrepresentation of minority faculty members in STEM.

Recent scholarship supports the imperative of utilising this data to drive substantive change. For instance, Morimoto (2022) emphasises that data-informed approaches are crucial for identifying and addressing systemic barriers within academic institutions, arguing that transparency and accountability are essential for fostering equitable academic spaces (see also Morimoto and Zajicek, 2014). Merely recognising diversity issues without actionable strategies perpetuates the status quo, undermining efforts toward equitable changes. The notion of change as a gradual process, often cited as a rationale for the slow pace of diversity initiatives, particularly in STEM disciplines, fails to recognise the urgency and necessity of immediate action. Ahmed (2012) critiques this perspective as a deflective argument that institutions use to avoid making substantial changes. She asserts that without concrete plans and measurable outcomes, claims of gradual progress amount more to 'lip service' or, at best, incremental progress. This is echoed by Harper and Hurtado (2007), who advocate for proactive measures and accountability mechanisms to ensure that diversity goals are met within specified timelines. As they argue, the efficacy of data utilisation is important for setting clear, achievable targets and regularly monitoring progress to ensure that initiatives are not merely performative but lead to real, measurable improvements in representation.

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Secondly, beyond targeted recruitments, it is crucial to support WAC in their career progression and help them reach their professional potential. STEM faculties and the wider university community should implement and promote inclusive collegiate mentoring programmes and support networks designed to foster career advancement, mitigating the risk of 'setting women up' for career stagnation or quitting their STEM careers. These mentoring programs should be specifically tailored to address the unique challenges faced by WAC, providing connections with senior academics who can offer valuable guidance, advocacy, and support. According to Zambrana et al. (2015), mentoring is a critical component in the professional development and success of minority women in STEM academia, helping to navigate institutional barriers and systemic biases.

Furthermore, these programs can serve as vital platforms for WAC to share their experiences, build professional networks, and advocate for equitable changes within their faculties. Research indicates that effective mentoring programs contribute significantly to the progression and retention as well as career success of underrepresented groups in academia. For example, Nkrumah and Scott (2022) highlight that peer mentoring relationships enhance the academic and professional outcomes for minority faculty by providing opportunities for career development, role modelling, and social support, countering feelings of isolation and marginalisation as well as fostering a sense of belonging (see also McGee and Bentley, 2017).

Thirdly, establishing transparent pathways for progression for academics working in STEM faculties across ranks is equally crucial. In view of this, clear requirements of faculty heads or line managers should be spelled out for approving applications for promotion, with a constructive feedback mechanism on promotion decisions (Wright, Thompson and Channer, 2007). This should include specific actions academics should take to improve their applications for resubmission if they fail at the first attempt. To ensure compliance with an equitable system of progression, institutions such as the Higher Education Statistics Agency should collaborate with EDI units to compel STEM academia to periodically (for e.g., (bi)annually) publish the outcomes of promotions according to gender and ethnicity. In cases where low numbers of underrepresented groups hinder the disclosure of such statistics, as Rollock (2019) recommends, universities should state the practical steps they are taking towards addressing the underrepresentation of WAC, with periodic progress reports on their actions.

Towards the furtherance of a more culturally diverse STEM research ecosystem, EDI units and Universities UK should collaborate with research and funding organisations such as UK Research and Innovation (UKRI) to reflect a diverse range of research activities, including those that are not traditionally considered the 'gold standard' of research excellence. Additionally, the Advance HE and Royal Society should consider working with leading STEM initiatives such as FemEng, STEM Ambassadors, and Women in Science and Engineering (WISE) to give deserving recognition to WAC who have distinguished themselves in their area of specialisation. Such awards should showcase the academic and professional profile of these scholars while taking into account their contributions to knowledge production.

While career progression issues are being addressed, relevant bodies such as the UCU, Athena Swan, and Universities UK should also focus on ensuring equity in salary structures across UK universities. These advocacy organisations, which are committed to advancing gender equity in STEM and higher education, must prioritise the establishment of fair and transparent salary frameworks. Adequate advisory services should be provided to enable individuals to negotiate salary increases that are commensurate with their career progression and increasing job responsibilities. This recommendation is crucial in light of findings revealing persistent gender pay gaps and a lack of negotiation support, which are further compounded by ethnicity pay gaps for women of colour. These findings are consistent with recent data from the Office for National Statistics (2023) indicating that gender pay gaps remain a pervasive issue in UK universities, with women earning significantly less than their male counterparts. When intersected with ethnicity, these pay gaps are even more pronounced, highlighting the urgent need for targeted interventions. The introduction of transparent salary frameworks and negotiation support services can play a pivotal role in mitigating these disparities, reducing the potential for discriminatory practices, and fostering more equitable STEM faculties.

In view of the study's findings, revealing a pervasive masculinised STEM culture (including microaggression) that seeks to categorise WAC as the 'other' and deem their contributions as less or unintelligible, I recommend that the EDI unit in STEM faculties and across academia should enforce a 'zero tolerance to sexism and racism' culture, including both overt and covert forms of microaggressions. This can be facilitated by encouraging anonymous whistle-blowing practices that promote an anti-bullying culture within British HE spaces. While I have observed that UBTs may not be the most effective measure against explicit and implicit forms of discrimination, EDI units should work with STEM faculties to introduce periodic and mandatory gender and racial equity training for all academics, especially those in managerial and leadership roles. Such training should be centred on issues of power, privilege, and microaggressions.

Aligning with findings around the "partnership and motherhood penalty", promoting flexible work policies is essential to accommodate the diverse needs of WAC and retain those who might otherwise leave academia. Crucially, such policies must move beyond the narrow focus on heterosexual family structures to explicitly recognise and support single-parent academics, LGBTQ+ parents, and those embedded within extended or chosen kinship networks. Flexible work arrangements, including remote work options, flexible scheduling, and non-detrimental extended leave provisions, can significantly mitigate the challenges of balancing professional responsibilities with diverse familial and caregiving obligations.

O'Meara et al. (2019) emphasise that flexible work policies are particularly beneficial in reducing stress and burnout, which disproportionately affect women and racially minoritised faculty. Similarly, Cech and Blair-Loy (2019) show the value of such flexible work arrangements, arguing that they enhance job satisfaction and increase retention rates among underrepresented groups in STEM academia. Additionally, the COVID-19 pandemic further underscored the importance and feasibility of flexible working practices, suggesting that their continued application has the potential to reshape academic cultures towards inclusivity and equitable practices (Gordon and Hornung, 2021). Accordingly, embedding comprehensive, inclusive, and flexible work policies is not only a strategy to improve retention of WAC but also a critical step toward transforming academic workspaces to value diverse contributions, caregiving arrangements, and lived realities.

Avenues for Further Research

While I have discussed the policy and practice implications of this study in the preceding section, these findings also open grounds for further scholarly inquiry. Continued research on intersectional barriers—particularly the gendered and racialised cultures of STEM faculties—remains vital for unpacking the structural dynamics that reproduce inequitable patterns of representation. One avenue can involve longitudinal studies assessing the impact of diversity initiatives over time, interrogating not only their effectiveness but also their unintended consequences for WAC's visibility, legitimacy, and career progression. Comparative cross-national studies, spanning both the Global North and South, would further enrich this field by highlighting how structural barriers and decolonial interventions operate differently across varied institutional, cultural, and political contexts.

Future research could also engage in-depth with the intersections of underrepresentation with broader debates around academic precarity, impermanence, and the casualisation of labour in higher education. For WAC, such structural conditions are compounded by racialised and gendered hierarchies, often positioning them as "illegitimate" or perpetually temporal within academic spaces. Moreover, the tightening of migration regimes—coupled with the resurgence of anti-migration and anti-equity rhetoric across global contexts—intersects with these dynamics, producing additional vulnerabilities for international scholars whose legal and professional status is contingent on precarious academic contracts. Exploring these intersections would provide a more nuanced understanding of how systemic inequities are reproduced not only through culture and discourse but also through material labour conditions and geopolitical structures.

As Charleston et al. (2014) suggest, such studies would benefit from critical race theory and Black feminist frameworks, which foreground marginal intersectionality and conceptualise counterspaces as both theoretical and discursive practices (see also Ong, Smith, and Ko, 2018; Wilkins-Yel et al., 2023). Equally, a continued exploration of hegemonic discourses of meritocracy in STEM (Blair-Loy and Cech, 2022; Seron et al., 2018) remains essential, as these narratives often obscure the material and structural inequities sustained through casualisation, neoliberal productivity, and institutional hierarchies. Within such contexts, future research could explore how WAC mobilise technologies of power/self to navigate, resist, and re-signify these pressures.

Lessons Learned: A Reflexive Account of 'Doing' Feminist Research

Reflecting on my personal journey as a male PhD student of colour conducting research on the gendered and racialised experiences of WAC in STEM has been both a profound learning experience and equally challenging. As a man of colour, I found myself negotiating the delicate balance between being an insider due to shared experiences of racial marginalisation and an outsider due to my gender. This duality often placed me in a position of 'in-betweenness,' highlighting the blurred and ambiguous nature of my insider/outsider status (Ogunyankin, 2019)—one in which I had to carefully consider how my identity influenced both the research process and my interpretation of the data. While my African background and personal experiences of racial discrimination connected me to the research, they did not automatically guarantee access/acceptance as a researcher of colour on women's experiences. Instead, as I have reflected extensively in the methodology chapter, my identity as a male researcher presented additional layers of complexity, particularly in terms of finding, interacting, and maintaining contact with participants, including understanding/interpreting their experiences as well as gaining their trust and referrals.

A particularly notable and unsettling moment was when I was assumed to be a woman in one of the Zoom interviews. This meant that I had to repeatedly—(sub)consciously—reassure participants of my ethical commitment to my interpretivist stance of working *with* and *for* women in research and seeking to inter-subjectively understand how gender and race intersect to influence WAC's experiences in STEM. Importantly, I sought to demonstrate that my aim was not to misrepresent or appropriate their narratives, nor to exploit their experiences as a means of advancing my own academic ambitions, but rather to produce knowledge in solidarity with them. The challenge here was not only to avoid the potential pitfalls of being perceived as an 'outsider' but also to navigate the expectations and assumptions attached to my gender. In this context, 'doing gender' became both a conscious and strategic process, as I had to actively manage how my gender identity was perceived to build rapport and establish credibility with my participants. This involved a careful consideration of how I communicated, listened, prompted, and responded during interviews—ensuring that I did not inadvertently reinforce the very hegemonic discourses I sought to critique.

Although I anticipated potential challenges from the outset relating to participant recruitment and concerns over trust issues and my research intentions as far back as the proposal writing phase, this particular experience underscored the complexities of identity work in research – particularly as they relate to a feminist strand of standpoint epistemology—a perspective that emphasises the significance of knowledge construction from the social positions and lived experiences of marginalised or minoritised groups (Harding, 2004, 2013; Ladson-Billings, 2003a, 2003b). Central to such feminist epistemology are arguments that those positioned 'inside' the margin possess unique insights into power structures and social relations—insights that are often inaccessible to those situated on the outside of the margin or in more privileged positions. As I progressed through the data production phase, this theoretical construct became increasingly evident in practice, underscoring the importance of identity work and the nuanced dynamics of ethically 'doing my gender' in such ways to gain trust and acceptance in the research process.

Experiencing this reality play out within the context of my research work made me more aware that identity extends beyond skin colour (Jackson, 2022) and that the notion of identity work here goes beyond simply acknowledging my positionality – as my male gender could have been misconstrued as an attempt to reproduce hegemonic discourses or position myself as an 'expert' on the experiences of my research subjects (Ladson-Billings, 2003a). It required a deliberate effort to align my research methodological practices with the feminist principles that somewhat underpin poststructuralist standpoint epistemology. This meant recognising that my male identity could be seen as unfitting with the research focus on WAC's experiences and could have potentially hindered the openness of the participants' responses. To mitigate this, I engaged in reflexive practices, continuously (re)questioning how my presence and positionality potentially influenced the data production process and the participants' willingness to share their experiences.

Moreover, I had to confront the reality that gaining research trust and credibility was not merely a matter of transparency or ethical praxis but involved an ongoing negotiation of my identity in relation to the participants. This process of 'doing gender' required a sensitivity to the power dynamics at play and an acknowledgement of the participants' potential reservations about my capacity to in-depthly understand and represent their lived experiences. In hindsight, my research experiences have reinforced the importance of identity work in qualitative research, particularly when studying marginalised groups. It highlighted that trust and acceptance are not automatically granted based on shared racial or ethnic backgrounds; instead, they must be carefully cultivated through ongoing reflexivity and a commitment to ethical research practices that accurately represent the participants' perspectives, interlinked with the researcher's subjectivity.

If I were to approach this research again, I would place even greater emphasis on building trust and rapport with my participants from the outset and addressing any identity-related concerns upfront. Given the sensitivity of the subject matter and the potential for distrust due to my gender, I would invest more time in establishing a foundation of mutual understanding and respect. This might involve more extensive pre-interview engagements, where participants have the opportunity to learn more about my research intentions and where I can address any concerns they may have. Additionally, I would consider strategic ways to encourage greater engagement with participatory methods (given that the timeline mapping exercise witnessed low engagement), allowing the participants to play a more active role in shaping the research process and outcomes rather than relying more on 'member-checking' as a strategy for enhancing the credibility of my study. This could help mitigate some of the power imbalances inherent in the researcher-participant relationship.

Engaging in thematic and discourse analysis within this context required not only a rigorous academic approach but also deep introspection regarding my positionality, identity, and the power dynamics inherent in the research process. The thematic analysis allowed me to identify recurring patterns in the participants' narratives, revealing the underlying processes that pose barriers and shape their experiences in STEM. However, it was through an engagement with discourse analysis that I grasped a greater depth of these challenges, unpacking the subtle and pervasive ways in which power operates within academic discourses to marginalise WAC. One of the most profound lessons I learned through this research is the importance of reflexivity in qualitative research, particularly when dealing with sensitive topics related to identity and marginalisation.

As I explored participants' narratives, I had to constantly interrogate my own assumptions and biases, ensuring that my interpretations were grounded in the participants' lived realities rather than my preconceptions. This process was humbling and often uncomfortable, as it required me to confront the limitations of my perspective and the potential for misrepresentation. In terms of the analytical approach, I have come to appreciate the value of integrating thematic and discourse analysis in a way that not only amplifies what is being said but also critically explores how it is being said, and the broader societal and institutional structures that influence these narratives. This dual approach has enriched my understanding of the complex intersections of race, gender, and power within STEM academia.

Additionally, I recognise the value of embracing the 'messiness' and ambiguities of power dynamics in research. However, I also acknowledge that had I more deeply considered the impact of my gender from the outset, I might have approached certain aspects of participant interaction differently – (such as being explicit about my identity in my participant information sheet), potentially fostering a greater sense of trust and openness from the beginning. This experience has underscored the importance of ongoing reflexivity and adaptation in research, particularly in 'ethically important moments' when negotiating the nuanced dynamics of identity and power (Berger, 2015; Guillemin and Gillam, 2004; Yarrow, 2018).

Further reflecting on my personal research journey, I find it impossible to separate the intellectual and emotional dimensions of this experience. This research journey was profoundly shaped by a personal and tragic event—the passing of my primary supervisor, the late Professor Srabani Maitra—which left an indelible mark on both the process and outcomes of this study. Her loss was not only a significant personal bereavement but also the departure of a mentor whose intellectual guidance and support were pivotal to my academic development. Her insights, alongside those of my current primary supervisor—Professor Barbara Read—were invaluable to both the methodological design of my research and the overall research process up until her passing. Her guidance was instrumental in refining my methodological approach, challenging my assumptions, and encouraging me to engage deeply with the theoretical frameworks that underpin my study. She played a critical role in helping me navigate the complexities of my research topic, particularly as it intersected with my identity as a male researcher of colour.

Her influence extended beyond academic rigour; she was instrumental in signposting career development opportunities and encouraging my visibility within the academic community—an approach I would describe as 'academic mothering.' The absence of this support left a significant void, one that is proving difficult to fill, bringing to the forefront the crucial, yet often unspoken, role that mentorship plays in the academic research journeys of students. It has underscored the profound impact that a dedicated mentor can have on a scholar's development, both academically and professionally, shaping not only the trajectory of their research but also their integration into the broader academic community.

Initially, I did not fully comprehend the depth of the impact of her loss. However, I soon noticed a subtle decline in the pace of my work and submissions, which contributed to the decision to extend my PhD into a fourth year to allow for the completion and thorough revision of my thesis. Her passing inevitably compelled me to approach the research process with a renewed sense of resilience. This period became one of significant challenges for both my research and professional advancement, as I had to assume greater responsibility in steering my research work and professional development forward.

Throughout this time, I found myself continually reflecting on her advice, striving to embody the intellectual rigour and empathy that she embodied in her approach to research. This reflection was not merely an effort to honour her legacy; it was also a conscious endeavour to ensure that my research remained true to the principles of integrity, reflexivity, and critical engagement that she so deeply valued and instilled. Her influence continued to shape my approach, driving me to uphold the high standards she set and to persevere in the face of challenges.

This journey has been a testament to the importance of mentorship in academia, not just in terms of academic guidance but also in providing emotional and intellectual support. The process has underscored the value of building strong, supportive networks within the academic community, especially for early-career researchers who may face significant personal and professional challenges. In retrospect, I realise that while the loss of my supervisor was a devastating blow, it also became a catalyst for growth. It pushed me to dig deeper into my research, to trust in my own capabilities, and to seek out new forms of support and mentorship. This experience has left an indelible mark on my research journey, shaping the way I approach my work and the way I understand the academic journey as a whole. It has reinforced the importance of resilience, adaptability, and the human connections that sustain us through the rigours of research. In a way, the experience also deepened my understanding of the themes I was researching. The sense of loss and the need to persist despite it mirrored the resilience and tenacity that many WAC in STEM experience in the face of systemic barriers and personal challenges. It gave me a more profound empathy for the participants and a renewed commitment to accurately and respectfully represent their experiences.

Ultimately, this research journey has reinforced my commitment to conducting ethically grounded, reflexive research that centres the voices of this underrepresented group of women. It has also deepened my understanding of the nuanced ways in which identities intersect and influence experiences, both within the research context and beyond. Moving forward, I aim to apply these insights to future research, continuously refining my approach to ensure that it remains both rigorous and empathetic.

Conclusion

In conclusion, this thesis explores the persistent underrepresentation of WAC within British STEM faculties, with a particular focus on how intersecting structures of gender and 'race' serve to shape their professional trajectories, experiences of inclusion and exclusion, and practices of resistance. This contributes to existing scholarship on inequities in STEM higher education by centring the lived experiences and counter-narratives of WAC in STEM. At its core, the study foregrounds the ways in which racialised and gendered power relations are sedimented within the cultures, practices, and epistemologies of British STEM academia, unpacking how these relations define who can be recognised as a legitimate knower. At the same time, it highlights the discursive and everyday strategies through which WAC negotiate, subvert, and re-signify their positions within these exclusionary spaces.

The study argues that addressing the underrepresentation of WAC cannot be reduced to performative gestures of diversity and inclusion that leave intact the colonial and patriarchal legacies underpinning STEM faculties and academia more broadly. Instead, what is required is a structural, cultural, and epistemic reconfiguration—a dismantling of the hegemonic norms that privilege whiteness, masculinity, and Eurocentric epistemologies as the measure of scholarly legitimacy. This implies an ongoing, unfinished, and necessarily uncomfortable project of interrogating and undoing the very foundations upon which exclusion and misrecognition have been normalised. In this sense, this thesis contributes to pressing calls to 'decolonise' STEM faculties across British higher education, including hegemonic practices and cultures that serve to 'other' WAC and perpetuate inequitable patterns of representation.

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Appendices

Appendix 1: Ethics Approval

University of Glasgow

College of Social Sciences

01 September 2022

Dear Abimbola Olatunde Abodunrin

College of Social Sciences Research Ethics Committee

Project Title: Decolonizing Higher Education: Underrepresentation of women academics of colour in Science Technology Engineering and Mathematics (STEM) faculties in British Higher Education

Application No: 400210174

The College Research Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Start date of ethical approval: 01/09/2022
- Project end date: 01/09/2024
- Any outstanding permissions needed from third parties in order to recruit research participants or to access facilities or venues for research purposes must be obtained in writing and submitted to the CoSS Research Ethics Administrator before research commences: socsci-ethics@glasgow.ac.uk
- The research should be carried out only on the sites, and/or with the groups and using the methods defined in the application.
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: (https://www.gla.ac.uk/media/media_490311_en.pdf)
- Any proposed changes in the protocol should be submitted for reassessment as an amendment to the original application. The **Request for Amendments to an Approved Application** form should be used: https://www.gla.ac.uk/colleges/socialsciences/students/ethics/forms/staffandpostgraduateresearchstudents/

Yours sincerely,

Dr Susan A. Batchelor
College Ethics Lead

Susan A. Batchelor, Senior Lecturer
College of Social Sciences Ethics Lead
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School of Social and Political Sciences &
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Ivy Lodge, 63 Gibson Street, Glasgow G12 8LR.
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Appendix 2: Clerk of Senate's (UofG) Permission for Participants' Recruitment

Appendix 3: Ethics Amendment Approval

University of Glasgow

College of Social Sciences

College Research Ethics Committee

Request for Amendments - Reviewer Feedback

Ethics Committee for Non-Clinical Research Involving Human Subjects

Application Details

Postgraduate Student Research Ethics Application

Student id. Number if applicable:

Application Number: 400210174

Applicant's Name: Abimbola Olatunde Abodunrin

Project Title: Decolonising British Higher Education: Underrepresentation of women academics of colour in Science Technology Engineering and Mathematics (STEM) faculties

Original **Start** Date of Application Approval: 01/09/2022

Original **End** Date of Application Approval: 01/09/2024

Date of Review: 27/03/2023

Application Status: Amendments Approved

REVIEWER MAJOR RECOMMENDATIONS	APPLICANT RESPONSE

REVIEWER MINOR RECOMMENDATIONS	APPLICANT RESPONSE

ADDITIONAL REVIEWER COMMENTS	APPLICANT RESPONSE
The request to extend the range of participants, given an initial limited response, seems appropriate and does not raise any additional ethical concerns and is hence approved.	

Please retain this notification for future reference. If you have any enquiries, please email socsci-ethics@glasgow.ac.uk.

Appendix 4: Participant Information Sheet

University of Glasgow

College of Social Sciences

Participant Information Sheet

Decolonising British higher education: underrepresentation of women academics of colour in Science Technology Engineering and Mathematics (STEM) faculties

Abimbola Abodunrin	Prof. Srabani Maitra
a.abodunrin.1@research.gla.ac.uk	srabani.maitra@glasgow.ac.uk
PhD Researcher in Education	Primary Supervisor
School of Education	
St. Andrew's Building,	
Level 3, Room 384,	Prof. Barbara Read
11 Eldon Street, Glasgow, G3 6NH	barbara.read@glasgow.ac.uk
University of Glasgow	Secondary Supervisor

You are being invited to take part in the above-named research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to **read the following information carefully** and discuss it with others if you wish. Ask me if there is anything that is unclear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

Who is the Researcher?

This study is being conducted by a male researcher of colour from Nigeria, currently undertaking doctoral research at the University of Glasgow. I believe it is important to state this explicitly, as my own positionality, as an African researcher (with a science education background) working within UK higher education, shapes both my interest in this topic and my awareness of the structural inequities in STEM.

What is the Study About?

This interview is for women academics of colour (WAC) of varying racial groups and career stages currently working and/or studying in Science, Technology, Engineering and Maths (STEM) disciplines in a UK higher education institution. The aim of the study is to explore the persistent underrepresentation of WAC in STEM by specifically exploring how a person's gender and race/ethnicity may impact their career experiences, opportunities and trajectories. During the interview, I will therefore be asking about:

- aspects of your experience as an academic,

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- your perceptions about issues of representation and equity,
- your thoughts about decisions to stay in your career path or potentially change trajectory, and
- any strategies or approaches you have adopted to navigate or progress in your career.

Timeline Mapping Exercise

Prior to the interview, you will be requested to take part in a timeline mapping exercise designed to help facilitate discussions around key moments, figures and experiences in your career that you deem important and would like to share. This will help support the conversation, reflection and narrative flow. Kindly note that this exercise is optional: you may opt in or out.

If you choose to take part, you may represent key moments (including the events and figures) in your academic career in any format you feel comfortable with, including but not limited to:

- a simple list of career stages or periods you wish to discuss,
- lifelines (with peaks, dips, transitions, and brief annotations),
- arcs, waves, or step-function style timelines,
- annotated diagrams, sketches, or flow-charts,
- short textual notes that sequence meaningful events or turning points.

You may complete this exercise as creatively or minimally as you prefer. If you produce a diagram, chart or sketch, I will ask that you email it to me ahead of the interview. Your timeline will then be used as an interview prompt alongside the interview guide. If you opt out of the mapping exercise, the interview will proceed entirely based on the question guide provided with this information sheet.

The Interview

The interview will last approximately one hour, with the option for a short break halfway through the session or at any time needed. The interview will be conducted via Zoom and recorded solely for transcription and analysis purposes. You have the option to either have your video turned on or off, and may rename your Zoom username if you wish to do so.

Your *participation is entirely voluntary* and at your discretion. Thus, you do not need to answer any questions you are uncomfortable with, and you reserve the right to withdraw from the study at any time without giving a reason. In the event of withdrawal, any personal data or research data connected to you will be securely deleted to support your right to erasure. Please note that there is no financial incentive or compensation for participation.

Confidentiality and Data Protection

Any personal details generated in the interview will be kept strictly confidential. In line with non-disclosive reporting, data will be:

- pseudonymised at the analysis stage.
- accessible and analysed only by me (the researcher)
- anonymised and securely stored electronically in my University OneDrive (password-protected)
- destroyed 10 years after completion of the study.

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In the interest of open science practice, a de-identified dataset will be securely archived with Enlighten, the University of Glasgow's research data repository.

Please note that confidentiality will be maintained as far as possible unless, during our conversation, I become aware of information suggesting that someone might be in danger of harm. In which case, I might have to inform the relevant support or safeguarding services.

Use of Data

Your contribution and the resulting data will be used for the production of academic publications, such as PhD thesis, journal articles, conference papers, and other academic presentations online or in print. No identifiable information will appear in any publication.

Funding and Ethical Approval

This study is funded by the College of Social Sciences PhD scholarship, University of Glasgow, UK, and has been reviewed and approved by the College Research Ethics Committee.

To pursue any complaint about the conduct of the research, please contact the College of Social Sciences Lead for Ethical Review, Dr. Susan Batchelor by email at socsci-ethics-lead@glasgow.ac.uk

_____End of Participant Information Sheet_____

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Appendix 5: Call for Participation

Seeking STEM women academics/ PGRs of colour in British HE
to participate in a research study
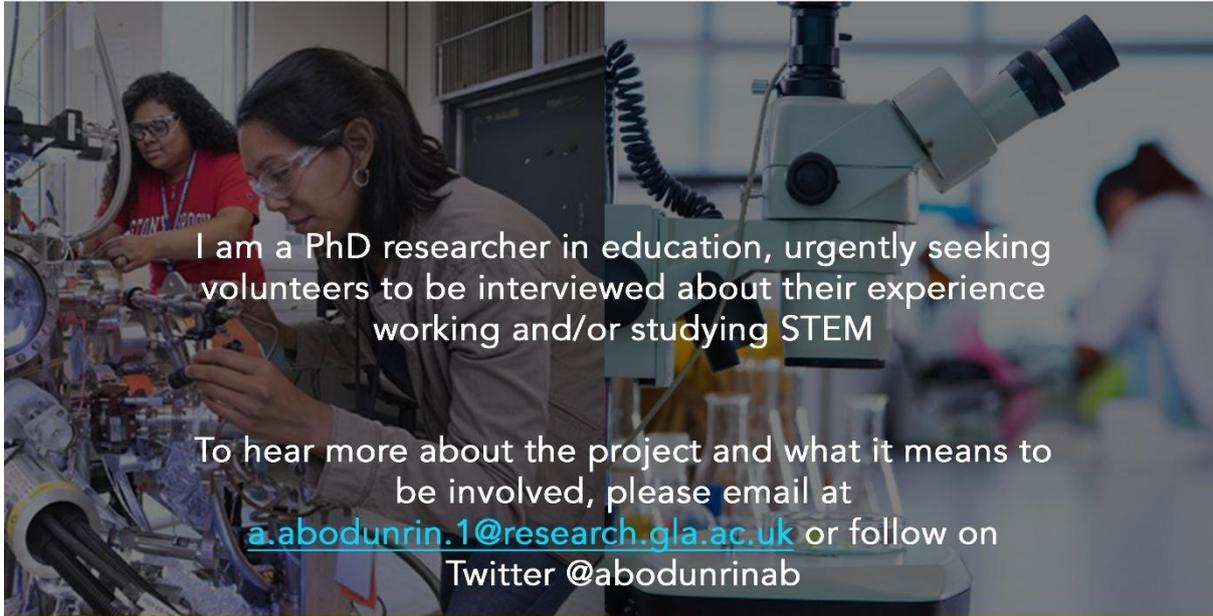
I am a PhD researcher in education, urgently seeking volunteers to be interviewed about their experience working and/or studying STEM

To hear more about the project and what it means to be involved, please email at a.abodunrin.1@research.gla.ac.uk or follow on Twitter @abodunrinab

This project has been approved by the University of Glasgow's College of Social Sciences Ethics Committee

Appendix 6: Interview Guide

Decolonising British higher education: underrepresentation of women academics of colour in Science Technology Engineering and Mathematics (STEM) faculties

Introduction

Thank you for agreeing to take part in this interview. I am interviewing you to have a better understanding of how your gender and race/ethnicity may impact your career experiences in STEM higher education. I will therefore be asking about aspects of your experience as a woman academic of colour, your perceptions about these issues, thoughts or decisions to stay in your career path or potentially change direction, and any strategies or approaches you have adopted to progress in your career.

The interview should take approximately 1 hour, depending on how much information you would like to share. If you wish, a break will be observed halfway through the session or at any time convenient for you. With your permission, I would like to confirm if I can record the interview and take notes of our discussion because I don't want to miss any of your comments or any relevant details about this interview. Do you give your permission to be recorded? If yes, *[remember to start recording on Zoom]*. All responses will be kept confidential. This means that only your de-identified interview responses will be subsequently published and archived, and I will ensure that any information I include in my report does not identify you as a participant.

To ensure that my analysis is an accurate reflection of your thoughts, you will be allowed to review interview transcripts, see, and comment on my analysis (if you wish to do so). *Participation in this study is voluntary and at your discretion*. This means you may decline to answer any question or stop the interview at any time and for any reason. If you choose to withdraw from the interview, your personal data or any other research data generated from or by you will be securely deleted to support your right to erasure.

For the record:

- Are there any questions about the interview?
- Have you read the consent form and privacy notice?
- Do you give your consent to participate in the study and for the use of data?
  [Start screen sharing].

Section 1: Establishing Rapport and Collecting Demographic Information
[Remember to probe answers and ask follow-up questions based on what emerges]

The researcher briefly introduces himself

Q1. First, could you please introduce yourself, telling me your name, university and about your current role at the university?

Q2: What does this role entail? [What are you teaching and/or researching? And how long has this been for?]

Q3. If you don't mind, can you give me further information about your age, social class, ethnicity/ race?

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Section 2: Personal Experience and Motivation

Q4: Before we begin, I would like to ask if you have done the timeline mapping exercise for your career journey in STEM? If yes, *Prompt* - could you talk me through your map, telling me about moments in your career experience in STEM that you consider significant for this discussion? (This might include periods of success or challenges) If no, you can tell me moments of your career journey you would like to discuss.

Q5: Could you please describe your motivation for undertaking a STEM-related programme at higher education and your subsequent decision for joining STEM academia?

Q6: What were your expectations when joining a STEM faculty as an academic and/or PGR? Would you say these expectations were or have been met or not? How so?

Q7: How have your beliefs, motivations, and aspirations changed over the course of your academic career?

Section 3: Experience
*[Questions/prompts depend on whether or not a topic has been covered in the timeline discussion or at the beginning of the interview]

Q8: What does your involvement in STEM as a woman academic of colour mean to you?

Q9: How would you describe your working experience in your faculty? Would you classify this experience as largely positive, negative, or a mix of both? why so?
Prompts for negative experience: Would you say that this experience might have been influenced by your identity both as a woman academic and/or as a person of colour working in your faculty? If yes, in what ways? And probe further in Q10.

Q10: As you may already know, there's quite a gendered difference in terms of students who decide to study STEM subjects (especially in physical sciences, computing and engineering) and subsequently progress into STEM roles in higher education. What factors do you think might account for this difference? And what are your thoughts on them?

Q11: In your own opinion, do you think women academics especially those of colour are currently proportionately represented in your faculty? Why so? *Prompt for negative response - What would you say are the plausible factors that might be perpetuating and/or exacerbating this underrepresentation?*

Section4: Faculty Dynamics and Perception

Q12: There are often different social groups/networks of academics within faculties. Is this so in your faculty and do you have a network? If so, how was this network created? (*prompt - are there any indications that suggest that the network has developed due to aspects of the same identity/experience?*)

Q13: Within your networks/social groups – do you think gender or ethnicity ever comes up as a factor in terms of the group dynamics or your relations with people? How so?

Q14: Do you belong to other social groups/networks other than those of your School/Department or university? If so, how do you find it relating to other colleagues (whether male or female, white or 'others') within these groups?

Q15: How do you perceive yourself as an intellectual and what is your understanding of how other colleagues (especially those outside your gender and racial category) perceive you as a woman academic of colour?

Q16: Do you think there are any forms of disparity between these two perceptions? If so, what are your thoughts about them?

Section 5: Strategies for faculty retention and progress

Q17: What are some of the personal approaches and strategies you have adopted or are currently adopting to remain and thrive within STEM academia?

Q18: Have you at any time within your career journey in STEM potentially thought of changing your career path? If so, what were the reasons for considering a potential change in your career trajectory?

Q19: Are you involved with any organisation(s) that support women of colour in STEM academia? *Prompts: Can you mention any examples? And are there any mentors or notable individuals (whether in your faculty or within these organisations you look up to or who inspire you regularly? How so?*

Q20: Do you find yourself being often asked to do a burdensome amount of work on committees regarding diversity/equal opportunities as a woman and an academic of colour? *If yes, prompt - how does this impact your career experience and progression?*

Q21: How would you describe your contributions as a woman academic of colour towards greater gender and racial representation in your STEM faculty?

Q22: Can you recommend any institutional or cultural changes that could enhance increased representation for women academics of colour as well as foster their retention in STEM faculties?

Q23: Is there anything I have not asked that you think is important and worth discussing?

Thank you for your time. Please do connect with other participants within your network who fit the description for this study if you have any (whether within or outwith your university)

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Appendix 7: Consent Form

University of Glasgow

College of Social Sciences

Consent to Research Participation and Use of Data

Title of project: Decolonising British higher education: underrepresentation of women academics of colour in science, technology, engineering, and mathematics (STEM) faculties.

Name of Researcher: Abimbola Olatunde Abodunrin
Supervisors: Prof. Srabani Maitra and Dr. Barbara Read

Please tick as appropriate

Yes ☐ No ☐   I confirm that I have received, read and understood the Participant Information Sheet for the above study and have had the opportunity to ask questions.

Yes ☐ No ☐   I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

Yes ☐ No ☐   I acknowledge that I have been sent a privacy notice, detailing how my data will be held and processed for the research study.

Yes ☐ No ☐   I consent to interviews being audio-recorded

Yes ☐ No ☐   I acknowledge that copies of transcripts will be returned to participants for verification.

Yes ☐ No ☐   I acknowledge that participants will be referred to by pseudonym.

I agree that: (for researcher's purpose only)

Yes ☐ No ☐   All names and other material likely to identify individuals will be anonymised.

Yes ☐ No ☐   The material will be treated as confidential and kept in secure storage at all times.

Yes ☐ No ☐   The material will be retained in secure storage for use in future academic research

Yes ☐ No ☐   The material may be used in future publications, both print and online.

Yes ☐ No ☐ I waive my copyright to any data collected as part of this project.

Yes ☐ No ☐ Other authenticated researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.

Yes ☐ No ☐ Other authenticated researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form

.

Yes ☐ No ☐ I acknowledge the provision of a Privacy Notice in relation to this research project.

Please tick as appropriate (For participant's purpose)

I agree to take part in this research study ☐

I do not agree to take part in this research study ☐

Name of Participant .... Signature ....

Date ....

Name of Researcher .... Signature ....

Date ....

Appendix 8: Participants' Timeline Maps

POSITIVES (2019) NEGATIVES

I became a volunteer mentor with ▓▓▓▓ Engineering (Trade Body)
- I was the 2nd female mentor out of about 10 mentors.

(2020)

I completed the "Career Enhancement Program" hosted by ▓▓▓▓ (an organisation which increases profile of Women in STEM roles)

I felt I should have benefited from this program if I was in my 20's or 30's

(2023)

I was a guest speaker on the "▓▓▓▓ Programme" organised by AAI Employability (specialised Diversity Inclusive recruitment training company)

Recieved the "Diversity in STEM" award at ▓▓▓▓ (Aug 2023) End of Time -line....

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Timeline Map

Late 80s to early 90s

Curiosity and interest in biology
+
Strong sense of intellectual capability
+
Completed masters

Early 90s to late 90s

Family values for education (success was encouraged)
+
Social expectations of family & respectability
+
Unsuccessful PhD fundings

Late 90s to 2005

Successful PhD funding
+
Imposter syndrome
+
Subtle discouragements
+
Perceived surprise at competence
+
Supervisor's support

2005 to 2010

Supervisor's retirement/Changes to the supervisory team
+
Funding precarity
+
Financial strain but finished PhD
+
Completed PhD

2010 to 2016

Job hunting/precarity
+
Post-docs/short term contracts
+
Immigration challenges
+
Full time R&T role

2016 to date

Finding my 'tribe'
+
Competitive culture
+
Leveraging collaborations
+
Grant precarity
+
Knowledge hierarchies

█████ journey

Timeline tagging

Great school

2000-2005 Was an average student in a boarding school. My father wasn't educated enough so he thought it would be a good idea to get me into a good (expensive) all girls boarding school where they can take care of me and ensure I study on time as well as not miss any classes. Just focus on studies

I got out of boarding school because my father was struggling to pay. He had also gotten my sister in the school. And was planning on getting my brother too in an equivalent all boys school.

Average school

2006-2008 - Studied at a local school which was average. I was always the topper for all exams and all years. My maternal uncle came to stay with us, and he got me more interested in science and encouraged me to work hard and study for knowledge. He helped me with my studies and inspired me to do great in education.

2007-2008 My father got me into private tuitions especially for science subjects, where I was being taught some extra stuff, not necessarily the school course itself to get me some edge

Great school

2009-2012 My father moved to the capital and got us all into a great private (so called International) school in the hopes that great school is equivalent of great students and education. Of course, not all students were good, most of my friends did not do well. There, I was among the top 4 so it was validating coming from a smaller city and average school. In fact I joined late and appeared for some exam only through self-preparation, the teacher (female) was very impressed and pointed this out to students. So far, all the people facilitating my STEM journey were males. This was the first female who validated me, and sent me to represent the school also. I also scored full in an exam that mattered a lot so I became famous in school. During farewell, I got the title Lady Einstein.

2009-2010 Tuitions at a coaching center, the teacher said I had potential and gave me extra time where he taught me more stuff than others. This was validating and encouraging. Most teachers there saw my potential and helped me grow

2010-2012- my father paid for a coaching center which prepares you for one of the toughest exams in ▇▇▇ to get into some top tier engineering colleges. I was performing well there, although it was intense managing both my school and the coaching as it requires a lot of hard work.

My rank in the exams were not good enough to get me computer sci or mechanical or electrical /Electronics which are considered top in hierarchy of courses offered. Also people from lower caste (like me) get some reservation in the sense that the cutoff score would be a little lower than normal. IT would go even lower for castes lower than me. I was in the mid. I was a bit disappointed to use it but I felt I needed it because my parents were from village and someone needed that added advantage to go forward in life. No one in my family had even gone to college/ Uni, everyone was in some business so it was a big deal as I am the eldest in my generation in the entire family.

Formative years
- Grew up with expectations that edu. is the surest path to career stability
- Science felt distant. Initially struggled with physics but encouraged/enrolled in extra classes

Personal aspirations
- Imagined myself as a physicist but rarely saw people like myself in Uni
- Interested in discussing/teaching physics related topics. Academia became an ambition

Early STEM exposure
- Physics teacher encouraged me to consider Astrophysics in Uni
- Lab sessions were interesting but also isolating being the only WOC in the space

Institutional issues
- Being an Astrophysicist/WOC was seen as incompatible. Expertise questioned
- Mentorship felt inadequate & access to network limited

Moments of validation
- Publishing my first paper subsequent publications made me feel visible
- Certain students saw me as role model. Working with established colleagues

Individualised culture
- Excellence defined narrowly & implicitly "white". Diversity celebrated rhetorically
- Premium on 'merit' but informal network shaped opportunities more than merit

Trajectory
- Non-linear progression alongside exhaustion and considerations to quit academia
- Moments of doubts, resilience and doing academic astrophysics on my own terms