Schools and Shaping of Sexual Subjectivities: Exploring Biology Education Discourses

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DECLARATION

This thesis is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

The work was done under the guidance of Professor Sugra Chunawala until 31 May 2022, and then Dr. Deepa Chari, at the Tata Institute of Fundamental Research, Mumbai.

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In my capacity as the formal supervisor of record of the candidate's thesis, I certify that the above statements are true to the best of my knowledge.

Dr. Deepa Chari
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ABSTRACT

This thesis explores the discursive space of biology classrooms and sexual subjectivities (thoughts, emotions, dispositions, opinions, sense of self and the world) therein. The thesis has been conceptualised with the understanding that the dynamics within a biology classroom cannot be fully comprehended without considering how the school as a whole operates and how broader societal discussions on sexuality shape the institution of the school. Hence, I begin by examining the discourses in the public sphere, then narrowing to the school, and finally zooming into biology classrooms. Through analysis of specific public discourses, science textbooks, teacher interviews and classroom observations, I attempt to examine how relations of power and different institutional and cultural discourses work to constitute specific subjectivities. Within the classroom, I explore different aspects of teachers' lived experiences, positionality and emotional experiences that influence the narrative they bring while discussing sexuality. I further explore the interaction of scientific and moral discourses on sexuality in the classroom to produce narratives of reproduction, identity and pleasure. Lastly, the thesis examines the troubled and tense environment that arises during these discussions and explores how teachers navigate these complexities.

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ACKNOWLEDGEMENT

List of Publications

In peer-reviewed journal

Jose, P., Chunawala, S., & Chari, D. (2023). Of the forbidden frontiers of the body: exploring teachers' narratives about students' sexuality in the south Indian state of Keralam. International Journal of Qualitative Studies in Education, 1-17. https://www.tandfonline.com/doi/full/10.1080/09518398.2023.2181446

Jose, P., Chunawala, S., & Chari, D. (2024). Moralistic Science: Socio-Cultural Norms about Sexuality in Indian Biology Education. *Journal of International Women's Studies*, *26*(3), 6. https://vc.bridgew.edu/jiws/vol26/iss3/6/

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Presentations at conferences

Jose, P. (2023). Slippery terrains of Science and Sexual morality: Exploring the frequent departures from 'medico to socio-cultural moral grounds in higher-secondary biology classroom discourse. Paper presented at the 9th World Conference on Women's Studies (WCWS 2023), Bangkok, Thailand.

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Chapter 1

1.1 Motivation: The stapled pages

My interest in sexuality and its societal acceptance comes from retrospectively reflecting on my high school days, particularly the biology classes. The textbook chapters on Reproduction and Anatomy left us students more confused than providing answers to our questions. Now, I can think of many reasons for the pervasive confusion, such as the inane scientific jargon and representations, the cultural taboos around sexuality and the inhibitions of the teacher to talk about these topics, asymmetrical knowledge access between boys and girls, and so on. This is not my story alone, as I have heard similar stories from many. A colleague once narrated how her school had stapled together the pages of the chapter on Reproduction and Anatomy before distributing the textbooks, effectively censoring the textbook. When the school found out that students tried to peep through the gaps and read or steal a look, they glued the pages together.

Why were those pages stapled? Why did the students peep into the pages despite knowing that it is prohibited? These are some of the questions which motivated me towards this research. In this context, I am interested to know whether such reticence on the part of school authorities and teachers has diminished over these years. If yes, then how do teachers discuss sexuality with their students and how do schools address issues around sexuality?

1.2 Introduction

I begin this chapter by expanding on two fundamental concepts that underpin the thesis-sexuality and subjectivities.

1.2.1 Conceptualising Sexuality

It is difficult to fully grasp the scope of all that the concept of sexuality encompasses. For the purpose of this thesis, I refer to the definition provided by the World Health Organization (WHO, 2006a). The choice of using the definition of sexuality provided by WHO is partly grounded in the influential (or authoritative) role that WHO plays in global health policy-

making. As an entity of the United Nations, the WHO's definitions and guidelines have the potential to significantly impact policy decisions at both international and national levels, including in the field of education. More importantly, this definition provided by WHO emphasises the importance of understanding sexuality in its broader complexity for the development of informed, effective, and inclusive educational policies.

"...a central aspect of being human throughout life encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors."

(WHO, 2006a)

Sexuality is conceptualised not just as a series of physical actions or attractions, but as an integral aspect of our human experience. Sexuality encompasses various aspects of human experiences including our biological sex, the gender identities and roles we adopt or are assigned, our sexual orientation which guides who we are attracted to, and aspects of eroticism that include our sexual fantasies and desires.

Furthermore, sexuality encompasses the pursuit of pleasure, the intimacy we share with others, and our capacity for reproduction. The ways in which we experience and express our sexuality are diverse, manifesting in our thoughts, fantasies, desires, beliefs, attitudes, values, and behaviours. These expressions are also evident in the practices we engage in, the roles we play in our relationships, and the nature of those relationships themselves. While sexuality includes all these dimensions, individuals may not experience or express each and every aspect.

The formation and expression of sexuality are not isolated phenomena. Instead, they are shaped by various factors that range from biological and psychological to broader societal influences such as personal experiences, social norms, economic conditions, political climates, cultural beliefs, legal frameworks, historical contexts, and religious and spiritual beliefs. It surpasses the boundaries of age, health, and physical capacity (Higgins & Hynes, 2018).

Expanding on the concept of sexuality, we can see that it is not a fixed or static entity but rather a dynamic and fluid one that evolves over time and can be influenced by various internal and external factors. The meaning of sexuality is not uniform across different cultures, societies, or historical periods. Cultural beliefs, values, and norms often shape how individuals perceive and express their sexuality. It is also essential to acknowledge the intersectionality of various aspects of one's identity such as race, gender, age, ability status, sexual orientation, etc., which can influence how an individual perceives and expresses their sexuality. Political, cultural, and legal factors also exert a profound influence on sexuality by shaping the policies, norms, and laws that govern sexual behaviour and rights. Historical contexts provide insight into how perceptions of sexuality have evolved over time, while religious and spiritual beliefs offer varied perspectives on sexuality, often dictating moral standards and practices.

1.2.2 Subjectivities: The process of becoming and being within the socio-political context

Subjectivities refer to the unique ways in which individuals construct and experience their own sense of self, shaped by various social, economic, cultural, and historical factors (Bazzul, 2013). This understanding, acknowledges that we are constantly negotiating our identities and positioning ourselves within different social contexts.

In this thesis, I draw upon the works of Bazzul (2016; 2013) and Blackman et al. (2008) to present a relational perspective on subjectivity. This perspective emphasises that subjectivities are not fixed or stable categories but rather fluid and dynamic processes of self-construction and negotiation. Bazzul (2016; 2013) articulates subjectivity as comprising a spectrum of beliefs, attitudes, orientations, and subconscious tendencies that individuals hold, with no singular correct perspective or foundational truth in reality. Instead, it is viewed as contested sites constantly being moulded by the social order. This understanding highlights the possibility for individuals to think and act differently. Drawing upon Michel Foucault, Louis Althusser, and Judith Butler, Bazzul emphasises the utility of analysing how specific subjectivities are formed through discourse and practices to understand the workings of oppressive social institutions and networks.

Bazzul explains that subjectivities are shaped by various factors, including ideological state apparatuses, such as educational institutions, which play an important role in the formation of subjects by imbuing them with certain ideologies under the notion of neutrality or 'naturalness.' This process of subject formation is complicated as individuals are always already subjects before they become aware of their subjectivity due to the deep-rooted influence of societal norms and power structures on personal identity. Subjectivity is continually produced and reproduced through the practices and actions individuals engage in, which are themselves informed by the prevailing discourses. The power produces subjects who are free to act within the confines of the discourse that constitutes them.

Blackman et al. (2008) complement this understanding by conceptualising subjectivity as an outcome of the intricate processes and structures of human experience. Blackman et al. (2008) refer to subjectivities as experiences that are produced through social, cultural, historical, and material processes. They emphasise that subjectivity is not an individualistic or essentialist concept but rather a relational one that emerges from interactions with others and the world around us. Subjectivity is shaped by power relations, discourses, and ideologies, which can constrain or enable our experiences of being human. Subjectivities are fluid and dynamic, constantly shifting and evolving in response to changing circumstances. This fluid conception of subjectivity allows for the possibility of change and resistance against oppressive social norms and ideologies, providing a pathway for individuals to reconceptualise their sense of self in more empowering ways.

By acknowledging the historical specificity of subjectivities, the thesis understands that how people make sense of themselves and their roles in society cannot be separated from the broader context of their lives. This includes the prevailing (or accessible) ideologies, power structures, economic conditions, and cultural norms that define their environment. These factors collectively contribute to the formation of subjectivities, making them inherently contingent—dependent on and variable according to—the particular socio-political circumstances surrounding individuals.

Throughout this thesis, I explore how broader social structures and power dynamics actively try to constitute sexual subjectivities and how different individuals, groups/communities construct and negotiate their own subjectivities within the power structure. This approach aligns with the relational understanding of subjectivity that prioritises interactions between

individuals and their environments, as well as the role of power relations and discourse in shaping subjectivities. By examining how subjectivities are formed, maintained, and transformed, we can gain insights into the mechanisms of social transformation as pointed out by Blackman et al. (2008). This perspective also highlights the importance of engaging with our own constituted selves and the need to critically examine how our fundamental views of what can be done or thought are formed by power relations, discourse, and ideology.

1.3 Understanding the Discourse: A Review of Background Literature

I will now proceed to review and map out key literature that addresses various aspects critical to this thesis, thereby laying the groundwork for understanding the issue at hand. This includes an examination of existing research on childhood sexuality, followed by an exploration of the reasons behind the perception of sexuality as shameful. Additionally, I will explore how educational institutions contribute to the formation or shaping of sexuality. Finally, the last section will investigate the intersection of scientific discourses on sexuality with caste, race, and other dimensions of social identity.

1.3.1 Conceptualisations of childhood sexuality

Heteropatriarchy significantly shapes the framework within which social, cultural, and economic interactions are constructed and perpetuated. This system of power deeply influences our day-to-day lives and determines our positions within the hierarchy of gender and sexuality. The societal norms and agreements delineate the boundaries of acceptable and unacceptable forms of sexuality, largely shaped by the prevailing cultural, political, and historical contexts (Devika, 2009; Tambe et al., 2000). These norms not only regulate individual behaviours but also reinforce the dominant power structures, often marginalising non-conforming sexual identities and expressions.

In this context, it is important to note that the concept of childhood and societal understanding of what constitutes a child are not universally defined but rather vary significantly across different cultures and societies. Caste, race, class, and gender have emerged as the primary dimensions around which mechanisms of regulation, management, and social surveillance are most consistently oriented. These dimensions have undeniably been central to the structuring of sexuality in societies, influencing how sexual norms and

behaviours are perceived, legislated, and policed. However, it's crucial to recognize that another dimension—age—plays an equally critical role in the regulatory landscape (Egan & Hawkes, 2008a). The discourse surrounding childhood sexuality is invariably shaped and constrained by the intersections of caste, race, class, and gender, revealing age as a powerful axis of social control. Thus, the notion of childhood is shaped by cultural perception as well as by broader socio-political and economic contexts that define societal norms and values, as highlighted by Kehily & Montgomery (2009) and Norozi & Moen (2016). This intersectional framing underscores how childhood sexuality does not exist in a vacuum but is deeply influenced by societal structures and inequalities. The way children's sexuality is constructed and responded to often reflects broader social hierarchies and power dynamics.

Thus examining how societies conceptualise childhood, including childhood sexuality, is crucial for understanding social and political hierarchies that govern societal behaviour and identity formation. It offers insights into mechanisms of power and domination that structure societal relations and dictate acceptable behaviour and identity parameters. This exploration sheds light on the dynamics of power and oppression, as well as broader societal structures that shape our collective and individual experiences.

Child development theories, such as those proposed by Jean Piaget, have historically framed the understanding of children's growth as a linear and universal progression through a series of biologically predetermined stages, closely tied to their age. These theories suggest that all children, regardless of their individual differences, cultural backgrounds, or unique experiences, follow the same path of development (Qamar, 2021; Robinson, 2012). According to Piaget's theory of development, children's intellectual growth is marked by four distinct stages: the sensorimotor stage, the preoperational stage, the concrete operational stage, and the formal operational stage. Each stage represents a significant leap in cognitive abilities, indicating a more sophisticated level of reasoning and understanding as the child ages (McLeod, 2007).

This perspective implies that children's ability to comprehend the world around them, including complex concepts such as morality, identity, and sexuality, is strictly limited by their developmental stage. As a result, certain topics, especially those deemed complex or sensitive, are often considered inappropriate for discussion with children until they reach a specific age or developmental milestone.

Social construction theories around childhood criticise this approach for not only underestimating children's capacity for comprehension and critical thinking but also reinforcing a homogenised view of childhood that fails to account for the vast diversity in children's experiences and learning capabilities. Social construction theories of childhood understand childhood as a category constructed around puberty and social meanings such as dependency, school completion, and age of marriage (Norozi & Moen, 2016). Norozi and Moen emphasise that childhood is not a fixed or inherent stage of life but is shaped by societal beliefs, values, and practices. This construct differs not only across different societies but also within the same society, influenced by social factors like gender and class.

Definition of infancy in India extends beyond the early years to encompass the first four or five years of life (Kakar, 1978). During this period, the child develops a deep attachment to the mother and relies on her for both necessities and emotional comfort. This prolonged infancy influences the subsequent stages of development, where the child gradually moves away from the mother and forms other significant relationships. Kakar notes that the mother-infant relationship (dyad) forms the basis for all subsequent social interactions and is central to the development of an individual's capacity to relate to others and to love. The child's first relationship with the mother affects the quality and dynamics of the social relations throughout life. This early bond is where a person first learns to interact with the "Other" and develops social and emotional capacities. Kakar writes about the socialisation of children within the traditional Hindu extended families and its influence on the child's development. The extended family is typically hierarchical, with the eldest male (father or grandfather) holding the primary authority. This structure affects the child's perception of authority and obedience, shaping future interactions outside the family. The extended family plays a crucial role in preserving cultural traditions and rituals. Children learn cultural norms, values, and practices through direct participation in family activities and observances. Even when the nuclear families have taken over joint families, yet social 'jointness' often remains intact, with family members maintaining strong connections and mutual support. Thus the cultural ideal of the extended family continues to influence social expectations and family dynamics within society.

Qamar (2012) sheds light on the varied and layered understanding of childhood in Pakistan. Through his research, Qamar reveals how children are viewed differently, ranging from being

considered individuals who require guidance and protection to being recognized as autonomous social agents. It is evident that the perception of a child is not solely determined by chronological age but rather influenced by various social, cultural, and historical factors. Qamar's study identifies four primary (sometimes contradictory) theoretical themes in the conceptualization of children:

- Human Becoming: This category includes views of the child as physically immature, passive, and inexperienced, emphasising a developmental perspective where children are seen as evolving towards adulthood.
- Human Being: This category recognizes children as active, agentic, and competent beings with their own social roles and contributions.
- Evil Child: Captures a more negative perception, associating children with traits that require adult correction or discipline.
- Innocent Child: Idealizes childhood as a state of purity and vulnerability, necessitating adult protection and care.

Qamar through this study points out the importance of exploring how children are conceptualised in various cultures and contexts, challenging universal definitions or understanding of childhood.

Faulkner (2013) explores the cultural construction of childhood innocence and its implications on societal perceptions and treatment of children. Faulkner argues that the concept of childhood innocence, while aimed at protecting children, paradoxically heightens their vulnerability by casting them in roles that serve adult needs and fantasies rather than the children's actual well-being. This construction of innocence creates a dichotomy where children are either seen as pure and in need of protection or, when they deviate from this idealised innocence, as threats to the moral fabric of society. For instance, children who do not conform to the idealised standards of innocence—such as those living in poverty, suffering abuse, or belonging to marginalised groups—are often excluded, vilified, or demonised.

As mentioned above, not all childhood is conceptualised in the same way. Burman's (1994) analysis explores how the West conceives of children in the context of emergencies within the third world, particularly highlighting how the portrayal of children from the South as

vulnerable and in need of rescue reinforces paternalistic relations between the Global North and South. This cast the South in an infantilized role that legitimised intervention and aid from the North. Through the exploration of media coverage of disasters, Burman notes how these images both evoke identification with suffering children and employ strategies to protect viewers from the anxiety such identification brings. By examining the gendered and geographical distribution of qualities of innocence and experience through various images within the former Yugoslavia, Burman sheds light on the dehumanisation of children, their families, and cultures through these portrayals. Further, Burman critiques dominant models of childhood in the North as a modern and Western construction, emphasising their historical novelty and implications for representations of children in humanitarian efforts.

The way a society views childhood is deeply contingent upon its core values, beliefs, and norms, which collectively shape the societal understanding and treatment of children. This extends to how societies view the childhood of those in different communities, particularly when cultural, economic, or political relations come into play. The relationship between societies, whether marked by power imbalances, historical ties, or economic dependencies, can significantly affect how the childhoods of different communities are perceived, valued, and supported.

Sexual maturation is often considered as the distinguishing factor between a child and an adult. Sexuality thus becomes the exclusive domain of adults, where children are not permitted. Thus children who have acquired sexual knowledge beyond their age are put outside the category of children because of the "abnormal development". Adults decide what is appropriate for children: how children should behave, what they can know, when they can know and so on. Foucault (1990, p. 153) writes: "In the sexualisation of childhood, there was formed the idea of sex that was both present (from the evidence of anatomy) and absent (from the standpoint of physiology), present too if one considered its activity and deficient if one referred to its reproductive finality; or again, actual in its manifestations, but hidden in its eventual effects whose pathological seriousness would only become apparent later".

Thus, the intersection of childhood and sexuality is contested and complex. The predominant constructs of childhood innocence and moral panic used in the control and regulation of childhood sexuality are discussed below. Children in relation to sexuality are conceptualised in varied ways in the Western world: as innocents who need to be protected, as objects to be

monitored, or as prurient beings who need to be controlled (Egan & Hawkes, 2008a). Various social purity and hygiene movements led to the construction of the child as born pure but susceptible to the corrupting influences of evil companions (Egan and Hawkes, 2008b). This discourse of the "innocent child" suggests that if parents can protect their children from "evil companions" the sexual development of their child will lead to a desired, normal, monogamous, heterosexual end. However, if parents fail, the child could become involved in sexually deviant behaviour.

The notion of innocence leads to ignorance and dismissal of the child's account of their experiences (Bhana, 2007a). The "innocence" discourse arises from societal fears and anxieties. Children can be easily monitored, controlled, and shaped; hence, the larger discourse converges onto the child for a "pure and civilised" future. Such discourses construct the child as simultaneously endangered and dangerous—necessitating safeguarding while being considered a threat once sexualized. This paradoxical logic facilitates the demarcation of childhood sexuality as different from adulthood, thereby legitimising various interventions under the name of protection and best interest. When children's desires or behaviours diverge from adult constructions, they are often attributed to external corrupting influences, further entrenching the narrative that childhood sexuality, once activated, poses a risk to the social order. Thus, all childhood experiences are hetero normalised to make future heteronormative adults (Egan & Hawkes, 2008, b). This conception of sexuality makes it essential to separate children from adults, younger from older, lower class from middle class, and school-going children from those who are in inappropriate institutions (Foucault, 1986 as cited in Deacon, 2006). This also led to discriminating against students based on their "morality".

Robinson (1970) discusses the concept of "difficult citizenship" for children, particularly in the context of sexual citizenship. Robinson argues that the dominant societal view of children as citizens "in potentia" rather than as current citizens with rights, including the right to knowledge about sexuality, severely limits their participation in societal, political, and economic arenas. This regulation is rooted in the desire to maintain a heteronormative social order, with children's education playing a crucial role in developing the "good" future citizen. According to Robinson, the discourse of "child innocence and protection" aims to create a moral panic to regulate and control sexuality. Hier (2008, p 173) defines moral panic as: "Irrational and disproportionate societal reactions to the exaggerated threat posed by some

person or group of people". Key attributes of moral panic, as described by Goode and Ben-Yehuda (2012), are concern, hostility, consensus (about the existence and serious nature of the threat), disproportion (exaggerated threat), and volatility.

Moral panic serves two purposes: reasserting the adult-child power hierarchy and heteronormative morals (Robinson, 1970). It calls for protecting the child from the "folk devil" – the sexual child, the homosexual predator, and sources of sexual information (Robinson, 1970). The category of folk devil is similar to what Devika (2015) calls "apadhasanchaarikal", a word in Malayalam which refers to people who refuse to take the path which others think is right. The sexual child refers to both: the one with sexual knowledge and the one with sexual behaviour. Moore and Reynolds (2017) talk about how the "masturbating child" comes under surveillance and is subjected to various corrective "anti-masturbating techniques". Mobile phones and technology are new additions to the "folk devil's" list. A blanket ban on phones in schools and colleges has become a norm in many parts of India. The moral panic and anxiety over the corrupting influence of the "dangerous technology" on youth, particularly young women, necessitates its censorship, ban, and surveillance (Rao & Lingam, 2021).

Bhana (2007a, 2007b) challenges the myth of childhood sexual innocence, arguing it perpetuates adult authority by associating innocence with purity and viewing sexual knowledge as a threat. She critiques the gendered notion of innocence, especially for girls, seen as passive victims and eroticized through virginity discourses. Erricker (2003) suggests that conceptualising children as blank slates facilitates adult control, hindering children's ability to process their experiences and leading to their experiences being dismissed or ignored.

However, as Jarkovska and Lamb (2018) point out, critiquing the notion of innocence should not downplay children's need for protection from exploitation by adults and the harmful sexist stereotyped notions of sexuality. Shifting focus to the concept of vulnerability will aid in understanding children's needs at various stages of their development, the role of social identity in making some children more vulnerable, and help decriminalise children's sexuality. There is also a need for reframing vulnerability and addressing it through mechanisms other than policing, surveillance, and punishments (Meiners, 2017). A vulnerability-centred approach acknowledges how various factors related to social identity—

including race, class, and gender—can exacerbate a child's susceptibility to harm and exploitation (Jarkovska & Lamb, 2018). Moreover, a vulnerability-centred discourse serves an important function in challenging and ultimately decriminalising children's sexuality. It allows for a more compassionate and informed engagement with children's sexual development, recognizing it as a natural part of their growth rather than a taboo subject. This shift encourages a protective environment that respects children's rights and dignity, fostering conditions that support their healthy development free from stigma and criminalization.

1.3.2 Moulding Childhood Sexuality

As mentioned previously, sexuality is perceived and permitted differently in different cultures. For instance, medieval European royals and upper classes assumed that children mature sexually at around the age of twelve. Hence, marriage in these groups occurred around that age while other classes married later (Kehily & Montgomery, 2009). The strict restriction of sexual knowledge was also class-specific. Unlike the middle class, children from low-income families likely to rest in common sleeping areas were more aware of sexual activity and the adult body's anatomical features (Kehily & Montgomery, 2009).

In India, the establishment of the legal age for sexual maturity has been significantly shaped by both colonial and postcolonial narratives, coupled with the impacts of intergovernmental and transnational dialogues (Tambe, 2019). These discussions have extensively focused on issues such as child marriage, efforts towards population control, and concerns about upholding the nation's moral standing on the global stage. As detailed by Tambe (2019), this legal age benchmark reflects not merely a response to domestic societal norms but also India's engagement with international expectations and conventions regarding child rights and welfare. Consequently, the setting of this legal threshold encapsulates a historical continuum of shifting perspectives, from colonial legacies to contemporary global discourses, revealing how legal frameworks for sexual maturity are deeply embedded within broader socio-political and cultural contexts. For instance, in the late 1800s and early 1900s, Age of Consent Act (1891) caused conflict between colonial officials and Indian nationalists (Heimsath, 1962 as cited in Desai & Andrist, 2010). This act set the minimum age for a bride to be considered "consenting" at just 12 years old. Nationalist leaders saw this and its subsequent amendment (the Sharda Act of 1929, raising the minimum age to 14 for girls and 18 for boys) as attacks on Indian cultural values and religious autonomy. These laws led to

significant protests that were part of a larger critique of colonial rule for undermining India's social and cultural traditions. This legislative issue was intertwined with debates about the idealised Indian woman versus her portrayal in Western and colonial discourse as oppressed and subjugated. Over time, various religious laws, including the Hindu Marriage Act of 1955 and the Special Marriage Act of 1954, were amended to increase the legal age of marriage to 21 for males and 18 for females (Verma, 2017). Despite these changes in Hindu, Parsi, and Christian laws, Muslim law remains largely uncodified, relying on interpretations that consider puberty as the marker for marriage eligibility, which can be as early as 15 years for boys and girls. This was further revised by the Prohibition of Child Marriage Act (2006) to 18 for girls and 21 for boys across all religions. In 2021, the Government proposed 'the Prohibition of Child Marriage (Amendment) Bill, 2021' to the parliament, aimed at increasing the legal marriage age for women to 21 years, thereby equalizing it with the age requirement for men (Government of India, Ministry of Women and Child Development, 2023). However, the decision on this bill is still pending.

An increase in the legal age of consent also restricted sexual exploration and access to reproductive and sexual healthcare for adolescents (Pitre & Lingam, 2021). The compulsory reporting of sexual activities by different institutions escalated familial control while reinforcing the traditionalist marriage norms. The discourse surrounding the sexual maturation of girls occupies a crucial role and highlights how the legal age of sexual consent involves broader implications beyond mere autonomy into the realms of pregnancy and motherhood, as pointed out by Tambe (2019). This legal definition not only marks a threshold for sexual activity but also intersects with societal expectations around female reproductive roles and signals a transition into adulthood with significant social and personal responsibilities. Furthermore, Tambe underscores that the debate over these standards of sexual maturity has historically been more variable and contentious for girls than for boys, reflecting deep-seated societal concerns and norms about female sexuality and protection.

Menarche is widely regarded as a key indicator of sexual maturation in girls, marking their eligibility for marriage in many cultures (Field & Ambrus, 2008; Dharmalingam, 1994). Menarche is not only a biological milestone but also a socio-cultural event that signifies a girl's readiness for marriage and subsequent roles in a patriarchal society. This transition is marked by elaborate ceremonies that serve multiple purposes: they reinforce kinship ties, display the family's social and economic status, and, importantly, underscore the girl's

transition into a realm where her identity is significantly shaped by marital and maternal expectations (Dharmalingam, 1994). These ceremonies, while celebratory, also act as mechanisms through which the subordinate position of women is both highlighted and perpetuated. This period sees families becoming more involved in overseeing their daughters' sexuality, leading to reduced freedom of movement for the girls, stricter supervision of their interactions with boys, and increased escorting by family members (Abraham, 2001). Girls, regardless of age, are advised to maintain distance from boys, reflecting a broader societal effort to safeguard their sexuality and the family's honour. This control extends beyond family, with teachers, relatives, neighbours, and friends also playing roles in monitoring girls' behaviour.

Renold and Ringrose (2011) also point out this discrepancy in how society regulates the sexuality of girls compared to boys and illustrates that to control sexual behaviour, society imposes strict moral boundaries around girls, but not boys. This approach leads to the creation of sexual double standards, where the sexualisation of girls and the restrictions placed upon their sexuality compel them to adhere to certain prescribed sexual scripts and portrayals (Ringrose & Renold, 2012). Such standards not only dictate how girls should navigate their sexuality but also contribute to a culture where girls' bodies and sexual expressions are often viewed through a lens of shame, rather than being celebrated as aspects of their empowerment. This dichotomy underscores a broader societal issue where the autonomy and agency of girls are undermined, and their sexualities are policed, reflecting deep-rooted gender biases and inequalities. Tolman (2006) discusses how the societal forces of hegemonic masculinity and homophobia drive both boys and girls towards embodying compulsory heteronormativity across various domains, including institutional frameworks, cultural traditions, personal beliefs, and everyday interactions. This dynamic forces girls to internalise the male gaze, leading them to suppress their own desires and emotions to protect themselves from the boys adhering to hegemonic masculinity norms. Consequently, girls often find themselves adopting behaviours associated with hegemonic femininity, conforming to traditional feminine roles and expectations as a strategy to navigate the gendered landscape. This process not only perpetuates gender norms but also reinforces the cycle of gendered expectations and behaviours.

1.3.3 Understanding the Challenge: Shame and the Silence around sexuality

This section explores the relationship between sexuality and shame and discusses how societal perceptions and cultural norms significantly impact individuals' understanding and expression of sexualities. The section discusses the role of shame in mediating the public discourse on sexuality, which is often stigmatised as both sinful and shameful leading to a reluctance to engage in open discussions about sexual desires and experiences. The suppression of sexuality, deeply rooted in cultural and social constructs, results in individuals concealing their sexual identities and further adds to the tension between desire and societal prohibition.

Shame plays a crucial role in both individual and social development, acting as a regulatory mechanism that guides behaviour and social interaction. Mollon (2005) and Lansky (2015) provide insights into the underlying causes of fear and shame associated with sexuality. Mollon reflects on Freud's observation that sexuality, while central to the human condition, often finds itself at odds with the constructs of civilization. This conflict, Mollon suggests, illuminates the nature of our linguistic culture and the fetishistic essence of human sexuality, positioning it as a primary object of shame and repression. Mollon highlights why sexuality often evokes shame due to its disruptive nature in both sexual and non-sexual contexts. He argues that this discomfort stems from the threat sexuality poses to symbolic socio-cultural constructs and personal identity, suggesting that the development of symbolic culture may have necessitated the suppression of sexuality. This repression fosters the creation of symbols and thus, sexuality remains indirectly referenced, reinforcing its position as the object of repression. Thus, sexuality's repression is intricately tied to the formation of language and culture, with sexual desires and acts becoming heavily coded and symbolic. He suggests that the tension between the rawness of sexuality and the structured realm of language and culture is a fundamental human dilemma. Lansky further explores the affective state of shame and how the fear of encountering shame (whether it stems from past events or the anxiety over future possibilities) significantly limits individuals' capacity to freely express their sexual identities and preferences. Individuals might thus find themselves in a state of self-censorship, where the prospect of societal condemnation or self-judgement for deviating from accepted sexual norms becomes a pressing concern.

Shadbolt (2008) examines how childhood and adolescent experiences shape adult sexuality. As children grow and discover their bodies, touch initially brings them pleasure and wonder. However, as they transition to recognising touch as a means of expressing and eliciting sexual desire, societal and familial boundaries introduce shame, causing a pivotal shift in their understanding of themselves and their desires. This shift is often triggered by sudden rejections or negative reactions to their natural exploratory actions, which were previously unproblematic. These experiences complicate the developmental trajectory as children become more aware of their own bodies and those of others while also grappling with societal messages that frame sexual expression as something to be hidden or problematic. This internal conflict is intensified by the cultural and relational context in which it occurs, highlighting how external prohibitions can clash with a child's innate curiosity and sense of self. Ultimately, these moments shape a child's perception of themselves and their sexuality, emphasising the profound impact that societal messages and familial boundaries can have on individual development.

Resneck-Sannes (1991) delves into the gender-specific aspects of shame, highlighting the intensified experience of shame for women due to societal norms and cultural expectations related to body image, sexuality, and maternal roles. This experience is rooted in societal expectations around femininity and sexual purity, affecting women's personal identity, societal perception, and self-view. Elise's work (2008) suggests that an internalised belief in their genital inadequacy leads girls to suppress not only their sexuality but broader aspects of their identities. This suppression is magnified by societal norms that favour male sexual autonomy, contributing to a widespread sense of inadequacy among women. The societal backdrop significantly influences women's internal feelings of inadequacy, driving them to minimise or deny their desires and goals in various life aspects. This internalised belief system results in patterns of inhibition, self-censorship, and reduced agency as a defence against fear of judgement, rejection, or additional internal conflicts.

Riezler (1943) expands the discussion of shame beyond sexual behaviour to include non-sexual aspects of life, noting that shame serves to protect and conceal, guarding personal and social vulnerabilities. He points out that while the triggers for shame may vary globally, the core feeling of shame is present across different cultures.

The notion of shame and embarrassment prevents adults from engaging in the conversation around sexuality, particularly with children. Stone et al. (2013) identify parental shame as a significant barrier to open discussions about sexual health with young children. This shame is not only due to the sexual content itself but is also embedded in a wider societal context where such discussions are stigmatised. Parents' awareness of societal norms and the appropriateness of sexual knowledge at various ages of the child heightens their fear of transgressing these norms, making it difficult for them to have open discussions about sexuality. Concerns about being judged or criticised by others, including peers, partners, and the broader community intensify the shame experienced.

Thus shame does not only act as a mechanism that represses the expression of sexuality, but it obstructs the discourse surrounding sexuality itself. This obstruction is multifaceted, affecting not just individuals on a personal level but also shaping the societal and cultural conversations about sexual health, identity, and norms. The pervasive nature of shame in relation to sexuality creates a silence around the topic, leading to a lack of open, honest discussions that could foster understanding, acceptance, and healthy sexual behaviours. Instead, the cycle of shame contributes to misunderstanding, fear, and ultimately, the continued stigmatisation of sexual expression and exploration.

1.3.4 School and sexuality

Education decisions and choices are often influenced by concerns over marriage, work, and gendered norms of conduct. Goswami's (2015) study in rural Assam, shows that apart from cost, considerations of school proximity, security, and discipline play a crucial role in choosing high schools for children, especially daughters. The study discusses how the socio-economic status of families, along with community-specific gender norms, shape decisions about schooling. For instance, in many cases, girls rather than boys are sent to higher-cost private schools as a reflection of family strategies aimed at ensuring their safety and adherence to societal norms of femininity and modesty. Thus, the discourse around sexuality plays an important role even in the choice of school.

The following section will explore how within the school, different discourses on sexuality play to constitute specific subjects.

a) Sexuality Discourse and the Unspoken Curriculum

Schools have become an important site for managing and manipulating children's sexuality and bodies. Through various discourses and events, schools play a prominent role in shaping children's cultural and sexual/gender identity (Mac an Ghaill, 1996; Skeggs, 1991). Normalised identities are often celebrated in schools, demonstrating the intersection with power. The hidden curriculum consists of the subtle ways that formal education conveys certain values, ideas, and worldviews. It covers everything from educational materials to teaching methods and school structures, which together promote the views and norms of dominant groups, including specific classes, genders, and cultures, often sidelining alternative viewpoints and beliefs (Speirs, 2021).

Paechter (2007) illustrates how schools, as modernist institutions, prioritise rational thought and intellectual development while sidelining the physical aspects of students' identities and their desires. This emphasis on the mind over the body manifests in the way schools organise space and control behaviours, thereby influencing students' understanding and expression of sexuality. The architectural segregation, such as separate bathrooms and changing areas for boys and girls, serve as an early lesson in maintaining a physical divide between genders, reinforcing the notion that male and female bodies should be kept apart. Furthermore, schools actively monitor and regulate romantic interactions among students, employing various structural mechanisms to oversee and control these relationships. This regulatory environment highlights the school's role in shaping students' perceptions of gender and sexuality, enforcing a disciplined approach to bodily autonomy and expression within educational settings.

Chacko (2021), in her study about the Police Cadet Program in Keralam, explores the interconnectedness of gender, clothing, and empowerment. She begins by discussing the politics of uniforms within the broader discourse of gendered appearances and points out that uniforms can both obscure and accentuate differences, thereby playing a crucial role in the social construction of gender identities.

In their examination of school dynamics, Epstein et al. (2001) explore the construction of femininities and masculinities within the context of the school playground. The playground emerges not only as a space for friendship but also as a battleground for harassment,

domination, and bullying. The physical layout and location of the playground significantly influence the gendered distribution of power. The study reveals that boys who excel in or show a preference for football and physical confrontations assert dominance over both girls and less athletically inclined boys, using these activities as a means to affirm their masculinity. Interestingly, the study notes a shift in participation dynamics when female teachers organise football activities, leading to increased participation among girls and prompting boys to seek alternative activities, thereby altering the traditional gendered power dynamics on the playground.

Masculine and feminine sexualities operate differently, allowing students to take up their roles – the powerless and those with power (Skeggs,1991). Skeggs, through ethnographic research within the context of Further Education among white working-class women enrolled in 'caring' courses, highlights how masculinity is embedded within the educational system through the internal discourses present. Specifically, Skeggs showcases how male teachers are able to exert control over female students by sexualising certain situations. This reinforces and perpetuates masculine dominance while subjugating feminine subordination. Skeggs highlights how discourses surrounding familialism, biological reproduction, and hygiene play a significant role in shaping and reinforcing normative masculinity within educational settings. These discourses create a set of expectations for behaviour, appearance, and attitudes towards learning that align with masculine identity, thus marginalising female students and their experiences. For instance, schools promote a series of masculine behaviours that boys are encouraged to adopt. These behaviours include actions that contribute to the oppression of female students, including sexual intimidation. A camaraderie among boys is developed in this context. Similarly, within the schools, both overt and symbolic forms of violence are normalised and even sanctioned. Schools become sites where various masculinities fight for dominance, with the institutional framework privileging some masculinities over others, influenced by class and race. Additionally, the curriculum is designed to signal to students the gender appropriateness of certain subjects, reinforcing gender-specific expectations and roles. This institutionalisation of masculinity within educational discourse also manifests in the curriculum and pedagogical practices, which often prioritise masculine-coded knowledge and values, marginalising or devaluing feminine-coded knowledge and experiences. Moreover, Skeggs notes that sexuality is frequently present within classroom interactions which functions both as a means for male students to assert

their power and authority, as well as a tactical resource utilised by female students to challenge this dominance.

Dunne (2007a; 2007b) analysed the primarily focusing on students' duties, disciplinary practices, class text representations of gender and sexuality, and how these contribute to heteronormativity. The study uncovered gender segregation in school spaces with boys dominating physical and verbal areas while girls were relegated to traditional female spaces. Boys generally performed better in sciences and technical subjects while girls excelled in languages and traditionally feminine subjects. Subject choices and teacher assignments often aligned with gender stereotypes, and despite any national performance trends, teachers frequently used negative comparisons to motivate boys (statements like 'even the girls can do it better than that'), suggesting a deep-rooted bias in pedagogical approaches. The study also highlighted the normalisation of control and coercion through acts of physical and symbolic violence, with boys experiencing more corporal punishment but girls facing sexual harassment and intimidation.

Likewise, Mac an Ghaill (1996) argues that schools function to prepare students for the sexual division of labour in domestic and workspace situations through the discursive practice of classroom, staffroom, and playground micro-culture; offering hierarchically ordered heterosexual masculinity and femininity to the students. Dunne (2007a) also writes about gender-segregated school duties, where leadership roles and responsibilities are typically divided along gender lines, often placing males in positions of authority and relegating females to more domestic tasks.

Pascoe (2005) explores the construction of masculinity among teenage boys in high school, particularly focusing on the role and perception of athletes or "Jocks" within this social context. The study reveals that even boys not categorised as "Jocks" engage in various strategies to align themselves with masculine ideals, often by redefining group membership and masculinity itself to include traits associated with "Jocks" like competence, heterosexual success, and dominance. The study shows how boys' sense of self and masculinity is shaped by their social positioning and individual actions within the school's gender order. Boys use sports participation, engagement in drama or music, and their approach to relationships with peers and girls to negotiate their masculinity. Boys construct masculine identities by negating homosexuality and femininity and by performing sexist heterosexuality. They assert their

masculinity through homophobic teasing and jokes to deny the masculinity of others. These dynamics underscore the fluidity and complexity of masculine identities among adolescents and illustrate how broader societal and cultural shifts, including the influence of feminist movements and changing gender norms, impact boys' experiences and understanding of masculinity during their formative years.

Further, the physical and symbolic structure of the school disciplines and regulates students' sexuality and sexual expression. Allen (2007) elaborates on the way the "official culture" of the school regulates and allows only a particular "non-sexual" identity for the students. The protective discourse and the emphasis on sexual risk are often aimed at taking away sexual agency from students. All other discourses of desire which can "eroticise" students are banned from school.

Thus, in educational institutions, despite the evident gender-based dynamics and structures present, there is a widespread indifference or lack of attention towards gender-specific issues, termed "official gender blindness" (Dunne, 2007a; 2007b). This implies that schools, as institutions, fail to recognise or address the ways in which their practices and policies contribute to reinforcing gender stereotypes, discriminating based on gender or perpetuating unequal treatment of students and staff based on their gender.

Many studies have explored the school experiences of individuals with intersex variations, focusing on their upbringing within assigned gender roles and interactions during primary and high school (Jones, 2016; Henningham & Jones, 2021). These studies reveal that many students frequently experience isolation, and lack of friendships, and engage in stigma-driven secrecy, resorting to lying and avoiding questions about their intersex status (Henningham & Jones, 2021). Medical and clinical discourses often portray intersex, which includes more than 40 variations (Bromdal et al. 2017), as a "disorder of sex development," marginalising individuals and threatening their rights to non-discriminatory treatment and empowered selfhood (Jones, 2016). A significant number of intersex students have considered or attempted suicide, as well as dropped out of school (Jones, 2016). Social isolation is common due to the lack of systematic and inclusive approaches in schools to recognise and accommodate intersex diversity, largely influenced by normative messages about the human body.

b) The Fear Tactics and the Invisible Identities in School Sexuality Education

Schools play a pivotal role in imparting knowledge about sexual health, serving as a critical space for both government-led regulation and individuals' self-regulation of their bodies (Harrison & Hillier, 1999). Traditional sexual health education programs have typically relied on instilling fear and highlighting disease risks as their primary tools to encourage safer sexual practices (Goodson et al., 2003; Lesko, 2010). Simoni and Pantalone (2004) point out that many of the programs differ in their understanding of safer sex and lack clear and precise terminologies. Within the school setting, discussions have primarily revolved around addressing concerns like sexually transmitted infections, promiscuity, sexual deviance, and unintended pregnancy, often neglecting the positive aspects of desire and pleasure in human sexuality. Pursuits of desire and pleasure outside of marital contexts have frequently been associated with these problems, leading to messages that downplay sexual pleasure to discourage what may be seen as inappropriate pursuits (Allen, 2004). A more balanced approach to sexual education, one that refrains from instilling fear and guilt regarding sexual feelings and acknowledges both the enjoyment and risks associated with sex, is better suited to meet the needs of learners (Lesko, 2010). However, teachers and curricula often hesitate to present sex as a potentially positive and pleasurable physical experience (Francis & DePalma, 2014).

Hobaica and Kwon (2017) point to the heteronormative bias found in many sexuality education curricula, which fail to address sexual minority identities and the various forms of sexual expression associated with them. This omission can make sexual minority individuals feel invisible, ill-prepared for their own sexual experiences, and burdened by internal feelings of shame. Another study in the Indian context points out that even the comprehensive sexuality program in Indian schools by using ambiguous and abstract language regarding sexuality fails to provide sufficient information about contraception and safer sex practices (Das, 2014). Das argues that this program perpetuates myths and stereotypes by neglecting the needs of diverse communities, including those with different sexual and gender identities and disabilities, exacerbating their marginalisation and discrimination.

Many studies have also focused on examining different sexuality education programmes, their resources and instruction, to ascertain whether or not these are intersex-inclusive; how intersex bodies, people, and experiences are represented; and how the classroom environment

shapes their bodily-being (Sperling, 2021; Lundberg et al., 2021; Bromdal et al., 2017; Bromdal et al., 2021; Das, 2014; Jones, 2016). These studies highlight how these discourses fail to address the harmful practices of the medical establishment in regulating intersex bodies, while also pathologizing intersex bodies and endorsing harmful ideologies. Further, these studies suggest that it is important to move away from the binary notion of body and start to represent and acknowledge the intersex body within schools and textbooks.

c) Sexuality discourse within Science textbooks

Textbooks play a pivotal role in the education system, particularly in India. They serve as the foundation for teaching and are often the only resource that students have (Kumar, 1988). Beyond their educational function, textbooks symbolise bureaucratic control, influencing teaching practices and serving as a gauge of teacher performance within the system's power structure (Kumar, 1988). Numerous studies have critically examined science textbooks, exploring the diverse discourses on sexuality they present. These analyses shed light on the ways in which textbooks construct and communicate ideas about sexuality.

Through the analysis of an Indian school biology textbook, Raveendran and Chunawala (2015) demonstrate how the textbook excludes individuals and bodies outside of binary gender and sexes. They note a lack of recognition for sexual diversity and a definition of reproductive health, focused solely on organ functionality. The use of "normal" to define sexual health serves to exclude and pathologize non-normative sexualities. They state that the textbook also promotes technological solutions for perceived abnormalities by establishing scientific standards based on organ functionality.

Bazzul and Sykes (2011) critically examine the discourses of gender and sexuality within a widely used biology textbook in Ontario schools from a queer perspective. The authors reveal that the textbook perpetuates heteronormative constructions of sexuality alongside rigid sex/gender binaries. Their findings include portraying the male body as standard, comparing female physiological changes to males, framing attraction as purely biological, and describing sexual anatomy in a heterosexually functional manner, with a notable absence of non-heteronormative identities and sexualities. This analysis highlights the textbook's contribution to oppressive misconceptions of sex/gender and sexuality by exclusively promoting heterosexual relationships and distinctly separating male and female biological roles without acknowledging the spectrum of gender identities and sexual orientations.

Nehm and Young (2008) examine the use of the term "sex hormone" in secondary school biology textbooks in the U.S. and its association with concepts of sex dualism. They find that textbooks universally employ the term, inaccurately presenting estrogen and testosterone as restricted to females and males respectively, and discuss these hormones solely in the context of sex-related physiological roles. This perpetuates a model of sex dualism that medical science rejected in the early 20th century.

Snyder and Broadway (2003) investigate representations of non-heterosexual sexuality in American biology textbooks, finding that sexuality is confined to an anatomical and reproductive framework, viewed through a Darwinian lens of reproductive drive. They critique the textbooks for portraying non-procreative sexual behaviours as unnatural and limiting discussions of sexual behaviour to penetrative intercourse. The textbooks rarely mention homosexuality, and when they do, it is almost exclusively in the context of AIDS which further marginalises non-heterosexual orientations.

Reiss (1998) examines UK school science textbooks and evaluates their content based on four main categories. Reiss's discussion on these four themes is summarised below;

- Anatomy: There is a notable disparity in the representation of male and female genitalia, with the clitoris often omitted or minimally described compared to more detailed descriptions of the penis. This contributes to a visibility imbalance between male and female sexual anatomy.
- Puberty: While most textbooks describe the variation in puberty onset ages, there is a lack of personal discussion on menstruation, leaving out important aspects such as emotional changes, which can contribute to students' misconceptions and anxieties. Menstruation is treated purely physiologically without discussing personal experiences, detaching individuals from the process.
- Contraception: The responsibility for contraception is predominantly portrayed as falling on women, with limited discussion on cultural attitudes towards contraception. This perpetuates gender stereotypes and overlooks the shared responsibility in contraceptive practices.

- Sexual Identity and Intercourse: The majority of textbooks assume heterosexuality and do not address homosexual or bisexual orientations which contributes to a lack of representation and potential alienation of LGBTQ+ students. Discussions on sexual intercourse are often clinical, omitting emotional and psychological aspects, which can lead to a skewed understanding of sexual relationships.

All the above studies suggest that such representations in educational materials not only fail to reflect the complexities and diversities of human sexuality but also serve to reinforce societal norms and prejudices. They also emphasise the need for educational content to challenge these biases by presenting a more inclusive and better understanding of sexuality. This call to action is grounded in the belief that science textbooks/science education should critically engage with socio-cultural realities and promote an understanding that respects diversity rather than reinforcing exclusionary norms.

d) Challenges in discussing sexuality: Teachers' perspectives

Numerous studies have explored the readiness, sensitivities, values, and beliefs of teachers, as well as their perceptions of their roles when discussing topics related to sexuality, primarily within the context of sexual health education.

Studies, such as those by Francis and DePalma's (2015), based on interviews with teachers in South Africa, highlight that teachers often teach sexuality education based on their availability rather than their expertise. Despite the lack of specific qualifications, there is a shared belief among teachers that not anybody can teach sexuality and HIV/AIDS education due to its sensitive nature and one needs guts to do that. Teachers feel that teaching sexuality requires a critical consciousness which involves understanding the social forces and structural factors, such as poverty and gender inequality, that influence sexual behaviour and health outcomes.

Bird et al. (2022) further expand on these challenges by exploring the discussions from a symposium at the University of Otago, which brought together educators across disciplines to address the multifaceted nature of teaching reproduction, gender, and sexuality. The challenges highlighted were the difficulty of incorporating biological, political, socio-cultural, psychological, and ethical perspectives, along with the need to adapt to evolving societal attitudes towards gender and sexual diversity. Teachers also face practical difficulties

in integrating indigenous perspectives and acknowledging the bicultural legacy of places like Aotearoa New Zealand, which involves honouring Māori knowledge systems alongside Western views.

Mufune (2008) adds to this by noting the delicate balance teachers must maintain between following the syllabus and managing potentially sensitive topics like love, emotion, and masturbation without provoking parental criticism or straying beyond academic boundaries. The limited teaching materials, which are often insufficient and culturally insensitive, compound these issues, making the teaching landscape even more challenging.

Despite seeing themselves as change agents, teachers when discussing sex often grapple with anxieties rooted in fears of provoking interest around sexual activity, concerns about parental backlash, or deeming the subject inappropriate for young learners (Francis, 2012). Moreover, the school environment can limit their ability to freely teach what they believe is necessary. Contributing to this discourse, Ahmed et al. (2009) reveal the tension between the educational mandates and teachers' personal beliefs, particularly around condom use versus abstinence. Many teachers, while supporting abstinence, found it challenging to discuss safe sex due to conflicts with their personal values. This tension reflects broader concerns about inciting interest in sexual activity, navigating parental expectations, and reconciling personal convictions with professional responsibilities. Ahmed et al. (2009) underline that discussing aspects around sex is closely associated with notions of responsibility and morality.

Khan et al. (2020) highlight similar observations about the experiences of shame and discomfort of teachers in Bangladesh due to societal norms around modesty and the inappropriate nature of certain topics within the curriculum. This study discusses the fear of community ostracization and the challenge of maintaining respectability while discussing taboo subjects such as sexual intercourse and condom use. Teachers worry about potentially encouraging discussions among students that are 'too open' or leading students astray, alongside concerns about their own authority being undermined by their own lack of expertise compared to more digitally informed students.

In one study Helleve et al. (2011), found that teachers emphasised the significance of personal characteristics like life experiences and comfort with one's own sexuality as crucial for effectively teaching these sensitive subjects. Teachers also expressed concerns about

maintaining professional boundaries while being approachable, acting in multiple roles such as teachers, counsellors, and sometimes even acting as parental figures to their students. In the study, teachers also highlighted the importance of being relatable and trustworthy to facilitate meaningful discussions, yet they grappled with the discomfort of being questioned about their personal lives.

Simayi and Webb (2019), explore how cultural taboos among isiXhosa-speaking communities in South Africa's Eastern Cape influence teachers' ability to teach human reproduction in rural secondary schools. The study reveals that teachers face significant challenges due to cultural taboos that restrict language use, particularly when addressing sexual content. This issue, termed 'language conflict,' arises from the cultural belief in 'asibizi' ('we do not talk about this'), which impedes the use of standard academic language and relies on metaphors for teaching human reproduction topics. This the authors call as the 'fifth language issue' (four language challenges identified are casual home language, academic language, discipline-specific terminology, and English as a foreign language) that teachers face in a multicultural classroom where cultural restrictions dictate what can be said and which words can be used.

Collectively, these studies present different complexities that teachers experience which points to the need for a supportive framework including teacher training and adequate resources for teaching.

e) Integrating Queer Theory into Science Curricula

Queer theory, as outlined by Gunckel (2009), challenges traditional narratives by resisting normative processes and categories, focusing on the deconstruction of identity, and questioning the normalisation of heterosexuality. It serves as a critical framework for examining the exclusion of LGBTQ+ perspectives and the pervasive heteronormativity within traditional biology education, as critiqued by scholars including Broadway (2011), Lundin (2014), Reiss (2019), and Fifield and Letts (2019). These critiques highlight a significant gap in how science education, particularly biology, addresses issues of gender and sexuality, often presenting them within a limited, binary scope.

Lundin (2014) and Reiss (2019) both emphasise the complexities inherent in teaching topics such as sexual education, which include discussions on love, relationships, and identity

alongside biological aspects. Lundin (2014) points out that the empirical approach of science education often fails to accommodate the perspectives provided by queer theory, suggesting a tension between fact-based science and the more inclusive, non-dichotomised views of queer theory. Reiss (2019) advocates for a multifaceted approach to science education that benefits from considering multiple perspectives for a more inclusive learning experience.

Gunckel (2009) identifies the heteronormative bias in science curriculum materials, pedagogical practices, and policy documents, and advocates "queering" science education. This would involve not only including marginalised identities in curriculum materials but also critically examining the creation of scientific knowledge to ensure it reflects a broad spectrum of human experiences. This approach aims to challenge misconceptions and provide a more comprehensive view of sexuality beyond heteronormative frameworks.

Similarly, Fifield and Letts (2019) call for a fundamental rethinking of science education that transcends adding LGBTQ+ content to interrogate and transform the underlying assumptions that perpetuate the exclusion of diverse sexual orientations and gender identities. They emphasise the importance of questioning the production of scientific knowledge, the language used in education, and the societal norms that influence pedagogical practices.

Lundin (2014) advocates for a science education that not only acknowledges but actively engages with the diversity of sexual orientations, gender identities, and relationships, challenging traditional gender patterns to contribute to a more equal and just educational environment. This inclusive approach aligns with broader educational reform efforts aimed at making science accessible and relevant to all students, enriching the educational experience by fostering inclusivity, curiosity, and a critical learning environment.

Integrating queer theories into science education presents a transformative step toward recognising and valuing diverse identities and perspectives within the learning process. By challenging existing stereotypes and embracing the complexity of human experience, science education can contribute to a more just and inclusive society, aligning with the democratic and egalitarian goals of education.

1.3.5 The Blurred Lines of Cultural and Scientific Discourses around Sexuality

The discourse of sexuality does not exist in isolation; rather, it intersects deeply with various socio-cultural dimensions such as race, caste, and geographies, each of which significantly influences how sexuality is understood, experienced, and regulated across different contexts. These intersections reveal the complex ways in which social hierarchies and power dynamics shape sexual norms, behaviours, and identities.

Many of the concepts and approaches within modern scientific and biomedical discourse regarding sexuality can be traced back to the early understandings of the HIV/AIDS pandemic in the global north which informed global health policies (Spurlin, 2023). The scientific discourse around Acquired Immune Deficiency Syndrome (AIDS) also serves as an illustrative case that cultural and scientific/biomedical discourses are not sharply separated but form a continuous spectrum, where various meanings, narratives, and conversations converge, intertwine and challenge one another. The diverse discussion around AIDS also helps in understanding how various groups of people are categorised and how different individuals and behaviours become pathologized within the context of sexuality discourse. By examining the discourse surrounding AIDS, this literature review aims to explore the intersections of cultural, moral, and scientific discussions around sexuality. This examination not only elucidates how these various discourses mutually inform and shape one another but also enhances our understanding of the interrelations between scientific knowledge and cultural perceptions, particularly in the context of this thesis where we could see an overlap of scientific and cultural arguments in teachers' narratives around sexuality.

Numerous scholars have extensively critiqued and highlighted the presence of racial, gendered, homophobic, and classist biases within scientific discourses on AIDS (Austin, 1989; Bibeau & Pedersen, 2003; Briggs, 2005; Esparza, 2019; Treichler, 1987; Waldby, 2003). They have elaborated on how knowledge and social connections come to be, and who gets authority in this process. Medical epistemologies and technologies from Europe and America have been taken to formerly colonised and less-industrialised countries as a means of regulating bodies and diseases (Briggs, 2005). As Treichler (1987) argues, our understanding of AIDS in terms of its global impact, threats to civil rights, associations with sex and death, the 'gay plague,' or consequences of the postmodern era, are not rooted in the objective, scientifically determined 'reality'. Instead, they stem from what we understand

about this reality, which is often shaped by the prior social (racial) constructions within the realm of biomedical science.

AIDS gained a distinct cultural meaning due to its place in Western concepts of sexually transmitted diseases (STD). In both the 19th and 20th centuries. Western scientific discourse often placed diseases, especially sexual ones, within the bodies of Africans and American "Negroes" (Austin, 1989). These diseases were characterised as a "Negro problem" and seen as a just consequence of sexual immorality. The disease was not only seen as widespread but also as impossible to eradicate, as it was considered intrinsic to the "physical being" of the black individual (Austin, 1989). Bibeau and Pedersen (2003) argue that scientists seem unable due to enriched values or unwilling to move beyond these negative images, as they continue to place the origin of the virus at the heart of Africa, even in the absence of reliable data. Some scientists even suggest that a genetic code predisposes African populations to practices like polygyny and loose sexual morals, thereby increasing their susceptibility to AIDS (Bibeau & Pedersen, 2003).

In the racist narrative of AIDS, there are four key characters that represent the black subject in Africa: the promiscuous urban male, the female prostitute, the victimised wife, and the male homosexual (Austin, 1989). The urban male in this narrative symbolises modernity and progress while also being associated with sexual excess and debauchery. He embodies civilization's greatness but is also seen as the embodiment of sexual immorality and degeneracy. The prostitute, as the second character, is defined by her role in relation to the man. She represents sexual corruption and is judged by the number of clients she has and her risk of infection. The third character, the wife, is also defined in relation to the man. She is portrayed as a victim of her husband's promiscuity and lacks sexual agency of her own. She is seen as an innocent recipient of the disease due to her husband's promiscuous behaviour. The fourth character is the male homosexual who was embedded in perceptions of AIDS as primarily a 'gay disease'. This framing not only shielded the sexual practices of heterosexuality from discourses on AIDS but also upheld its ideological superiority. This may be contrasted with middle-class white gay activists who had relative success in shaping debates about HIV/AIDS research, treatment, and representation, which led to the decline of conspiracy theories within their community (Briggs, 2005).

In discussions about AIDS, various forms of misleading language, such as ambiguity, stereotypes, and blame, can be found both in popular discourse and in biomedical communication (Treichler, 1987). For example, scientific research articles have at times described how the AIDS virus enters the bloodstream, using terms like the 'vulnerable anus' and the 'fragile urethra,' while contrasting this with the 'rugged vagina,' depicted as a robust barrier capable of withstanding penetration by objects like penises and small babies. The choice of such terminology within research articles introduces ambiguity by implying inherent strength or weakness in certain body parts, without clear scientific evidence to substantiate these claims (Treichler, 1987). This linguistic approach can contribute to misunderstandings and reinforce stereotypes, particularly regarding the perceived vulnerability of specific individuals or groups. Consequently, such language effectively integrates both homophobia and sexism into the discourse of scientific research. Additionally, women have been depicted in scientific literature as 'inefficient' transmitters of AIDS, with references emphasising the 'resistant impermeability of the vaginal mucous membrane' (Treichler, 1987).

Despite recent scientific advancements in the last few decades, not all infected individuals are treated equally (Esparza, 2019). In the early 19th century, the field of public health (which was influenced by ideas of sexual deviance) became intertwined with eugenics. This connection linked theories of sexual degeneracy with attempts to maintain the racial composition of the nation. The field of public health, influenced by notions of sexual deviance, merged with eugenics, linking theories of sexual degeneracy with efforts to preserve the nation's racial composition. In the United States, public health became politicised as it aimed to protect the nation-state from perceived "infectious" threats posed by migrants and people of colour. Both public health officials and social reformers sought to eliminate elements seen as "polluting" the social purity of the nation's body politic.

Waldby (2003) points out that the language used in AIDS discourse is imbued with militaristic rhetoric. Biomedical researchers and public health officials often refer to the collective efforts against the virus as the "war on AIDS." The virus is depicted as an enemy force, a "foreign antigen," or the "AIDS agent" that invades the sovereign territory of the human body and undermines its natural defence mechanism, the immune system. However, from the perspective of those affected by the disease, this metaphorical warfare transcends the boundaries of biomedical technicalities and extends into a broader societal conflict. The

primary casualties in this extended conflict are not the viruses themselves but people living with AIDS (PLWAs). Declarations of war enable the use of legitimate violence and the suspension of civil rights. For PLWAs and those engaged in various medical strategies related to the epidemic, biomedical practices often involve the deployment of violence, framed as preventive, therapeutic, or diagnostic measures.

The emergence of AIDS as a significant threat to health prompted a shift in focus towards analysing and intervening in the sexual behaviour of the population (Nelson, 1994). This shift, which revolved around discussing safer sex practices as part of the Human immunodeficiency viruses (HIV) prevention discourse, was influenced by both cultural and epidemiological insights. Consequently, the prominence of safer sex discourses as a means of regulating community sexual behaviour grew, extending beyond public health concerns to encompass political dimensions as well (Nelson, 1994).

These discourses go beyond mere physical considerations and also involve the conceptualisation of sexual identities (Rudolph, 2013). Mankayi (2009) highlights the interconnectedness of safer sex discourse with the portrayal of the "other" as responsible for HIV/AIDS transmission, linking it not only to gender and sexual orientation but also to factors like class, race, and ethnicity. This results in diverse placements of individuals within this discourse. Notably, the responsibility for safer sex practices is often placed primarily on women, as highlighted by Lindegger and Maxwell (2009). Cisgender women are predominantly represented as being in or aspiring to be in monogamous heterosexual relationships, with frequent references to their partners, thus normalising and privileging this relationship status (Moran & Lee, 2011). Messages advocating abstinence and faithfulness in relationships are typically aimed at women, emphasising their role in maintaining sexual health (or sexual purity) and preventing the spread of sexually transmitted infections such as HIV. In contrast, messages concerning condoms and safer sex practices tend to target men within heterosexual relationships (Segopolo, 2014).

However, Flood (2003) argues that heterosexual men are largely invisible within sexual health discourse as indicated by the smaller number of campaigns directly targeting them. This is because the responsibility for sexual health is often placed on women, while men's sexual practices and attitudes are considered defaults. Rudolph (2013) notes that lesbians occupy a complex position within the safer sex discourse, being both included and excluded,

with their risk of HIV transmission often either ignored or considered negligible. As mentioned before, gay men were perceived as the primary carriers of the virus and held responsible for its transmission, thus becoming the main focus of intervention efforts and campaigns (Mankayi, 2009).

The stigma associated with "touch," carries profound social implications in the Indian context. As Sarangi (2007) says, this stigma is exacerbated in the case of the HIV/AIDS epidemic, which has led to the formation of a new marginalised group perceived as "untouchable" in a society already deeply divided by an intricate and historically entrenched caste system. The creation of this new "untouchable" class is particularly concerning in the context of India's caste system, which categorises individuals based on their birth and has historically dictated their social status and occupation. The emergence of a modern "untouchable" group, defined not by birth but by health status, underscores the persistent challenges of stigma, discrimination, and social exclusion in India. Individuals diagnosed with HIV/AIDS are frequently shunned and avoided, to the extent that they are often deprived of basic human contact and care, not just by the broader community but by healthcare providers as well.

Building on this, Acharya and Dutta, (2012) studied the portrayal of tribal peoples in HIV/AIDS campaigns within the district of Koraput, Odisha, which reveals a broader pattern of discrimination that pathologized tribal cultures and silences their voices under the guise of health interventions. The focus on tribal communities in HIV/AIDS interventions is primarily due to the perceived high vulnerability and risk associated with their socio-cultural practices and living conditions. The global and national discourses around HIV/AIDS have constructed it as a lifestyle disease, where individual behaviours are seen as the primary drivers of the epidemic. However, these populations are more severely affected by HIV/AIDS due to many factors including displacement, poverty, lack of access to healthcare, and marginalisation from mainstream development initiatives.

The above study specifically points out certain tribal practices that are highlighted by campaign planners and implementers as contributing to the spread of HIV/AIDS within tribal communities. These include pre-marital and extra-marital sexual relations, and certain cultural festivals and traditions where sexual activities are portrayed as more liberal and open compared to mainstream societal norms. Campaign narratives often describe these practices

in a way that exoticises and eroticises tribal cultures, thus reinforcing stereotypes and overlooking the socio-economic realities that underpin these practices. For instance, the tradition of "Dhangidi basa" and "Dhangda basa" (youth dormitories for adolescent girls and boys, respectively) is mentioned as a cultural practice that supposedly facilitates free sexual interactions among the youth, thereby increasing the risk of HIV/AIDS transmission. Such portrayals not only stigmatise tribal cultures but also fail to engage with the deeper structural and socio-economic factors that influence these practices.

A study by Thompson et al. (2013) explores how the program aimed at HIV prevention has influenced the self-perception and societal engagement of kothis (a term referring to men who adopt feminine gender expressions and may engage in sex with men) in Karnataka. The study reveals how public health campaigns and HIV/AIDS-related interventions can exacerbate the stigmatisation of kothis by framing their sexual practices in negative, moralistic terms. For instance, kothis often find themselves at the intersection of being targeted for HIV prevention efforts while also grappling with societal prejudices that view their identities and behaviours as deviant or problematic. This pathologization is not merely a reflection of individual prejudices but is deeply embedded within the cultural, social, and moral landscape of society. The study discusses how kothis perceive their sexual behaviours and identities as vices or addictions, mirroring broader societal views that associate non-normative sexualities with immorality or disease. The authors suggest that such perceptions are reinforced by HIV/AIDS discourse that, while aiming to address health issues, also operates within and contributes to a societal context that pathologized kothis.

Similarly, Khan et al. (2018) explore the experiences of Devadasis in Northern Karnataka of HIV/AIDS, sex work, and the socio-cultural and economic pressures that shape their existence. The study illuminates how Devadasis, traditionally dedicated to temples and engaging in sex work, face a disproportionate burden of the HIV epidemic due to their marginalised status and the structural violence embedded in their societal role. The vulnerability of Devadasis to HIV is exacerbated by a mix of socio-cultural practices, economic hardships, and the stigma associated with their work. This is further complicated by public health strategies that often fail to acknowledge the lived experiences of Devadasis, focusing instead on behavioural surveillance and interventions without addressing the underlying social and economic drivers of their vulnerability to HIV.

Jena (2020) explores how Dalit women's immigration for domestic work was portrayed within the HIV/AIDS discourse in the Konaseema region of Andhra Pradesh. The study discusses how the migration of Dalit women to the Persian Gulf for domestic labour is misrepresented as sexual slavery and unjustly linked to the spread of HIV, reinforcing existing caste and gender biases. This misrepresentation supports restrictive policies that impact Dalit women's mobility and work while ignoring the actual causes of HIV transmission and the socio-economic benefits of their migration. Jena's analysis reveals that the stigma around Dalit women's work in the care economy is rooted in deep-seated caste and gender discrimination, perpetuated by state narratives and anti-trafficking rhetoric. This contributes to a broader discourse that vilifies and pathologies these women, ultimately hindering their economic independence and reinforcing societal inequalities.

These studies collectively illustrate how scientific knowledge, cultural perceptions, and moral judgments intertwine and influence each other within the discourse of sexuality. This interplay results in the pathologization of certain behaviours and the marginalisation of specific groups, particularly in the context of HIV/AIDS, highlighting the profound impact of social factors on these discourses. The discourse of sexuality is not merely a reflection of individual or biological aspects but is deeply embedded in and shaped by broader socio-cultural, economic, and political landscapes. Understanding the complex intersections between sexuality discourse and social factors such as race, caste, and geography is crucial for addressing the inequalities embedded within these discussions. It highlights the necessity of an approach that recognises the role of socio-cultural, economic, and political contexts in shaping individual and collective experiences of sexuality.

1.4 Contextualising the Research: Understanding the Background and Setting

In this section, I explore the prevailing discourse surrounding sexuality within Keralam. Initially, my focus centres on reviewing literature that specifically addresses the sexual landscape of Keralam. This involves both historical and contemporary perspectives on sexuality in this region. Subsequently, I look at the public discourse regarding childhood sexuality. This is essential for contextualising my research within the broader societal norms and attitudes that influence and shape understandings of sexuality in Keralam.

1.4.1 Surveillance and Resistance: The casting of sexual morality in Keralam

Kakar (1978) discusses how the role of motherliness is deeply ingrained in the identity of Hindu women. Unlike in some Western contexts, where motherhood might be seen as a cultural imposition, for Hindu women, it represents personal fulfillment and social recognition. Motherhood enhances a woman's status within the family and society, often perceived as a transformative gift from the unborn child. In traditional Indian society, a woman's self-respect is tied to her role as a mother rather than as a wife or daughter. Mothers exert authority through their sons, who serve as the medium of their self-expression.

A new sexual morality was imposed in India during the colonial period. It linked the 'civilised' sexual appetite to social and national progress (Murali, 2016). Murali argues that the introduction of Victorian morality by colonial rulers and the adaptation of these norms by local elites played a crucial role in shaping modern sexual morality in Keralam. This colonial imposition led to a new sexual moral order that was intertwined with notions of modernity, progress, and civilization, aiming to distinguish between legitimate and illegitimate forms of desire (Kumaramkandath, 2013). These colonial interventions produced new dichotomies like tradition/modernity and reshaped cultural narratives, contributing to the stigmatisation of pre-colonial practices as barbaric and uncivilised. They played a crucial role in creating images of un-civilised pre-modern regimes of sexual anarchy.

Nandy (1982) talks about the intersection of sexuality and colonialism and describes how colonial ideology in British India was intertwined with Western notions of sexual and political dominance. Colonialism created a shared culture between the colonisers and the colonised, which persisted even after the colonisers left. This shared culture shifted cultural priorities, bringing previously subordinate subcultures to the forefront and sidelining others. Nandy examines how colonialism exploited sex and age to maintain control. It affected sexual dynamics by imposing Western norms on indigenous cultures, using sexuality as a means of control. This often led to the suppression of native sexualities and reinforced colonial power structures. The colonial ideology marginalised feminine aspects and promoted a hypermasculine identity, reinforcing dominance in both British men and the colonies. Colonialism also manipulated age hierarchies, treating the colonised as children who needed guidance. This infantilisation justified colonial rule by portraying the colonisers as paternalistic figures bringing progress to the colonised. Nandy discusses the ways in which

non-conformity to rigid sexual roles became a form of cultural and political resistance against colonialism. For instance, Gandhi promoted the superiority of maternal qualities and nonviolence, which contrasted with the colonial culture's projection of aggressive masculinity.

Nandy (1976) discusses how Indian society constructs the idea of womanliness which emphases traits like docility, submissiveness, and nurturing behaviour. These characteristics are often idealised and seen as the benchmark for a 'proper' woman. These cultural norms serve to control and limit women's roles, confining them to domestic spheres and undermining their autonomy. British colonial rule imposed Western notions of femininity and domesticity, which were internalised and propagated by the Indian elite. This colonial legacy has perpetuated a dichotomy where traditional Indian values and Western ideals of womanhood intersect, creating complex and often contradictory expectations for women.

Tambe et al. (2000) also note a similar observation across India and that while imposing the "superiority" of Victorian morality, the colonial state also amended its aims to pacify religious revivalists and traditionalists. However, the globally influenced consumption space has displaced the anti-colonial, nationalist construction of women (the respectable middle-class women with "essential femininity") by aggressive, confident, sexualised public women (Lukose, 2005). These colonial and post-colonial discourses on modernity together shape the sexual morality of contemporary India.

The historical marginalisation of sexuality in Keralam has significantly impacted the representation and portrayal of sexuality in the public sphere, extending to cultural artefacts such as literature and cinema. Keralam has been resistant to the forms of sexual expressions that globalisation and liberalisation have enabled for many middle-class Indians (Devika, 2009). In Keralam, public morality often manifests through moral policing and disciplining mechanisms in both private and public spheres, imposing religiously sanctioned, middle-class notions of sexuality (Kurup, 2021; Devika, 2009). This social control, exercised through vigilantism, aims to preserve the structures of family, religion, and the nation. Educational and familial institutions enforce restrictions on interactions between young individuals to prevent any form of sexual encounters, extending into the public sphere where spaces that could foster romance and personal freedom are heavily monitored (Kurup, 2021).

Keralam is known for its "Model of Development," which sets it apart from other states. This model results from long-standing social and political mobilisation, progressive governance, and a commitment to redistributive policies, leading to significant advancements in education, healthcare, and social welfare (Parayil & Sreekumar, 2003). It is characterised by developmentalist public policies and egalitarian politics, supported by active female agents who have transformed domestic life. However, discussions on sexuality, reproductive, and sexual rights are notably absent within the mainstream development discourse in Keralam (Devika, 2009). Despite recognising gender imbalances in crucial development indices, there is a conspicuous silence about women's sexual and reproductive rights. The discourse emphasises the mother/homemaker role of women, constructing a "model woman" who is educated, elite, healthy, modern, and prefers a smaller family size (Devika & Sukumar, 2006). This focus on women's roles in family nutrition, education, and birth rates largely ignores the impacts on women's bodies and autonomy, normalising women's bodies within the framework of maternal health and sidelining discussions on reproductive rights (Devika, 2009).

While developmental discourse has contributed significantly to the state's social indices, it has overlooked the concerns of marginalised groups such as Adivasis, Dalits, fishermen, women, and particularly sexual minorities (Devika, 2009; Devika & Kodoth, 2001). This oversight is notable because these groups, especially sexual minorities, are not even considered within the discourse of acceptability. As noted by Devika (2009), the people at the margins, including prostitutes, sexual minorities, persons afflicted with AIDS, and Dalits, have been more sexualised in Keralam's culture. This marginalisation has contributed to a lack of representation and portrayal of diverse sexual experiences and identities in cultural artefacts (Tharayil, 2014). Films and novels that depict non-normative sexualities or challenge patriarchal structures have played a pivotal role in public discourse, sometimes even inciting controversy and backlash. Furthermore, mainstream feminist groups and activists have often failed to address the challenges faced by women who are sexually marginalised, perpetuating an androcentric view and failing to challenge the structural underpinnings of gender inequality effectively (Agaja, 2013).

Adolescents and young adults have become new targets for social and sexual surveillance in Keralam, with increased police surveillance in social and cyber spaces through programs like "Operation Gurukulam" and "Operation Vidyalaya," focusing on truancy, inappropriate

sartorial choices, hairstyles, and leisure activities (Devika, 2021). This emphasis on surveillance signals a deeper societal anxiety regarding the moral and sexual autonomy of the youth, showcasing an effort to maintain control over young bodies and behaviours. It aligns with a long-standing practice of moral policing that targets sexual and gender transgression under the guise of preserving local mores. Protests like "The Kiss of Love" have emerged as forms of resistance against this abjection, where young people assert their rights to love, expression, and public space against state and societal repression. These protests challenge not only the acts of moral policing but also the underlying societal norms and structures that perpetuate gendered restrictions and surveillance, advocating for a reimagined understanding of public morality that embraces individual rights and freedoms (Kurup, 2021; Murali, 2016).

1.4.2 The conceptualisation of childhood and childhood sexuality within Keralam

This section aims to explore different conceptualisations of childhood and childhood sexuality within the public sphere of Keralam. This is crucial for understanding the broader context and how macro-discourses influence the micro-discourses within schools. The section draws extensively on the work of Devika (2023), who provides a complex analysis of specific "regimes of childhood" in Malayali society from the 20th century to the present. Devika defines "regimes" as 'historically shaped sets of rules, norms, ideas, practices, procedures, and institutions that implicitly or explicitly produce and govern childhood (pg: 6)'. Each regime emerges from specific historical conditions and reflects shifts in state-society relations and changing conceptions of childhood, gender, and the state. These regimes do not simply replace one another in a linear manner but coexist and overlap. This transition is shaped by the broader socio-political shifts, changes in parental and state authority, and evolving aspirations and expectations for children across different social classes.

Responsible Parenting: This regime emerged in the late 19th and early 20th centuries, emphasising the need for proper gendered socialisation and moral upbringing. It advocated for education and strict discipline to shape children into ideal, gender-conforming adults, as seen in early Malayalam literature and reform movements. Parents are expected to invest in by maintaining a stable marriage, adhering to gendered family roles, and aiming to transform the child into an industrious subject valuable to the nation.

Romantic Childhood: Influenced by Romantic notions of childhood, this regime surfaced in the literary works of the 1930s and beyond. It portrays childhood as a period of innate purity and potential, somewhat opposing the rationalising tendencies of responsible parenting.

Aspirational Regime: Gaining prominence in the latter half of the 20th century, this regime reflects the aspirations of Keralam's middle class. It treats children as 'raw material' for crafting into globally competitive individuals. Children were considered as a source of hope for upward mobility within the family.

Child-Governance: Overlapping with the aspirational regime, child governance focuses on empowering children, especially underprivileged children who are seen as "failed" and become the targets of NGOs, local governments, and other agencies. It incorporates global discourses on child rights, aiming to maximise children's agential capacities within a neoliberal framework.

The fifth regime, which is not discussed in detail by Devika, is the *"securitised child."* This regime targets teenagers and Muslim youth, portraying them as innocent and vulnerable, in need of 'saving', thereby denying their agency. This leads to increased surveillance and protective measures.

By examining present-day discourses, I expand on these categories of childhood regimes to reflect the more recent trends within the broader context of my study, the sexuality discourse in the public sphere of Keralam. I use media discussions around two specific events which transpired during the time of my research, to better understand the assumptions, ideologies, and power dynamics that underlie the present day discourse around childhood.

Event 1

The first event is the introduction of a gender-neutral school uniform in a school in Kozhikode in December 2021[1]. Shirts and pants were selected as the uniform for all students. This was expected to minimise the difficulties and restrictions of movement girl students face

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[1] https://www.onmanorama.com/news/kerala/2021/12/15/muslim-outfits-protest-gender-neutral-school-uniform-kozhikode.html

especially when taking part in sports. However, the decision had backlashes from various political and religious groups quoting it as enforcement rather than a progressive step[2]. Even though the higher education minister initially appreciated the initiative, the chief minister later said that it is not a directive from the Government and they do not intend to propose gender-neutral uniforms in schools.

Event 2

The second event surrounds a video which was uploaded on YouTube in June 2020. The video showed body activist Rehana Fathima's son painting a picture over his mother's semi-naked upper body. The video sparked both support and criticism from various individuals and groups. It led to significant public outrage and legal action under relevant child protection laws[3], with some people accusing Fathima of abusing her children under the guise of activism. In June 2023, the Kerala High Court ruled in favour of Fathima, discharging her from all charges (Eddapagath, 2023).

I followed these events closely as they sparked heated discussions around sexuality, gender and children in the mainstream. The latter being one of my interests in the context of this study. I consider these events and ensuing discourse to be reflective of the prevailing conceptualisation of childhood.

I carefully watched and took notes from numerous TV debates surrounding these two incidents. I used selected excerpts from five different debates (see Appendix A) aired on mainstream television and later uploaded on YouTube. While analysing both incidents, it becomes apparent that the conceptualisations share common ground, largely stemming from similar underlying fears. In this analysis, I will focus exclusively on the perspectives from the backlash, omitting viewpoints from those who support the causes. Considering that moderators also share their opinions and concerns, I will incorporate the perspectives of moderators into this discussion as well. As indicated earlier, the objective of this section is to hint at more recent interpretations and conceptions of childhood sexuality within the public

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[2]https://www.thequint.com/south-india/after-protest-kerala-government-rolls-back-gender-neutral-seating-uniforms-in-schools

[3]https://indianexpress.com/article/india/kerala-activist-rehana-fathima-booked-for-posting-video-of-her-kids-painting-on-her-body-6474374/

sphere of Keralam. A deeper analytical exploration would require a more focused and extensive investigation beyond the scope of this preliminary outline.

An underlying narrative across these debates is an increasing concern about the influence of global discourse on gender, sexuality and childhood, especially worries about over exposing children to concepts that could cause "gender confusion. The analysis I indicate an additional category called the " (Ideologically) malleable child". The idea of the "malleable child" highlights a fear that children's identities can be directed (or misdirected) by politically motivated interests, to potentially challenge traditional understandings of gender roles, bounds of sexuality and gender as a whole.

People opposing gender-neutral uniforms argue that clothing significantly influences a person's gender identity. They believe that what individuals wear can influence or even determine how they perceive and express their gender. Any deviation thus can lead to 'gender confusion'. This can be seen in the argument below[4],

> *(From Debate 4)" A man is a man, and a woman is a woman. You are trying to turn girls into boys and women into men [by introducing gender neutral uniforms]."*

In these debates, we see a tension between the belief in children's vulnerability to ideological shaping and the desire to protect childhood innocence from the complexities of gender identity and expression. It also reflects the tension between evolving global conversations on gender fluidity and inclusivity and traditional convictions that seek to maintain clear, binary distinctions between male and female roles. These tensions manifest as a concern that introducing children to a spectrum of gender identities and roles at an early age could confuse or overwhelm them, leading to uncertainty in their own gender identities. The following excerpt illustrates this;

> *(From Debate 1) "This is part of modern gender theory. Some individuals, having read books on the subject or being aware of similar initiatives in other countries, have misled the education minister and their team. These reforms will only contribute to gender confusion among students. This is not*

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[4] Excerpts are translated word to word from Malayalam to English, hence these sentences may not be properly structured.

progressive; it could be termed 'progressive superstition'. The notion that girls wearing boys' clothes are progressive is what I refer to as progressive superstition.... What we seek is gender justice, not gender neutrality."

The speaker implies that allowing, or encouraging, students to wear clothes not traditionally associated with their sex could disrupt their understanding of gender roles or identity. While gender neutrality could be seen as challenging fixed norms and expectations and as a pathway to achieving gender justice, they create a dichotomy between gender justice and gender neutrality. There are allegations that ideological motivations drive certain individuals to shape children according to their own desired values;

> *(From Debate 3) "Liberals are imposing their ideologies on children. This is the point at which we must make a stand. Liberals have their own views regarding the gender spectrum and sexuality, and they are free to pursue those beliefs. However, such discussions should be reserved for their party gatherings or within the privacy of their homes, not in schools"*

There is also a fear that the incumbent state government endorses the ideologies that the activists promote, further complicating the public's perception of the issue. This has created a moral panic around the safety of the child. Earlier protectionist discourse was focused on safeguarding children majorly from sexual predators. We can see a shift in the current discourse which says that children need to be shielded from progressive queer activists-who are perceived as introducing confusing or harmful concepts about gender and sexuality-and the Government who backs them. The lengthy excerpt will illustrate the fear that the government through curriculum, works with queer agenda,

> *(From Debate 5) "We are experimenting on young children. They (queer activists) argue that gender neutrality is a pathway to gender justice without any data or scientific basis. We want to ask those who argue for this; what data do you have to support this, or what is the scientific basis of your argument? On the other hand, we can provide data to show that gender neutrality does not reduce gender discrimination. Not only that but it also leads to more societal problems. Data show that in countries that have implemented gender neutral policies, there is a generation confused about gender or are gender non-conforming. We were asked why we can't see this as just a matter of uniform and not as an agenda. The response to that... We can see the tweets from the higher education minister regarding the reforms, stating, " students must be*

given a free environment unhindered by the burden of society's heteronormative expectations."

It is important to note that significant opposition from various religious and political groups played a crucial role, leading the government to clarify (or back away from its stance). The government stated that it is not pursuing any political agenda related to the implementation of gender-neutral uniforms in schools. Instead, the decision to adopt such uniforms is left to the discretion of individual school administrations, which are encouraged to make these decisions after consulting with students and parents.

Children emerge as focal points where disparate political and religious groups find common ground and unite, despite their usual disagreements on numerous matters. This unity is particularly visible in this context, where these groups collectively advocate for shielding children from being (re)shaped by the queer politics, as can be seen from the transcript below,

> *(From Debate 2) "The concept of the woman-man dichotomy is one that every religion puts forth… blind equality is not the solution. The spiritual, religious, and political leaders who opposed this (gender neutral uniforms) have presented a unified viewpoint. They have spoken on behalf of followers of all faiths, taking the essence of each religion to support their stance. This is not about patriarchy but rather the dichotomy between men and women. We have the responsibility to uphold this dichotomy.*

This unity reveals a shared priority in maintaining traditional gender roles in/through children across different religious groups who otherwise have huge theological or ideological differences. The concern that imposing gender neutral uniform will force children to reject spiritual ideologies reflects a fear queer politics will lead to a broader departure from religious and traditional values.

The debate surrounding the second event of a son painting on mothers body, captured public concern about the safety of children with activist parents. There is a prevalent fear that activists exploit their children to gain publicity and advance their ideologies. This incident also opened a broader discussion on state authority versus parental autonomy, the perception of nudity in non-sexual contexts, and the protection of children's privacy from potential sexual exploitation. Fathima's action was intended as a statement against the sexualisation of

women's bodies and to promote a non-sexual perception of nudity. However, many perceived it as child exploitation and obscenity.

Philip's (2023) analysis of this discourse around Fathima's case shows how child rights frameworks were appropriated by state and societal forces to criticise Fathima, applying laws and moral reasoning imbued with patriarchal values rather than genuinely aiming to safeguard children's rights. The public narrative shifted from a critique of societal attitudes towards female nudity and sexuality to accusations of child abuse, overshadowing the initial intent. This strategic redirection of the discourse not only questions the legitimacy of feminist activism by suggesting it harms children but also reinforces traditional views on motherhood and mobilises support for curtailing gender rights under the pretext of child protection. Philip points out that such reactions tap into existing societal fears and power imbalances and quash progressive debates on gender, sexuality, and the politics of the body.

Here, I am more interested to look at the moral concerns and arguments around the safety of children. As mentioned below, the fear that activists are shaping or using their children as tools to further their ideologies. This is illustrated by the excerpt below,

> *(From Debate 5) "Around the age of thirteen, children will imbibe or construct their knowledge from the information they receive during this phase or by observing the people around them. Therefore, the mistakes we make now could have consequences for children's futures. What I show them now might limit their perspectives tomorrow if they are unable to see other viewpoints. If the politics I expose them to is not what the child would choose in the future, how will this affect the child? Similarly, there is a significant element of abuse when adults use children to declare their politics."*

As we can see, the discourse brought attention to the themes of children's privacy and their vulnerability to sexual exploitation. One of the prominent arguments was that Fathima's public sharing of the video compromises her children's privacy and potentially exposes them to risks. The reaction also reveals entrenched fears about child safety, particularly within the digital sphere, which is illustrated below,

> *(From Debate 5) "When a child grows, there are many things that the child takes in from the family and society. The child is mostly exposed to the parents and the interactions within homes. The things that happen naturally will shape*

the child in the future. If the child assumes or believes that drawing on a semi-nude body is normal, the child will face contradictions when they enter society. The child is going to be socially isolated. We cannot change society in a day. We have rules in this country. These rules are shaped according to the values that society considers natural. According to the law, children below 18 are minors, and we need to obey that. The question is what we can make the child do or what we cannot. The important thing is that we are living in times where paedophiles are increasing in number; our children are being watched, and their photos are being shared on different websites. This act has provided support to these paedophiles."

People who oppose Fathima's approach argue that such matters should be approached with caution and privacy, suggesting that public exposure oversteps the bounds of appropriate parental guidance and ventures into exploitation. The dominant assumption is that children should be moulded to conform to society, which overlooks the potential for children to grow and in turn, shape society themselves. Additionally, it is often assumed that families should bear the responsibility of preparing children to integrate into society. There is also a presumption that children will be incapable of dealing with the contradictions between the values taught within the family and those prevalent in society.

The discourse also points out tensions surrounding parental authority in addressing childhood sexuality. Fathima's decision to involve her children in her political act—and the subsequent legal and social repercussions—highlights the contested nature of parental rights to educate their children about sexuality and the body. The backlash against Fathima's act raises critical questions about the boundaries between state authority and parental rights in decisions impacting children. It is also important to note that these concerns are heightened in this case as the parents here are queer activists. The state's intervention, citing child protection laws, positions itself as a protector of children's rights, overriding parental autonomy.

The backlash also highlights a prevailing societal inclination to view children as inherently non-sexual beings, whose exposure to any form of nudity must necessarily be shielded to protect their innocence. This perspective is rooted in a broader cultural narrative that seeks to strictly demarcate the realms of childhood and sexuality, placing them as mutually exclusive. The public and legal censure Fathima faced reflects a protective impulse, driven by the fear that exposing children to the naked body—especially in a publicly shared medium—could prematurely sexualize them or expose them to risks of sexual exploitation.

To conclude, the concept of the "malleable child" becomes visible in these recent debates in Keralam, where there is a growing concern that children are being "corrupted" by activists promoting gender fluidity, inclusivity and broader conceptions of sexuality. The fear is not just that traditional gender roles are being challenged, but that these challenges are part of a broader agenda to reshape societal norms. This leads to a moral panic, a reaction that aims to regulate and control sexuality under the image of protecting "child innocence". The panic is characterised by a consensus on the supposed threat activists pose to children, which is often disproportionate to the actual ideologies being presented. We may notice a dual role for the state in these debates, as being complicit in 'imposing gender neutral uniforms' and as a protector of the child from the corrupting influences of ideologically driven parents in the case of 'body painting incident'. Ultimately, the moral panic does more than just contest gender and sexuality discourses; it serves to reinforce the existing power hierarchies between adults and children and to codify heteronormative morals. It shifts the narrative from one of empowerment and understanding to one of fear and control.

The fear and anxiety around these events are not merely individual reactions but part of a broader affective economy (Ahmed, 2004). These emotions circulate through public discourse, media debates, and political rhetoric, and binds individuals to form a collective identity which opposes the disruption of gender binary. Ahmed says that emotions like fear and anxiety do not reside in specific subjects or objects but circulate within social spaces, contributing to the formation and reinforcement of collective identities. Ahmed also argues that fear is not always linked to a directly identifiable object. Instead, fear is often related to objects that are approaching but not yet present. The gender-neutral uniforms and the body painting video become objects of fear not because they are inherently fearsome, but because they symbolise the potential erosion of present gender norms.

It is also important to note the positioning of the government in relation to this issue. In the first instance, the government is perceived either as an ally or the primary agent seeking to influence or impose their agenda on children. Conversely, in the second event, with the government initiating legal action against Fathima, it aligns itself with a protectionist discourse, indicating a shift in its role from an alleged corrupter to a protector.

The "malleable child" category calls attention to the role of educational systems, media, and family structures in the dissemination of gender-related information. It can help question whether these institutions serve as guardians of traditional knowledge or as gateways to a more expansive understanding of gender. It also invites a critical examination of the power dynamics at play in the shaping of children's perceptions and understandings of gender, and questions whose interests are being served in the promotion of certain gender narratives.

1.5 Overview of the thesis

This thesis aims to study the discursive space of biology classrooms and sexual subjectivities therein. The thesis has been conceptualised with the understanding that the dynamics within a biology classroom cannot be fully comprehended without considering how the school as a whole operates and how broader societal discussions on sexuality shape the institution of the school. Hence, there is an attempt to understand various discourses on sexuality inside and outside the biology classroom.

This thesis takes a sequential approach, beginning with an examination of the public sphere, then narrowing to the school, and finally zooming in on the biology classroom. By considering these different levels of analysis, the thesis aims to provide a holistic and rounded understanding of how the discourses surrounding sexuality in various spheres impact the formation of sexual subjectivities within biology classrooms.

The thesis is structured as follows:

Chapter 1 has looked at various relevant literature that informed this thesis. The review revolved around the conceptualisation of childhood, why sexuality is deemed shameful, different sexuality discourses within school, intersection of sexuality discourses with race, caste and geography. In the latter section of the chapter, I tried to understand the context more through specific literature about the discourses on childhood, sexuality and religion in the public sphere of Keralam. I then attempted to understand the present dominant discourses around childhood sexuality by examining two incidents that happened in Keralam in the recent past.

In Chapter 2, I present the research questions, the context of the study, the methodological approach and design as well as theoretical considerations. Here I also discuss how I conceptualise structural power and teacher agency, which shape my analysis of the chapters that follow. I discuss how my positionality changed with respect to the work and the various moral complexities I encountered.

In Chapter 3[5], I explore the micro-discourses on sexuality and the dominant value framework shaping the microculture of a Roman Catholic management school in Wayanad. This chapter describes teacher narratives and cultural perceptions regarding children's sexuality along with the analysis of the value education curriculum of the school.

Chapter 4 explores the interplay between teachers' emotions, identity, and pedagogical decisions, focusing on "Wilson Sir" within the context of science teaching. I examine how teachers' emotions, shaped by social norms, practices, and the socio-political context, influence their professional identity and classroom dynamics, especially when addressing topics related to the body and sexuality.

Chapter 5[6] discusses the interaction of scientific and moral discourse around sexuality within the science classroom setting. I begin by exploring how science/ biology textbooks represent

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[5] The majority of Chapter three has been published in the following two works-

Jose, P., Chunawala, S., & Chari, D. (2023). Of the forbidden frontiers of the body: exploring teachers' narratives about students' sexuality in the south Indian state of Keralam. International Journal of Qualitative Studies in Education, 1-17. https://www.tandfonline.com/doi/full/10.1080/09518398.2023.2181446

Jose, P. (forthcoming). Exploring the category of we and them within the microculture of aided schools. In Proceedings of the Kerala School Education Congress-2023. Thiruvananthapuram, Kerala.

[6] Significant portions of Chapter Five are published in the following two works

Jose, P., Chunawala, S., & Chari, D. (2024). Artistic mutilation of genitalia: an interpretive analysis of representations of genitalia in Indian school science textbooks. *Gender and Education*, 1–21. https://doi.org/10.1080/09540253.2024.2384733

Jose, P., Chunawala, S., & Chari, D. (2024). Moralistic Science: Socio-Cultural Norms about Sexuality in Indian Biology Education. *Journal of International Women's Studies*, *26*(3), 6. https://vc.bridgew.edu/jiws/vol26/iss3/6/

the human body, genitals in particular and examine how ideologies are manifested through visuals in relation to the human body. Following this, the discussion extends to how textbooks and teachers approach the topic of safer sex. Here, I argue that the teachers, along with the textbook, intertwine 'scientific facts' with moral sensibilities; functioning together to produce, discipline, and regulate sexualities.

Chapter 6[7] presents instances where discourses on sexuality led to tensions in the classroom environment and outlines the strategies teachers employed to manage or navigate these situations. I discuss the challenges teachers face when using local languages to discuss sexuality, which leads them to depend on English for such conversations in the classroom.

The thesis concludes with Chapter 7, summarising how each research question is addressed across the chapters. I reflect on the research process and discuss the potential implications of the findings for textbook development and teacher training programs.

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[7] The majority of Chapter six has been published in the following work

Jose, P.(2022). The vulgar and the pristine: Exploring the barriers in using the vernacular while talking about sexuality in biology classrooms. In Proceedings epiSTEME 4: International Conference to Review Research on Science, Technology and Mathematics Education: Homi Bhabha Centre for Science Education, TIFR (pp.64-70).

Chapter 2

Research Design

2.1 Introduction

This chapter details the research design which includes the methodological framework adopted to analyse the specific narratives, and discourses related to sexuality within school, particularly in the biology classroom. It aims to explore the varied ways in which sexuality is talked about, taught, or addressed in a school setting. The overarching goal is to explore the production / shaping of certain discourses and subjectivities and the meanings and interpretations individuals assign to their experiences, necessitating a methodological approach that not only captures the diverse voices of participants but also navigates the complex discursive spaces in which these meanings are both constructed and conveyed. The methodology is built on the foundational assumption that the empirical tools selected will effectively help in understanding the interplay between discourses, subjects and the socio-historical context. This chapter provides an overview of the chosen methodological orientation, including aspects such as the description of the participants around whom the thesis is situated, the methodologies employed for data collection, the processes of data analysis, and the ethical considerations. Furthermore, the chapter provides a reflective account of the researcher's subjectivity and positionality. The thesis acknowledges the researcher's role as the producer of the narrative and recognises the impact of personal perspectives and biases on the study and interpretations. The thesis takes the perspective that every interpreter is located in a specific social network and practices, and hence all interpretations are situated (McClain, 2014). Interpretation is hence seen as a social practice happening within complex networks of social, cultural and technical systems, rather than just an individual, psychological process influenced by social factors. Thus, the meaning of the text is evoked through the researcher's perception and experiences, which are historically and culturally situated.

2.2 Research Questions

While the initial inquiry began with a fundamental question, the research process has led to the emergence and refinement of various questions. It is important to acknowledge that these questions are influenced by my personal subjectivity and theoretical orientation. However, I framed the questions within the constraints of the parameters set by institutional discourse surrounding research ethics and approval.

The fundamental question I try to explore through this thesis is

"What sexual subjectivities are promoted in the discursive space of a biology classroom? How are these subjectivities produced, and what role do the hegemonic structures play in this?"

I have broken down this question into a few others to carry out the research, which are:

R1   What are the different sexuality discourses produced within the school, biology classroom in particular?

R2   How do the social and institutional discourses on sexuality manifest in the everyday experiences of teachers and influence their narratives?

R3   What challenges do teachers face in navigating these discourses while addressing topics of sexuality within their classrooms?

R4   How do social and institutional discourses on sexuality interact with social relations between teachers and students?

R5   How do different discourses on sexuality interact with each other to produce a broader narrative? What role do hegemonic structures play in shaping the interaction between these discourses and the resultant narrative on sexuality?

2.3 Data Components for Individual Chapters

As previously stated, I approach the thesis with the assumption that it is critical to situate the biology classroom within the larger social structure. As a result, it was important to examine the various discourses present in the larger context. The thesis draws on research literature on childhood, sexuality, and religion in the context of Keralam for this. Thus, I present two incidents that have recently sparked public debate about childhood sexuality. The first incident involves the introduction of a gender-neutral school uniform at a school in Kozhikode, Keralam. The second incident centres on Rehana Fathima, a body activist, whose son created a painting on her semi-nude upper body. This body art video, once uploaded to YouTube, sparked mixed reactions. I present some excerpts regarding the diverse opinions presented in news debates on popular television channels about these incidents that are available on YouTube. My presentation is based on four debates surrounding the first incident and one debate surrounding the second (Appendix A).

Chapter three, which focuses on the sexual culture of a school, is situated within a government-aided Christian management school. The school is a minority education institution and has been providing educational services to the community for the past 45 years. It is managed by the diocese where the head priest is the head of the management committee. As an institution belonging to a religious minority, the school can choose its governing body and appoint all staff – teaching and non-teaching. Most minority institutions in Keralam prefer to employ staff from their community (Raveendran, 2019). In this school, all teachers, except one, are Syrian Christians. This makes for a homogeneous group of teachers with regard to their religious beliefs and associated socio-cultural practices, thus privileging a particular discourse over others. I belong to the same community and neighbourhood and am known to a few teachers, so access to the school was not difficult.

The first section of Chapter 3 involves engaging with teachers' narratives regarding their interpretations of student sexuality. The analysis draws on interviews with nine high school teachers from the school. This involves three men (T4, T8, T9) and six women teachers (T1, T2, T3, T5, T6, T7), of whom two teachers are nuns (T2, T5). To avoid potential socio-cultural bias, as is often the case with names, I decided to identify teachers by a designated number instead of a pseudonym (I opt to use pseudonyms when referring to other teachers with whom I have interacted more extensively through classroom observations and

interviews). All teachers interviewed were Catholic Christians and in the age range of 32 to 55 years. All the teachers have a bachelor's degree in their respective subjects and a bachelor's degree in education.

The interview with the first teacher (T1) was conducted over the phone, while the remaining interviews were conducted at the school in three days. All the interviews were conducted in Malayalam and lasted for around an hour. The interviews were conducted in the second week of March 2020, coinciding with the resurgence of Covid-19 cases in the news. The onset of the second wave of COVID-19 in Keralam was reported during the same period in the state[8] (Keralam had effectively identified and contained the initial few Covid cases, retrospectively considered as the first wave in Jan 2020). Nevertheless, schools operated at full capacity, conducting both board exams for Class 10th and annual exams for other classes during this period. Only the students who displayed symptoms resembling those of COVID-19 were restricted from appearing for the written exams. The interviews were carried out in a vacant classroom and were scheduled to align with teachers' examination supervisory duties. Not all the teachers were present in the school as teachers were assigned examination supervision in other schools. Teachers without such responsibilities were available in the school for the interviews.

The second section of Chapter 3 involves an analysis of the value education curriculum and its transaction. I analysed the POC (Pastoral Orientation Centre) Value Education textbooks designed for grades 6 to 10, published by the Kerala Catholic Bishops Council's Pastoral Orientation Centre. Due to the national COVID lockdown (which began on March 19, 2022), value education classes did not take place in the school. One of the teachers mentioned that there is a set of sexuality education series based on this curriculum titled "Know Thyself", created by the Angamaly Archdiocese, to make it accessible to the students. To adapt to the circumstances, these classes were transformed into online modules and uploaded on YouTube since physical classrooms were inaccessible. This series contains four episodes, with each episode being dealt with by a different woman teacher. All of these teachers are professors at a nursing school and one is also a nun. They are referred to as OT1, OT2, OT3 (the nun) and OT4 respectively.

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[8] https://www.downtoearth.org.in/news/health/the-kerala-paradox-of-covid-19-second-wave-79536

The data for Chapters 4, 5 and 6 come from teacher interviews, classroom observations and science textbooks. As mentioned earlier, the COVID uncertainty had imposed severe restrictions on my data collection. Hence, I think it is necessary to describe the process. In my planning phase, I had initially anticipated observing 12th-grade biology classes in May-June 2020. However, due to the pandemic, classes were suspended for several months. Subsequently, pre-recorded sessions were broadcast on the SCERT channel 'Kite Victers' to cover the reduced syllabus. In January 2021, higher secondary schools (only for 12th) reopened for a few hours daily, with a primary focus on board exam revision scheduled for May 2021. During this period, I observed revision classes conducted by a teacher, who will be referred to as Susmita Miss, in a government school in Wayanad. Susmita Miss, who was in her late thirties, was a temporary teacher at the school. These revision classes comprised two sections, with 45 minutes dedicated to each chapter.

Later I interviewed three higher secondary biology teachers during July 2021, of whom two were women and one was a man. I refer to them by the pseudonyms Ashna, Merina and Rashad respectively. The three teachers, who were from the same locality, were Muslims and were classmates from school to graduation. Marina Miss and Rashad Sir teach in two government schools in the district, whereas Ashna Miss teaches in a Muslim management government-aided school. I expected that I could observe their classes during two chapters of 12th grade- Human Reproduction and Reproductive Health, to which they agreed. However, the school opening was delayed again for a few months. When the school reopened, Rashad Sir was transferred to a school in another district and Ashna Miss went on a long leave due to a health emergency. Rashad Sir came forward to help and talked to two other teachers for me, who allowed me to observe their classes. I refer to these teachers who were Christians as George and Wilson. George Sir teaches in a government school, whereas Wilson Sir teaches in a Christian management government-aided school.

Due to the next wave of COVID-19, schools were opened only partially during October 2021. This batch of students attended in-person classes after a gap of over one year. After their 10th board exam (which is the school leaving exam) in 2020, these students had not attended any classes. They joined the secondary school during the pandemic period in 11th grade; however, in-person classes resumed after one year when they reached 12th grade. So the classes I observed were the first days of students in the present school, where they were just starting to familiarise themselves with each other and with teachers. All schools were divided

into two batches, with one batch attending classes on the first three days of the week and the second batch on the next three days. The school functioned for only three hours. The limited number of teaching periods and the approaching exams (which is also a board exam) caused many difficulties for teachers and students. After I observed the first two classes of Marina Miss, she communicated that she couldn't afford to spend more time on the chapters and preferred to just skim over them instead of a detailed class in one period. However, in my presence, she had to spend more time, hence I decided to discontinue observing her class. In this context, I approached another teacher, Lathika (a Hindu woman), who teaches in a government-aided school. So, full classroom observations of the two mentioned chapters, which lasted over a period of two months, came from the classes mediated by the teachers- George, Wilson and Lathika. I had extended conversations with these three teachers, which were audio-recorded, during this period.

I also wanted to observe the 8th-grade chapter titled "For the Continuity of Generation". However, this was not possible as the schools were not open during this phase. So I decided to look at the classroom lessons on the chapter that were uploaded on YouTube. I viewed online lessons of the same chapter by a female and a male teachers from a private study centre and SCERT-Kite Victers respectively, available on Youtube. I refer to them as OT5 and OT6. Additionally, I analyse another online session on 12 th-grade chapter "Reproductive health" taken by a female teacher (OT7) from a private study centre, available on Youtube.

The study also involves analysis of science textbooks- These were (1) NCERT (National Council for Educational Research and Training) science textbooks of 6th to 10th standard, (2) KSCERT (Kerala State Council for Educational Research and Training) science textbooks of 6th to 8th standard (3) KSCERT Biology textbooks of 9th and 10th standard (4) NCERT/ KSCERT Biology textbooks of 11th and 12th standard (KSCERT uses NCERT textbooks for higher secondary science). We chose these textbooks as they are used by most schools in the state of Keralam.

I provide more details about the teachers, classroom observation, interview structure and focus in the respective chapters.

2.4 Data Collection tools

2.4.1 Individual interviews

Throughout the research process, I carried out a series of informal interviews, both unstructured and semi-structured with open-ended questions with various groups of teachers. Each interview session typically lasted about an hour. While the questions primarily emerged organically during the interviews, I also utilized a pre-prepared set of questions. For the interviews with Biology teachers, I developed a questionnaire which I then shared with graduate supervisors and one other faculty member to gather their feedback. Following their suggestions, I refined the questionnaire. I made a list of prompts from the questionnaire and used them in the interview (Appendix B). The semi-structured interviews offered flexibility, allowing teachers to expand on their responses comfortably. They also provided us with the opportunity to further explore teachers' perspectives. The interviews were part of a larger study aimed at exploring teachers' understanding of biology discourse around body and sexuality.

If certain prepared topics didn't naturally come up, I raised them explicitly. The primary objective of the interview was to gain insights into the cultural beliefs and personal conflicts of the teachers related to sexuality. I employed the "life history narrative method" (Shah et al., 2015) to extract various discourses they had been a part of, including aspects of their personal lives, upbringing, education, religious background, workspace, and public interactions. Narrative interviews, in particular, prioritize narration over traditional interviewing methods, aligning well with the data needs of this study. In some instances, interviews were shorter than usual (around 30 min), due to factors such as time constraints and the extent of information teachers wished to share.

The second series of interviews focused more closely on teachers' understanding of biology discourse around body and sexuality. Specifically, it focused on the teachers' experience of teaching chapters on human reproduction and reproductive health, their perception of various textbook discourses (like population control, safer sex, sexually transmitted diseases, adolescent sexual and reproductive health and rights, sexual wellbeing, safe sex practices, medical termination of pregnancy, fertility care) and various related cultural discourses. With three teachers who granted me permission to observe their classes, I conducted multiple

interviews, each with a specific focus. In most cases, these interviews were conducted after the lessons, and were of varying durations. When immediate post-lesson interviews were not feasible, I interviewed the teachers later on the same day. I did not employ any fixed schedule for these interviews; instead, I tailored the questions to the specific lessons observed. The duration of these short follow-up interviews ranged from 10 to 40 minutes. All interviews were recorded with the teachers' permission.

I recognise in my work what Button (1987) says about discourses being interactionally co-constructed in an interview. The teachers shared their experiences and beliefs in response to my questions and comments. My understanding of the staff-room discourse and the structure of the relations within the school evolved with each interview, and this was reflected in the nature of later interviews. For instance, in the very first interview, the teacher linked religious identity with sexual expressions. The teacher cited many of her experiences to convince me of this linkage. Thus, in the later interviews, I put forth explicit questions about the intersection of religious and sexual identities. Multiple identities of me and the participants: the identity of being a woman, Christian, researcher, person outside of the school, local, unmarried, age, culture and social class, interacted in different ways to create a specific discourse at a specific instance of time. The openness and intimacy in the relationship changed with shifting identities.

2.4.2 Participant observation

I used participant observation, grounded in ethnographic fieldwork methodologies, as a major tool for data collection. The research questions necessitated the direct observation of classes, making this approach instrumental in uncovering aspects of classroom discourse, where everyday practices often become so deeply ingrained that they remain unnoticed. This involved sustained engagement within the setting, adopting a passive observer stance. The passive observer stance or the noninterventionist, requires the researcher to remain unidentified, unnamed and detached, refraining from any manipulation or posing of questions to the subjects (Zieman, 2012). Here, the researcher focuses solely on data collection, observing and recording every aspect of the experience. The observations were semi-structured; although there was a predetermined priority of focus, the observations unfolded in a less rigid manner, with the focus shifting as different discourses emerged during the class. I

maintained field notes throughout the observation process. I also audio recorded the classes, placing the recorder near the teacher at the front of the class.

2.4.3 Textbook Analysis

The textbooks listed in the preceding section, which include Value education textbooks, NCERT and SCERT science/ Biology textbooks from 6th to 12th standard, were selected for this study, recognizing their significant role as influential contributors to the shaping and defining of classroom discourses. The analysis of textbooks is pivotal given their crucial status as pedagogical resources widely employed in classrooms, often synonymous with the curriculum in the Indian educational context. These textbooks encapsulate sanctioned statements, thereby dictating the permissible discourses within the classroom—a dynamic heavily regulated by state authorities (Nawani, 2010). As highlighted by Bazzul (2014), discussions about sexuality may permeate various facets of the social world, yet when articulated objectively in textbooks, they acquire a distinct authority that amplifies the circulation of power effects. To explore the evolution of aspects related to body and reproduction across different grade levels, I considered textbooks spanning various grades in this study. I chose these textbooks because of their widespread use in schools throughout the state of Keralam. I conducted a review of these textbooks, encompassing the entire content from cover to back page, with attention to textual discourse and visual representations of the human body and genitalia.

2.4.4 Analysis of publicly available debates and online classes available on Youtube

I selected seven YouTube videos for detailed examination. Among these, five were news debates surrounding two specific incidents, originally aired on popular Malayalam television channels and subsequently uploaded to YouTube. While these news debates were not subjected to detailed analysis, they served as valuable sources to report and present diverse public perspectives and disagreements regarding issues related to the body and a child's sexual agency. Additionally, I selected and analyzed two videos featuring 8th standard biology classes conducted by private tuition centres, also uploaded on YouTube. The decision to focus on these videos was influenced by the unavailability of the option to observe 8th-grade biology lessons in person due to COVID restrictions. It is important to note that this analysis primarily centers on the academic content and not on the people in the videos or the

producers of the videos. All the selected videos for this study are publicly accessible on YouTube, requiring no passwords or permissions for viewing. Consequently, consent concerns were not compromised, as these videos are readily available for anyone to access, engage with, and respond to.

2.5 Analysis process

All the interviews were transcribed manually using software called 'otranscribe'. While around half of the classroom observations were transcribed in full, only significant instances were transcribed in others. I listened to the interviews and classroom observations multiple times during this process and familiarised myself with the data. I referred to the field notes from the classroom observations during the analysis and transcription. A few interviews were transcribed in Malayalam, and the relevant portions were translated into English during the analysis process. All other classroom observations and interviews were translated directly into English while transcribing. Working with the translated transcripts had its limitations as many usages have meaning only in the particular culture. Usages like "line adikuka", "kyyum kaalum kanikum" don't have English equivalents. These reflect the social organisation and values, and an English substitute loses the cultural element which shaped the discourse. For instance, the usage of "kyyum kaalum kanikum" can be literally translated as 'showing hands and legs'. This phrase could mean anything from expressing/signalling interest to seducing and was used by a teacher with reference to girls. The socio-cultural space in Keralam actively monitors women and girls with respect to the way they dress and offers little sexual freedom. Any show of skin is seen as an attempt to seduce. Hence, during the process of translating, a significant amount of meaning is lost. Also, a researcher while translating adds a layer of her own interpretations. Therefore, the translated transcripts here are my interpretations of what the teachers said.

I listened to the interviews multiple times during this process to get familiarised with the data. I analysed each interview individually and made observations on the narratives of each participant. I coded the instances that were of interest to me. I grouped the codes across all the interviews that shaped a particular discourse. For instance, the discourse on 'surveillance' consisted of codes like 'classmates reporting instances to teachers about other students', 'teachers restricting meeting places outside the school', 'teachers checking school bags', 'teachers surveilling romantic relations'. The discourse on 'safer sex'' consisted of codes like

'teachers' notion of safer sex', 'teachers' perception of textbook discourse', 'teachers' disagreements with textbook discourse', 'how teachers discuss safer sex', 'cultural-moral values', 'justification', 'personal experiences' and so on. Some of these codes individually become subthemes in the analysis, while others combine to form a subtheme.

An attempt has been made to understand each of the discourses by contextualising them in their specific social and historical settings. I intended to focus the analysis on how relations of power and different institutional and cultural discourses work to constitute specific sexual identities of the students. I use different analytical frameworks to analyse specific data in the thesis. Here, I use the analytical categories that these frameworks provide to (re)develop the codes. All the frameworks I employ examine the power dynamics inherent in various discourses and how these shape or construct subjectivities. Therefore, they all align with the principles of critical discourse analysis. I provide a summary of the frameworks I use in the respective chapters.

My understanding of sexuality is influenced by my heterosexual lived experience, implying that my personal perspective and biases may have swept into the research. Despite my efforts to see things through a queer perspective, I am aware that my lived experiences as a cis-woman influences various aspects of the research process. As mentioned in the beginning, interpretations of each discourse are contextually bound. During the interpretations, I use learned rules and knowledge that are shaped by my own social, historical, and cultural background.

2.6 Methodological Approach

I employ discourse analysis as the methodology in my thesis, which enables me to examine the discursive space of biology classrooms in greater detail and offer insight on how language, power, rituals, practices and social norms affect the shaping of sexual subjectivities.

Discourse refers to actions that shape the ways in which meaning is constructed, conveyed, and understood within specific contexts. Discourse analysis allows for an examination of discourses as sites of struggles, where different groups endeavour to shape social reality in ways that align with their intentions and establish superiority over others. It acknowledges

that social reality is not fixed or objective, but rather a product of the production of concepts, objects, and subjective positions (Hardy, Palmer, & Phillips, 2000). In other words, discourses play a crucial role in shaping and constructing our understanding of the world. Discourses are influenced by the social context and structure in which they exist, while at the same time, the social context gives rise to new discourses. This mutual constitution between discourse and social context underscores the dynamic and evolving nature of discursive practices (Fairclough, Norman and Wodak, 1997). However, discourse should not be considered as the sole constituent of social practices and we should not disregard the experiential and material aspects of power and identity (Lazar, 2007). Discourse can be instrumental in reinforcing and perpetuating existing power dynamics and social hierarchies. It serves as a means to maintain and reproduce unequal power relations between different social categories such as race, gender, caste, and class. Through choosing discourse analysis as a methodology, I explore the construction of worldviews, the exercise of power, and the role of discourse in maintaining or challenging unequal power relations within society.

Critical Discourse Analysis (CDA) operates within an emancipatory framework, striving to reach a just social order through a critical examination of discourse. The primary focus of critical discourse analysis from a queer-feminist perspective is to scrutinize discourses that uphold a hetero-patriarchal social structure, perpetuating power dynamics that systematically favor cis-men while disadvantaging others (Lazar, 2007). In the context of CDA, where social practices are both reflected in and constituted by discourse, a queer feminist perspective underscores that many seemingly neutral social practices are, in fact, gendered. Gender operates on two levels: first, as an interpretive category shaping how a community comprehends and organizes its social practices, and second, as a social relation that influences and partially shapes all other social interactions and activities (Lazar, 2007).

I adopt the strategies outlined by Waitt (2005), which provide a framework for critically examining discourses. These strategies include:

a) Rejecting/suspending pre-existing categories: involves challenging preconceived notions and assumptions, allowing for a more open and critical analysis of the discourse.

b) Familiarization with the text: involves examining the relationships and connections between words and word clusters within the discourse. This involves identifying different discourses present in the text and exploring how these discourses are interwoven.

c) Identifying key themes: involves using systematic coding methods to identify key themes within the discourses present in the text.

d) Analyzing the establishment of validity and worth: involves examining how arguments are presented within the discourse. This includes assessing whether certain ideas are presented as common-sense, natural, and beyond questioning, thereby establishing their validity and worth.

e) Identifying inconsistencies: involves looking for inconsistencies within the discourse, recognizing that they may reveal contradictions or gaps in the arguments presented.

f) Exploring silenced discourses: involves examining which discourses are marginalized or silenced within the text. This includes considering whose voices and perspectives are represented and whose are omitted or suppressed.

g) Identifying subject positions: involves investigating the subject positions of the teacher and students within the discourse. This involves understanding the participants' gender, class, sexuality, and ethnicity, as these subject positions influence their relationship to the reality constructed through the discourse.

I take a narrative inquiry approach (Bell, 2002) in this study, where I try to make sense of the institution of school and classroom, its practices, and the discursive production of subjectivities, by listening to teachers' narratives, classroom observations, and by closely looking at the textbook discourses.

2.7 Theoretical orientation

The thesis is grounded in a queer theoretical framework. In essence, queer theory seeks to challenge and disrupt heteronormativity—the prevailing assumption of heterosexual culture

as the elemental and fundamental form of human association, intergender relations, community basis, and reproductive necessity for societal existence (Warner, 1993, as cited by Sumara and Davis, 1999). Heteronormativity, as Warner says, permeates the ways in which society perceives itself and structures its relationships.

Queer theory provides a lens to scrutinize what is often presented as 'natural' in textbooks and classroom discourse by deconstructing binary constructs, compelling a broader understanding of sexuality and gender. This theoretical perspective delves into the regulatory nature of binary constructs, prevalent in modern culture and society, which organise themselves around assumed oppositional binaries. Given that sexuality relations are the organising principle of society, queer theory posits that destabilizing these relations can bring about societal change. This approach continuously evolves by critically examining the presence of heterosexual hierarchies within queer discourses and delving into the normative logic that upholds them (Smith, 2010). The framework, thus, engages in a continuous questioning of societal norms and assumptions, seeking to unravel the intricacies of power dynamics and norms that shape perceptions of inclusion and exclusion within diverse social contexts (Roseneil, 2000).

Unlike fixed and monolithic views of sexuality, queer theory views sexuality as non-fixed and fluid, challenging the status quo by rupturing fixed categories. The overarching goal of queer theory is not to introduce more fixed categories but rather to disrupt and challenge the rigid and stable nature of existing categories. It recognizes that the construction of categories serves as a means of social control rather than empowerment (Nelson, 1999). Queer theory, therefore, transcends mere inclusion efforts, delving into the processes that render certain identities as 'natural' over others. It aims to disrupt sameness and to challenge the status quo by exposing hidden prejudices within any discourse. It views prejudices as mechanisms of social control over gender and sexual roles (Snyder & Broadway, 2004). The historical roots of queer theory can be traced back to the struggles of the gay community against hegemonic normativity, including patriarchy and racism, seeking subjective agency in their experiences (Minton, 1997). Queer theory has widened its scope and recognizes the multiplicity and fluidity inherent in human experiences of gender and sexual orientation, acknowledging that individuals exist along a spectrum rather than conforming to fixed categories. It thus aims to foster a more comprehensive and equitable understanding of the diverse ways in which people navigate and express their identities and desires.

In science education research, discourse analysis using a queer theory perspective becomes a tool to identify and intervene in the oppressive social impacts of biological discourses, disrupting the conventional representation of sex, gender, and sexuality (Bazzul & Sykes, 2011). Sumara and Davis (1999) argue that science educators should discuss desire, pleasure, and sexuality in the classroom to disrupt heteronormativity, emphasizing the importance of recognizing the heteronormative nature of school science and acknowledging it as a human endeavour that is classed, sexed, and colonized.

2.8 Conceptualisation of Structure and Agency

It is important to outline how I conceptualised the function of structure and subject agency in the formation of a particular discourse which are the points of analysis of my thesis. This conceptualisation and the thesis have been mutually constitutive. I assume that the structure (referring to the social, cultural, political and institutional framework that produces norms, laws, and social hierarchies) plays a significant role in shaping how individuals perceive and make meaning of their actions. Individual subjectivities are not isolated or independent, they are influenced by the power dynamics inherent in our social, cultural, and political environments. The subjectivities are not fixed or static. Instead, they are constructed and reformed through social interactions and engagements. Each time individuals interact in social actions, their subjectivities are shaped and transformed. However, the individuals possess a certain degree of control over the social relations in which they are involved. Individuals have the capacity to exert agency and can potentially transform those social relations to some extent. However, this individual's ability to act is mediated by their socio-cultural context (Bazzul, 2013).

This means subjectivities can adapt and respond to the structure in which individuals find themselves, but the extent depends on their subjective position within the power hierarchy (Blackman et al.,2008). They emerge through a dynamic interplay between the structure and the individual choices. Thus, individuals may navigate and negotiate their identities and actions based on their relative power and position within the larger social structure.

Building on this, I go with the assumption that teacher subjectivities are produced within the complex discursive space of different social actions. These social relations and institutional practices both shape and are influenced by the actions of teachers. Within the larger macro-

discourse, teachers consciously or unconsciously adopt positions, make choices, and engage in actions that contribute to the production of their own subjectivities as well as those of their students. These choices and actions are not isolated but are embedded within the broader social and institutional contexts in which teachers operate. These choices contribute to the production and reproduction of specific discourses in the classroom. Teachers make meaning of different discourses based on their subjectivity, thus their beliefs and values become the frame of reference by which they interpret and make meaning of reality. Therefore, the discourse produced is mediated and influenced by particular subject positions constructed within the complex network of social relations. Thus, teachers, as mediators of discourse in school and the classroom, are both shaped by and actively shape the larger structural discourses.

2.9 Documenting Doctoral Journey - Positioning myself within the research

Positioning involves the discursive process through which individuals actively locate themselves in conversations. This involves presenting oneself as a coherent participant within collectively constructed storylines. Essentially, positioning involves the continuous negotiation of one's identity and role in conversations, drawing on familiar narrative structures and reading them within personal, subjective experiences and meanings (Gordon, 2015).

Position occurs at multiple levels as Bamberg (1997) points out. The first level involves the way characters are positioned relative to each other in narrated events, including how the narrator positions themselves among other characters. The next pertains to how the narrator positions themselves in relation to the audience during storytelling. For instance, the analysis considers whether the narrator's language serves an instructional purpose, guiding the listener on how to respond to challenging situations. Here, the focus is on examining the linguistic choices made by the narrator to convey instructions, justifications, or attributions within the given discourse context. The last level focuses on the writer's positioning of themselves as the storyteller in a way that extends beyond specific interactions, allowing for more decontextualized claims about the self. This level explores the process of how the narrator positions themselves in relation to their own identity through language. It delves into the use of language as a tool for asserting claims that the narrator perceives as true and relevant

beyond the immediate conversational context. In essence, it suggests that not only do the linguistic devices employed in narration convey the content and address the interlocutor, they also serve to construct the narrator's sense of self and identity. This act of self-positioning transcends the immediate goal of being understood by the audience, and extends to an abstracted understanding of self.

In this research, it is crucial to reflect on how I, as a researcher-narrator, position myself among other participants or elements within the context. This also extends to considering my position in relation to the audience, akin to a storyteller addressing their listeners. I recognise that research discourse serves not only to convey content or what I have to say, but also to construct my evolving sense of self and identity. Describing and articulating my positionality seems to be a challenging and complex task, perhaps due to the numerous contradictions I encounter. I believe that by making the researcher's subjective position as explicit as possible, the reliability and validity of the claims can be strengthened. Although I have attempted to explicitly express my positions throughout the following chapters, I will now outline a brief trajectory of how my positioning evolved over the course of the research period.

My interest in this doctoral study arose as a response to many of my gendered school experiences and my resentment towards my teachers. I believe when one engages in research on topics such as this, it is important that one develops comfort and ease around these aspects on a personal level. Throughout my journey, I found myself constantly working to comprehend and transform my relationship with my body. However, it took some time for me to truly grasp the realization that this struggle is highly personal and that it is an ongoing process. Initially, as I delved into my research, I may have approached it with a certain level of detachment or objectivity. With time, the process of academic exploration started to have some influence, mostly a troubling one, in positioning myself within the larger structure. I encountered moments of introspection, self reflection, and self acceptance. I realized that transforming my relationship with my body required a willingness to confront my own and societal expectations, insecurities and cultural influences.

Initially, I positioned myself as someone who is very comfortable with the aspects around sexuality, and who was able to surpass many social and cultural meanings ascribed to the body. Through this journey discovering my insecurities and troubled relationship with my sexual being broke my perception of myself as a 'progressive liberated woman' which was a

major setback at various points. This dissonance with my perceived self often posed larger questions around my identity. It took some time to actually understand that the process of self-acceptance is a continuous process. Ultimately, recognizing the personal nature of this struggle, I believe, allowed for empathy and open-mindedness when engaging in this research.

My relationship with the teachers I interacted with also underwent a similar trajectory. As mentioned before, my initial relations with the participating teachers in the study involved resentment I had towards teachers who had taught me. I placed the participating teachers in an antagonist position at the beginning and considered the protectionist discourse that they shared as an effort to suppress and limit students' experiences. My understanding that my thoughts are bound by morality helped to shatter the binary of regressive and progressive categories. As I delved into the complexity of sexual culture, where sexuality is expressed, practised, and understood in certain ways, I partially started to let go of my judgments. I recognized that teachers and sexuality educators were also striving to create a safe space for children. However, I also realized that there could be differing interpretations of what constitutes a safe space and how to create one, which requires continuous dialogues and negotiations. Identifying the shared goal of promoting a safe space allowed me to approach teachers with a better sense of understanding and openness.

2.10 Ethical considerations

The institutional guidelines of HBCSE for ethical practices and procedures to protect the participants from any potential risk or exploitation were followed while carrying out this research.

Detailed information about the research was provided to the teacher participants and the principal of the school involved. This encompassed the broader research question, details on how the data would be used, and information regarding the storage, publishing, and reporting of findings. This information was included along with the consent form (Appendix C, Appendix D) and the letter that was given to the principal (Appendix E). Contact details were shared in case any issues arose due to the research, facilitating opportunities for participants to make inquiries and express concerns. The research was conducted within the school, inside the unoccupied classrooms, where teachers felt comfortable. Interviews were conducted in

Malayalam. We also took short breaks in between long interviews. No information about classroom discussions and interviews was analysed outside the academic sphere. None of the teachers' knowledge, arguments and opinions were subjugated and dismissed during the research. All COVID protocols mandated by the state, as well as additional specific ones outlined by the school, were also adhered to.

Teachers were made aware that they are free to withdraw their consent and exit the research at any point. The confidentiality of the school, teachers, and students was ensured, with a commitment to not disclose information that could reveal the identity of the participants or aid in tracing them. Pseudonyms were employed during analysis and reporting to safeguard the participants' identities.

The study was guided by broader values which went beyond institutional ethics guidelines. A major aspect of doing research, in my view, involves disclosure of my positionality. Throughout the research process, including interactions with teachers, analysis, and writing, I have made efforts to talk about my positionality in various ways.

In the interviews with the first set of teachers, they expressed views which I had disagreements with. The teachers appeared comfortable to share their (socially constructed) opinions as I shared the same nominal cultural-religious identity with them. However, for the sake of more 'interesting' data, I did not did not disclose that I may have differing opinions. This was a conflict that I grappled with for some time. I pondered if I had 'deceived' the teachers by not sharing my views. This made me seriously reflect on what my role as a researcher should be.

In the interviews with the second set of teachers, there were many occasions when teachers asked my perspectives on certain aspects or posed the interview questions at me, which I engaged with more commitment and seriousness. With a few teachers, even after the interviews and observations, there have been occasional discussions and exchanges of relevant videos on the topics. We sometimes inform each other about some activities or talks that are of interest.

My second important concern was that as a researcher I should cause minimal harm to the pedagogical setting and ensure the comfort of the teachers. Teachers seemed comfortable, at

least not evidently disturbed, in my presence. Here I should also acknowledge that my access to the teachers was mostly through my network. My mother, who had just retired from teaching, was very active in the Teachers' union and familiar with a lot of teachers. Many teachers and principals readily allowed the interviews and observations due to their acquaintance or friendship with my mother. I had initially approached more teachers for observation. I could sense that two teachers were not very comfortable but committed to partaking in the study owing to their acquaintance with my mother. I chose to opt-out as their discomfort and tension were evident during the initial interactions. All other teachers, I assume, consented to the research freely and appeared comfortable. I also wanted to cause minimal disturbance to the teachers while in the class. In most schools, teachers introduced me as a Ph.D. scholar. In one school, the teacher introduced me as a supervisor/inspector who had come to observe the class. The teacher also requested the students not to create any 'nuisance as they normally do'. I didn't try to change or oppose the teacher. However, over the next few days, the students figured out that I was not an inspector. Students were curious and inquired about my work occasionally. I made the decision not to interfere with the lessons being taught in the class. There was an instance I happened to notice while sitting at the back of the classroom. The ink of a student's pen ran out and he asked around to find out if someone had an extra pen that he could borrow. The teacher was upset with the student because he believed that the student was talking to other students behind his back. Only after class did I decide to inform the teacher that the student was, in fact, searching for a pen. Though I am not convinced about my position, I think it's important to discuss the moral dilemmas that arose during the non-participatory observation.

Teachers mentioned that the students used to participate more in classroom discussions before; and that they might be restraining themselves as I was present. I recognize that my research has limited the space for discussion for the students. The classes might have become more formal, where the students would not be comfortable asking questions and discussing. This was partially because of the COVID situation as I could not start observations a few days before the relevant chapters and make myself a familiar part of the class. Teachers were also under a lot of time constraints. Many of them had initially planned to quickly go through these chapters and focus more on the later ones. According to the schedule that was given, teachers were expected to spend three sessions each on these two chapters. However, teachers spent more time on these chapters. I acknowledge that the teachers and students had to plan chapters differently to compensate for this extra time.

Throughout the research, I also made an effort to not subjugate or dismiss the knowledge, arguments, and viewpoints of all participants. I made a conscious effort to keep my biases and prejudices to a minimum during the analysis, writing, and interaction with the teachers, as well as to take an empathic position. This required knowing the sociopolitical context in which the teachers are situated as well as their demographics. Also, an attempt was made to stick close to the data and avoid drawing broader claims as much as possible.

Chapter 3

Shaping of Sexual Subjectivities within the School Microculture

3.1 Introduction

This chapter attempts to explore the prevailing value systems and the resultant micro-culture within a school setting. Here, I examine the interconnected discourses and narratives that act to together shape specific preferred subjectivities. The primary focus lies in comprehending the intricate manner in which certain discourses on sexuality are legitimized or delegitimized within this school environment. Grounded in the context of a Catholic management government-aided school located in Wayanad, this analysis tries to decipher the multifaceted dynamics that shape the institution itself, its operational practices, and the creation of discursive subjects.

The overarching aim is to explore the complex mechanisms through which power dynamics and interaction of institutional and cultural discourses collaboratively contribute to the construction of chosen sexual subjectivities within the school. In the exploration of these dynamics, each discourse on sexuality within the school setting is broken down and examined. By looking into the social and historical backgrounds of the discourses, this chapter tries to explore the factors that have shaped their existence. The methodology employed for this purpose involves discourse analysis, offering a structured lens through which these discourses can be understood and deconstructed. Through the exploration of the Catholic school's unique context, practices, and prevailing discourses, this analysis seeks to contribute to the larger discussions on power dynamics, subjectivity formation, and norms in educational settings.

As mentioned in the previous chapter, the school chosen for this study is a Catholic management Government-aided high school. The school is about 45 years old and was established to primarily educate children connected to the church. The school is run by the diocese, and the head priest is the manager of the school. This institution, which falls under

the category of minority educational institutions, is free to select its board of directors and hire both teaching and support staff. Nearly all the teaching staff in this school, with the exception of a single person, belong to the Syrian Christian community. As a result, the group of teachers becomes religiously homogeneous, which plays a pivotal role in producing the micro-culture of the school, which can be seen from the teachers' narratives.

Microculture refers to a shared set of beliefs, norms, values, symbols, artefacts, practises, and discourse among a specialised group with a shared identity in a formal or informal learning environment (Pöysä-Tarhonen, 2012). Every member of the group might be familiar with the expectations for behaviour within their environment through social and cultural norms (which are again reproduced and sustained by the members). Microcultures are subcultures where the members are significantly influenced by both the norms of their particular community and the norms of the larger culture in which they live. These belief systems and the knowledge produced within the group will influence their perception of others, which in turn affects their behaviour. When a group of members maintains control and occupies a higher position in the institutional order, their shared values become hegemonic. The institutional practices therefore are shaped by these hegemonic ideologies, values, and beliefs. Hegemony is a form of superiority that can be obtained through moral and intellectual leadership, negating the need for physical force and violence (Buyruk, 2021). Through sociocultural and ideological means, the superiority of the group is established, and its worldview and ideology become the community's shared values. There is a chance of a cultural clash and the imposition of one group's value system on others when those in positions of power come from the same cultural subgroup that has gained hegemony in the system.

Hence understanding the political nature of the school requires an examination of the hegemony construction and different micro-cultures of the school and the power relation between them. Examining the microcultures within the group of teachers and school, in general, shed light on their belief systems and worldviews, as well as their influence on practices and decisions about teaching and learning.

To explore the school's microculture, I employ two approaches. The first involves engaging with teachers' narratives regarding their interpretations of student sexuality. It was decided to interview teachers about their perceptions of students' sexuality since they play the most important role in the school's functioning and thereby the reproduction of dominant values.

The second entails analyzing the value education curriculum and classes to discern which values related to sexuality attain hegemonic status within the school. I am interested in looking at whether and how teachers' interpretations and narratives have been shaped by the microculture of the school.

3.2 Exploring teachers' narratives on students' sexuality

In this section, I present teachers' narratives and explore cultural beliefs concerning childhood sexuality. I attempt to understand ways in which the cross-cutting modalities of religion, caste, gender, and sexuality of the teacher and the student shape students' sexual subjectivities. I describe how the interaction between students and teachers is informed by power relations and how these interactions shape teachers' expectations of students' sexual knowledge, experiences and expression. This analysis draws on interviews with nine high school teachers of the school. This includes three men (T4, T8, T9) and six women (T1, T2, T3, T5, T6, T7), of whom two teachers are nuns (T2, T5). All teachers interviewed were Catholic Christians and in the age range between 32 and 55 years.

Since I share a similar religious background with the participants, most often I was considered an insider and a category of 'us' and 'they' were made by the teachers. However, the insider/ outsider category seemed insufficient and not fixed with respect to the relationality between me and the participants. Multiple identities of mine and the participants, the identity of being a woman, Christian, researcher, person outside of the school, local, unmarried, age, culture and social class, interacted in different ways to create a specific discourse at a specific instance of time. The openness and intimacy in the relationship changed with shifting identities. More details about the interview process were discussed in the earlier chapter. Roughly an hour was planned for each interview, however, some were shorter and some lasted longer. These were open-ended informal interviews and were conducted from the school. A pilot interview with the first participant was done over the phone. The questions for the further interviews were based on the intuitive themes and patterns that emerged from the pilot interview. The interview began by asking about how long the teachers had been working at the school and some information about the students' demographic. From there, we discussed topics like whether the school had classes on adolescent education, if they thought these classes were important, what students knew about sexuality, how they talked about it, where these discussions took place, what different ideas

students brought to the school about this topic, how students interacted with each other and the teachers, how do parents engage and so on. I aimed to use these interviews (and the study) to develop a general understanding of teachers' perceptions of students' sexuality and to extrapolate these insights while examining the biology classroom.

As we will see from the analysis, there is a cultural clash between different communities within the school. My intention here in the analysis is not to speak for others. I can only talk about how my privilege allows me and my community to sustain unequal power relations and structural inequalities. I see this research as a self-critical reflection on the belief system, values and discourses I am a part of. There is also no attempt to talk about the subordinate experiences as my history, social position and privilege would only provide me a distorted understanding of their experiences. Here I am talking for myself and I am trying to convince the readers that my arguments have some merit. This should be seen as a discourse in which I strive to prove my worldview. Hence this analysis will be one among many possible.

3.2.1 A note on the Analytical Framework

After going through the interview transcripts a few times, it became apparent that four specific domains of power, provided by Patricia H Collins (2009; 2019), were distinctly observable within the narratives provided by the teachers. This encouraged me to use this as an analytical framework to look at how dominant sexualities are privileged and exert their influence within the school environment. The main objective of the analysis is to understand

- How teachers make sense of their students' sexuality
- How social and institutional discourse manifest in the everyday experience and influence personal narratives
- How social and institutional discourses construct social relations.

This framework of domains of power by Patricia H Collins (2009), offers a useful model to analyse how domination is organised and operates in different interrelated power domains. This framework suggests that different forms of oppression interlock to produce a larger structure of domination. Collins explains that the intersection of different forms of oppression is not additive. The multiple forms of powers intersect at various degrees at different space-times and intersecting patterns leave the individual with a unique set of lived experiences and

reality, establishing their relationship of domination and subordination within the larger structure. This model moves beyond the binary assumption of oppressor and oppressed and argues that the privilege and penalties of an individual vary with time and context.

The framework explains how privilege and oppression manifest in four domains- structural, disciplinary, hegemonic and interpersonal- and shape one's experiences and actions. These domains are the site for oppression and resistance simultaneously. The structural domain of power refers to the systemic oppression and domination structured through social institutions like schools, hospitals, workplaces, religions, and other organisations. The disciplinary domain controls and oppresses through the organisational practices of rules, policies, hierarchies, surveillance, and punishments aimed to produce specific subjects. The hegemonic domain manages oppression through ideology and culture, as an essential function of social institutions is perpetuating the dominant groups' ideas and thereby normalising them. These ideas justify organised practices and domination. The interpersonal domain of power operates through internalised biases and prejudices which are reflected in the micro-level routines and practices.

Through Collins' framework, I have tried to understand how the four domains of power operate within a school to reproduce and sustain gender and sexuality norms. Dynamic centering (Collins, 2008) helped us to focus on the intersection of age, sexuality, and religion, whereas class, caste, and other forms of oppression are held more constant. I place sexuality at the centre of our analysis to bring out its intersection with the other forms of identities and macro-discourses. Here I refer to Foucault's work on sexuality (1990) to understand how sexual individuals are created through and by various discourses. These discourses not only have normalising and repressive effects, but lead to the self-identification of individuals. Sexuality is understood not as a set of reified features of the individual, but as a set of discursively constructed practices. Sexuality is thus an apparatus that enabled modern power to develop new ways of disciplining the individual. Body and sexuality hence become the targets of power and the locus of social control. Foucault explains sexuality as the "transfer point for relations of power between men and women, young people and old people, parents and offspring, teachers and students, priests and laity, as administration and a population (Foucault, 1990 pg: 103)."

3.2.2 Analysis of Teacher Interviews

a) Dissemination of 'true' knowledge: The structural domain of power

This section discusses how the structural mechanisms within a school environment contribute to reinforcing culturally privileged notions of sexuality that sustain the larger socio-economic organisation, including labour divisions, family organisation, reproduction, religion, and other social institutions. The official school discourse on sexuality is shaped by the social, economic, cultural, and political systems in which the school is located. Schools prevent the production of undesired sexualities primarily by limiting and policing sexuality discourses. The rituals and practices of the schools are designed to perpetuate the societal norms of sexuality. These strategies are often manifested through rules, guidelines, and policies that dictate how sexuality-related topics can be addressed or if they should be avoided altogether. This controlled approach to sexuality discourse can act as a mechanism to suppress alternative perspectives or sexualities that challenge culturally privileged norms.

In the structural domain, we can perceive how sexual moral codes are transferred to students through specific channels, of which the discipline of biology is an important channel. Schools predominantly discourage alternative avenues for providing sexuality education, particularly those that exist outside. This could be seen from the perspectives shared by the experts below.

> *T5: It's generally heard that in madrasas such classes (on sexuality) are given.*
>
> *Interviewer: But shouldn't the school also provide such information or knowledge to the students?*
>
> *T5: But if it's excess (indicating madrasas), it's bad. It should be given, however, it should be delivered in a way which is good for children. There are sex education classes for adolescents. We invite some biology teachers and teachers from the education department for this. They communicate these aspects to the students, with a special emphasis on girls.*

In this context, the domain of biology classes emerges as the primary arena where students can access and engage in discussions pertaining to sexuality. The confinement of sexuality-related discourse to biology classes is a marked observation within the school environment.

As Collins (2015) says, science is an 'elephant in the room' in propagating and legitimizing social practices that perpetuate inequality.

Schools use the discipline of biology to establish normative notions of gender and sexuality (Bazzul & Sykes, 2011). The authority of 'value-free' and 'objective' science establishes acceptable and non-acceptable bodies and identities by categorizing some as natural and others as unnatural (Lemke, 2011). Thus, the discipline of biology provides students with the 'correct' and 'true' knowledge about sexuality. This also means that sexuality gets limited to the biological functions of the body and that the discourse on sexuality becomes 'non-complicated'. T6 explained how biology provides 'age-appropriate' knowledge on sexuality to students:

> T6: We have classes on this. It's clearly written in biology textbooks. We have chapters on sex organs and changes during adolescence in classes 8th and 9th respectively. So, a child who passes class 8th has enough knowledge about this. In the class, where both boys and girls are present, we explain what menstruation is. When taught this, girls become timid. The boys are unconcerned. Since they are unaware, they are curious to know.

As mentioned, sexuality discourses are placed within biology, and any discussion outside the purview of biology is discouraged and limited. Biology classes become the site for students to know and talk about body and sexualities. Since school biology is silent on many topics like sex practices, any discussion on these is considered illegitimate. Importantly, the discipline provides the learners with 'facts' and eliminates the space for opinions. Thus, school biology discursively produces ideal sexuality by not acknowledging sexual (homosexual) desires and expressions (Bazzul& Sykes, 2011). Any deviation from the above is left to the domain of psychology, ie, the counselling psychologist intervenes and 'corrects' the non-normative behaviours. Romantic expressions too are considered unusual, and students involved in romantic relations are sent to a counsellor. T5 provides an anecdote,

> T5: The child (a boy from 5th grade) I referred to before, the one who gave the love letter (to a girl of 4th grade) (the girl reported this to one of the other teachers which was then discussed in the staff room), I asked him to meet the counsellor. But he did not go. He was eluding me for the next few days.

When asked if they had any Sexuality education programs in the school, teachers mentioned about the value education classes which are aimed at "character building" of the students, but,

none of them mentioned it as spaces where they discuss topics around sexuality. This value education curriculum, designed by Kerala Catholic Bishops Council's Pastoral Orientation Centre, is taught in most Christian management schools in Keralam. A detailed analysis of this value education curriculum and the classes is presented in the latter section of the chapter. None of the teachers were familiar with the Adolescence education curriculum by SCERT Kerala. There were not any activities or initiatives that have been carried out in the school under the SCERT Adolescence education program.

b) The 'essential' sites of surveillance: Disciplinary domain of power

The disciplinary domain establishes (and sustains) the position of an individual in relation to others within the institutional structure. Collins (2008) mentions two functions of gaze - firstly, it functions as a technique of control through the means of surveillance, and secondly, it makes the powerless feel watched in spaces in which they don't belong. Here teachers are under pressure to act as a group assigned with the duty of surveilling; making students the object of surveillance. Individuals taking up and performing the respective roles ensure the institution's functioning. This is achieved and ensured through day-to-day school practices, as well as written and unwritten rules. The disagreement of an individual with the expected role provides the starting point for resistance.

Schools also involve parents to become partners in the surveillance, thereby forming a network of gaze. Teachers and parents work together and support each other to perform their roles. What unites teachers and parents is their understanding of students, as put by T5, "during this adolescent age, they don't like to share things with parents and teachers".

Parents mostly take part in the system of surveillance in two ways. The first involves observing and reporting deviant behaviours to teachers, such as excessive use of mobile phones, or interactions and gatherings outside the school. It is through parents that teachers are able to extend the surveillance outside the school. Parents also get information from children about the incidents happening within the school to which teachers may not have access. T3 mentions,

> *T3: One day after biology class, one girl was talking about something during class. Other students found it uncomfortable and told their parents. They called me and told me that this child is having some forbidden talks in the class.*

The second role is of correction and punishment. Few teachers expressed their distress about the new policies that forbid them from using corporal punishment as a disciplinary measure. These policies have led to a change in the dynamics of teacher-student relationships and disciplinary measures in schools. They believe that this prohibition is causing difficulties in managing students' behaviour. In the past, corporal punishment might have been used to control students' behaviour, and the absence of this option is seen as a factor contributing to what they perceive as "unregulated" or unruly behaviour among students. As a result, teachers are more inclined to involve parents in matters of punishment rather than handling it solely within the school.

> *T5: I mean they (students) don't like us. Since we get involved in their matters. We pay attention, so they keep a distance. It's not dislike, it's just because we are involved in their matters, there is no personal or individual hatred. They feel that we are getting involved unnecessarily and this is not our business. But parents are supportive. I am in touch with all parents. If I find any issue with their character and behaviour, I call and inform the parents."*

Surveillance is not only used by one group on another; it occurs within the group too. Among students, self-surveillance happens with a few students monitoring others, becoming associated with teachers, and establishing themselves as relatively more powerful.

> *T2: Students discuss with each other what they see, like blue films[9] and such. They tell other students. Among them, if there are any good students, they tell us that they are discussing some bad topics. In this way, we get some clues. So when students go outside, we check their bags.*

Here some students are considered good for becoming useful subjects who help in surveillance and thereby help the functioning of the structure. These students who are information providers could be indirectly rewarded by the teachers, which can be understood by terms like 'good students'. Each student may also self-regulate based on their understanding of norms.

There is also monitoring within the teachers themselves. Since it is believed that open discussion about sexuality encourages students to become sexually active, all such discussions are policed. However, it was evident from the interviews that women teachers are expected to participate in various discussions on sexuality to shape the ideal gender and

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[9] The term 'blue film' is used to refer to erotic/ pornographic films.

sexual behaviours in children. Sexuality thus becomes a topic about which women teachers can talk in school. When male teachers talk about sexuality, especially to girls, their intentions are questioned and looked at suspiciously. A male teacher shared his experience of how he was accused of corrupting the students after discussing pubertal changes with the students in the class. T8 said, "The students were comfortable and had no problems, but other teachers were not". The teacher said that now he prefers to stay away from such topics, indicating his awareness of the gaze of his colleagues; choosing to comply with the norms.

Any romantic relationship between students is strictly policed and controlled by different structural means and punishments, often involving parents. Strict gender boundaries are maintained by limiting interactions and cross-gender friendships. This is achieved by both physically and socially (in terms of space and activities) separating girls and boys inside the school. Any interaction between boys and girls is looked at with suspicion and considered a threat. Policing romantic relationships inside the school becomes a need of teachers, parents, and society and, hence, all of them work together. T5 stated, "Students stare at each other in the class. If there are any lovers, they try to sit together however much we try to separate" illustrating the effort the school makes to control romantic relations through rules and how students try to resist these.

Teachers identify the 'older friends' as a group of people who corrupt innocent and disciplined students. Students' interaction outside the school is viewed fearfully as it can overrule the entire school discipline. The outside spaces like bus stands, roads, tuition centres and so on have been kept under watch. However as teachers have understood the impossibility of totally controlling the socialising places outside, there are efforts to minimise and prevent such places. Such an effort is evident from the below statement:

> T7: There are some tuition centres. We never encourage it. so the tuition centres have some hostility towards us. Students get a lot of space at these centres. Space to mingle with each other, it's not a positive mingling, yeah, I have heard that it's not going in a good way. In school, there is no such opportunity. These children when they go out, they bring some 'side effects'.

Teachers also talk about how school buses have helped to reduce socialisation outside and encourage parents to choose school buses for children. Eliminating such places of socialisation ensures that the child is always under the watch of either parents or teachers.

One way by which students resist institutional surveillance is by creating a trustworthy group within the school where they can openly discuss and produce sexual knowledge. These are closed groups, and teachers do not have access to them. Collins (2008) uses the metaphor of the veil to explain the gaze. The veil is not a fence, but is permeable and allows the less powerful to gaze back and develop sophisticated oppositional consciousness. The excerpt from T9's interview suggests the existence of such group resistance:

> T9: There are gangs formed. It's unclear what they are discussing. They keep everything within the gang, hence it's tough to know anything about these gangs.

Teachers mentioned that students gather restricted sexual knowledge from the internet, movies, peers, religious institutions, and older people in their socialising spaces. T2 indicated the following:

> T2: It's difficult to trace this (how they gather sexual knowledge). We get to know only when some cases are caught. From that, we understand that there is some racket outside. We get cases where younger children become friends with older ones, like students of class 7th or 8th go to play football with older ones or youths who don't go to school and wander around, they show these things... blue films, 'pictures that children should not see', and similar things from there...and this circulates...when one case is caught, we can trace many others.

As discussed, the official culture of the school tries to police any discussion on sexuality outside the permitted spaces. Students resist and oppose the ban of sexuality discourse by creating an alternate space where they can talk about it freely. These friendship groups become an important site of their identity formation. They create a secret space (which is not always and necessarily 'safe') among themselves, where they acquire this knowledge, actively discuss and make sense of it. The pornography gives students a false sense of freedom from regulation, but in fact is a neoliberal disciplining technology (Kurylo, 2017). By creating the standards of normality and deviance, pornography influences people to conform to certain standards and situates one into a fixed category.

Surveillance becomes the mechanism by which children are identified, categorised and disciplined. Student's gestures, speech, conduct, movements, clothes, interactions and so on are viewed suspiciously and undergo repeated scrutiny and evaluation. Students who do not

fit into the 'preferred sexualities' are advised, punished and made to render acceptable behaviours. Students too are quite aware of the surveillance and the expected behaviours. Both students and their sexuality are marked as good or bad based on how much they confirm and deviate from the structural norms.

Even though all the students are under surveillance, different students undergo different amounts of scrutiny. Many disciplinary actions are directed at girls which is a reflection of the patriarchal structure.

> *T5: There are very beautiful Muslim girls in the class. Their parents are very careful. They don't allow them to come for excursions and other programs. Many times we call the parents and convince them. But when these girls get a chance they make maximum use of it (interact with boys).*

This statement by a teacher reveals that the sexualities of Muslim girls are policed and regulated more. School uniforms are not only a means to create two kinds of gendered bodies, but also a disciplinary practice to enforce female modesty. This gaze comes from hypersexualising bodies of female students requiring them to dress in a modest way to protect themselves and not provoke men. The bodies of girls and women have always remained the central point of many patriarchal discourses which attempt to take over the ownership of bodies from women. This can be seen from T3's statement:

> *T3: Girls (Muslim girls) when they stitch their pants, they stitch in a way that their ankles are visible. Once I asked them, they told me that they are told to do so, it's in their book. Maybe that might be an excuse. When all other students wear the long pants, they look different and they do it for that.*

c) Acceptable sexualities and acceptable bodies: Hegemonic domain of power

Hegemonic beliefs, ideas, values, and ideologies shape the institutional practices within the school. By noticing how specific value systems possess power, we can understand how dominant groups regulate and shape students' experiences in the school. The dominant value system marginalises and invalidates the value system of the subordinates and labels them as deviants. As this school has members mostly from Christian and Muslim communities, the hegemonic discourse reflects the power relation between them. This creates hierarchies and categories of students and constructs shared beliefs of what constitutes good and bad.

Through excerpts from the conversation with teachers, we discuss how the hegemonic domain operates within the school.

i) Preferred sexualities

We have seen that certain sexual identities of the students were preferred by teachers and deemed appropriate and good. School discourse creates hierarchies of sexual identities based on 'virtue'. Values are attributed to different identities within the patriarchal and heteronormative value system. Students who enact the norms are marked 'good' while those who challenge the norms are seen as social and political problems. The cross-cutting modalities of religion, caste, sexuality, gender of the teacher and students, and the beliefs about childhood sexualities shape these value frameworks. A 'good' child is one who enacts the appropriate gender with limited cross-gender interactions and does not express sexuality (Allen, 2007). The child should also not be corrupted with 'too much' sexual knowledge (Egan & Hawkes, 2008a; Bhana, 2007a). Let us see how these labels are attributed to girls when they deviate from the expected identity:

> T5: Unlike the old days, boys and girls have no distance between them. There is no thought that 'I am a girl; I should not stand very close to boys'. Mostly they go up to them...they are very forward with boys.

This behaviour is believed to have been influenced by corrupting forces (Robinson, 2008) and is constantly compared with 'appropriate' behaviour that existed in earlier times (when the teachers were young).

However, 'too much interaction' among same-gender students is also not considered desirable. There is a fear of homoromantic relations and any interactions which go beyond the 'boundary of friendship' are not accepted as evidenced from the comment of T2:

> T2: I have doubts that boys are much closer than usual. How much, I am not sure. It is not just friendship. I don't know. However, we can read from their faces when we see some mannerisms and how they sit together. Even the way they casually sit.

Some teachers are finding it difficult to comprehend how children, who are relatively young and not yet emotionally mature, can engage in romantic relationships. These relationships are often seen as lacking in genuine affection and commitment, being perceived instead as something temporary or superficial, referred to as "time-pass" in the context. T7 says,

T7: I believe the increase in the usage of phones might be the cause. Children refer to it as 'line adikuka' (a colloquial term for dating) in their language. Even younger children are developing these inclinations. I will share an incident from a nearby school that occurred recently. A fifth-grade student confided in his teacher that he had feelings for a fourth-grade girl. This illustrates the current trend among children. If you ask me about the reason behind this, I don't have an answer.

Teachers' narratives also indicated the societal fear surrounding non-traditional living arrangements, such as cohabitation.

T5: Two to three years back, we came to know about a Muslim boy. His mother entered a relationship with a man who was the same age as her older son, and they chose to live together in this manner. They were living together that way. So the child is coming to the school seeing all this.....like they are staying together.

This fear stems from the concern that such arrangements could disrupt the established institution of family, which is traditionally defined by specific roles and responsibilities.This also points out the expectation of a certain age hierarchy in relationships. Typically, it is more acceptable if the man is older than the woman in a heterosexual romantic partnership. This dynamic aligns with traditional gender roles and power structures, where men are often considered the dominant figures in relationships.

ii) Whose sexualities are preferred

To understand these narratives, we have to look at the social context in which teachers and students are placed and understand how the macro discourses in society influence individual narratives. All teachers in this study were from Syrian Christian families, which forms the dominant group in the immediate school settings. The teachers have imbibed many prejudices from the widespread worldwide anti-muslim narratives. These beliefs and assumptions about the Muslim community shape and organise other acts and practices within the school. The hegemony of the Christian value system is made explicit in various instances in the interviews. Some teachers believed that Christian moral values could lead to a change in the character and sexual behaviour of students. This can be seen from T5's statement:

T5: We want all our students to grow with faith and fear. A large number of students are non-Christians. We never ask them to follow our religion or teach

them the religion. However, we pass them our Christian values and morals so they don't fail in their life.

To understand the hegemony of Christian values, one needs to view historically how Syrian Christians accumulated power in the local context. Christian missionaries played a significant role in the education system of Keralam and provided marginalised groups access to education. Their involvement in the educational sector cannot be seen separately from the larger aim of proselytism. As in other places, missionaries who came to Keralam aimed to purify the natives by changing their habits and practices thereby civilising the 'uncultured'. This aim can be derived from the biblical notion of a 'saviour' who was sent to save the people from backward regressive cultural and religious practices. A moral imperialism was achieved Through the establishment of various philanthropic networks like schools, that imparted and maintained a sexual discipline.

We need to remember that any different setting would reveal different hegemonic discourses; for instance, if the teachers were predominantly from upper-caste Hindu communities, the school discourses might be shaped by the Hindu value system. As we have discussed, the supremacy of one group is established either by associating subordinate groups with degenerate values or demoralising their value system. In the context of Keralam, the rhetoric of the Muslim population as people with distinct sexuality is powerful. This is similar to hypersexualised black bodies. Collins (2004) says, "African people were perceived as having a biological nature that is inherently more sexual than that of Europeans". We can see that this narrative has entered the school from the statement:

> *T3: For them (Muslims), boys and girls sitting together, touch or sex before marriage is not an issue. It's just a biological need for them. For us, in our community, it's forbidden...we treat that (sex) as sacred. They (Muslims) don't have that concept.*

Runkel (1998) argues that Christianity considers sexuality sinful and produces anxiety and guilt which is used to suppress one's sexuality and increase religious dependency. The religion also reduces sexuality to reproduction; thus every sexual act within marriage should aim at the production of a human life. Every other act of sex aimed at pleasure like homosexuality, sodomy, and masturbation is considered sinful.

The perception of the Muslim community has been largely shaped by the popular discourse where they are represented as people with unregulated sexual instincts. Islam is perceived as an irrational, regressive and stagnant religion (Osella, 2012). Often, the religion is blamed for 'uncultured and unregulated sexual behaviour'. These images have a role in shaping the public discourse on polygamy, talaq (termination of the marriage by the husband under Islamic law), child marriage, patriarchy, and so on. Even though the collective images of Muslim men and women are changing with time, many underlying assumptions remain. This negative characterisation of Muslims has a decisive role in the social reproduction of otherisation and prejudice regarding Islam. Most of the teachers interviewed held preconceptions about Muslim students. According to many teachers, Muslim boys and girls possessed more sexual knowledge and could corrupt non-muslim students. The unacceptable sexual behaviour of Muslim boys was attributed to the religious practice of circumcision by T1. In the interviews, Islam as a religion was constructed in two paradoxically different ways: a religion that restricts the agency of women and a religion that offers sexual freedom to women and men, which is socially dangerous. We had mentioned before that Muslim girls were under more strict surveillance than others. There was also a construction of Muslim girls as persons with more sexual knowledge who can corrupt other girls, hence a potential threat. This can be seen from the account:

> *T3: Muslim girls interact with boys more freely as compared to other girls. There is something beyond the normal friendship between boys and girls. It's not even love. Love is something which is eternal...this is different. They just want to appear beautiful, attract and invite others.*

All religious institutions play a significant role in constructing and shaping individuals' sexualities. This is because religion and heteronormativity are interlocked such that religion will collapse if the heteronormative value system loses its hegemony. Both Christian and Muslim religious institutions are active in imparting acceptable sexual behaviour and practices to students. However, the values catechism and madrasas impart are viewed differently. Some teachers believed that catechism provided Christian students with good morals, whereas madrasas provided children with, as T2 puts it, "excess sexual knowledge which is not age appropriate". Muslim students' sexual behaviours were attributed to the knowledge produced from the religious spaces, as can be seen from the comment:

> *T2: From their (Muslim boys') facial expression, we could understand that they know about these topics. When we teach these topics they, both boys and girls (Muslim students) express an all-knowing attitude.*

The discourse of Hindu and Christian girls needing protection from Muslim men comes with the construction of Muslim men as fanatics with unregulated sexual drive. This, along with the conspiracy theory of proselytism, shapes the 'love jihad' narratives in the public sphere of Keralam. Multiple teachers' statements show that this narrative has gotten into the school discourse too. T3's statements highlight this:

> *T3: These "kakka chekanmar" (kakka is a word used to refer to the Muslim community, sometimes non-muslims use it in a derogatory sense, chekkanmar refers to boys) will be there in the town from the morning, they will be seen near the bus stands, ground and in front of many shops. These are older boys, mostly dropouts from some schools. They wait on bikes for buses which the girls come and follow them to school. Girls also fall for them at this age, not all, but a few. They start chatting and, it will turn into a romantic relationship within days. These boys have a lot of friends and relatives inside the school, and they try to contact the girls through them. Girls will be reluctant initially, but these friends (girls) will persuade and convince them.*

This discourse can be seen as shaped by the macro-Islamophobic discourse prevalent in Keralam. Even if we claim that this is a prejudiced observation made by the teacher and is independent of other discourses, it ultimately strengthens and supports the love jihad conspiracy theory (Rao, 2011). Such a discourse exists when two categories - 'Muslim boys' and 'Christian girls' are constructed. For instance, if the participants were Christian boys and Christian girls, such a threat would not have been perceived. This statement should be viewed together with the power relations between different religions and the current political debates in India[10].

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[10] Many right-wing organisations have initiated hate campaigns alleging muslim men lure, marry, proselytize non-muslim women and also recruit them to terrorist organisations. Even though the NIA (National intelligence agency) has rejected such a conspiracy, Syro Malabar church has officially circulated circulars claiming 'love jihad' as true. This has been followed by many anti-muslim (also anti women) campaigns targeting christian youths to marry within the community. Many such persuasive and doctrinal strategies have been adopted by Hindu organisations too. The unification of these groups has led to further otherisation of muslims and portrayal of them as a threat to other communities.

The public discourse which stigmatises homosexuality as immoral and a societal threat is also rampant in Keralam. Ethnographic studies show the prevalence of more homosexual relationships among Malabar Muslims than in other communities which is attributed to the socialising pattern and long-term religious and trade relations between Malabar and the Arabian Peninsula (Osella, 2012). Hence, a narrative that marks homosexuality as a feature pertaining to Muslims is present. This rhetoric represents Muslim men as sexual predators of younger boys. Malabar men are stereotyped and ridiculed as homosexuals by people in other parts of Keralam. T1 said, "Many of these (Muslim) boys are used by older men... trucks and others... They now come and explain things to the other boys". When speaking about homosexuality among Muslim boys, the teacher had not come across or heard about any specific incident; however, she made speculations about her students based on larger narratives.

d) Permissible dialogues in the body: Interpersonal domain

Power operates in domains both in overt and covert ways, however, its presence is subtle in the interpersonal domain. The values and beliefs teachers enact in private spaces may be shaped by the dominant value system; hence it becomes challenging to demarcate one domain from another. I will now look at how teachers perceive and treat different students in their day-to-day interactions. Many practices that the religious values of teachers have influenced have already been discussed above as those value systems were hegemonic within the school culture.

Most teachers identified strongly with religion, which played an important role in shaping their identities and interactions with others. Religion was used as a marker for the students throughout the interviews. The teachers made the categories of 'us' and 'they' in many instances. Since the interviewer and the teachers belonged to the same religious community, the interviewer was considered as 'us' an insider whenever the religious categories were made. Most of the time, Muslim students were mentioned with adjectives like "*kaka chekkan*", "*Muslim kutti*", "*koya*" and "*manavatty kutti*" (manavatty is a word used to refer to Muslim bride).

Teachers understand that the underlying power relations between teachers and students make an emotional connection impossible. These power relations make students feel insecure to talk about their issues to teachers as they are aware of the surveillance and view teachers as

agents of the structure who gather information from students to administer disciplinary actions. Teachers feel that this is an inescapable situation. Few teachers go out of their way to break the power relations and establish a relationship based on trust with the students. This is in opposition to the structurally established relationship, which is characterised by mutual distrust. For instance, T6 made the following comment:

> *T6: I begin by saying, 'Sincerely, I won't tell others. You can talk to me about anything. I will keep this a secret. You can absolutely trust me. I will help you in all possible ways, this is not good for you if you continue in the same way. When we say this, they talk more openly. I keep that as a secret too.*

Here the teacher disapproves of the structurally assigned role of surveillance, punishment and disciplining and extends her help to resolve the issue as an ally. The statements also show teachers' struggle to establish alternate relationships within the structure.

Many teachers opined that the societal taboo and shame attached to the body and sexuality needs to be addressed and felt that students should be explained about menstruation so that it can be appropriately managed. However, the need to talk about menstruation is for different reasons for different teachers. T6 asserted that menstruation should be treated as any other biological process and need not be associated with any shame. She distanced herself from what she considered societal norms. Whereas, T3 indicated that she tries to build a male consciousness which is sympathetic to women's issues within the patriarchal setting by getting boys to help their mother when she is menstruating.

Through the examination of the teachers' narratives, I have discerned that both the structured and informal discussions within the school regarding sexuality have been influenced by existing power dynamics and the overarching societal narrative. This discourse plays a role in upholding and perpetuating these power dynamics. There was also an effort to understand the intricacies tied to cultural and religious concepts that dictate which forms of sexuality are deemed acceptable or unacceptable. As seen, observations revealed that the individual values held by teachers are often mirrors of the prevailing societal perceptions regarding what is deemed morally correct or morally reprehensible. In essence, our analysis shows how the discourse around sexuality within the school environment is not isolated, but rather deeply intertwined with the power structures and prevailing societal norms.

However, a more direct approach to understanding the prevailing values that hold hegemony within the school involves an examination of the value education curriculum that the institution imparts. The curriculum acts as a deliberate tool for shaping students' perspectives and moulding their moral compass. This curriculum provides a distinct and unambiguous insight into which values are officially endorsed and actively propagated within the school's environment. The following section will discuss the Value education curriculum that is present in most of the Christian management schools in Keralam. Some of the broad questions which I am interested to ponder are - how are values and morals defined, what values are preferred, why are they preferred, who determines what is right, how can different morals coexist in our pluralist society and so on. The study aims to examine sociological and pedagogical implications of this speecific value education curriculum. Here, I try to understand the premises and aims that shaped the curriculum.

3.3 The Moral Landscape: Analysing the value education programs promoted by Christian managements schools in Keralam

Most of the Government-aided Christian management schools in Kerala, including this specific school, follow Pastoral orientation centre (POC) Value education curriculum designed by the Kerala Catholic Bishops Council's Pastoral Orientation Centre. The textbooks under this curriculum were first published in the year 1972 and revised in the years 1977, 1996 and 2015. The current value education program consists of a set of 12 textbooks under a series called "Life is Beautiful". The program aims to "Give serious attention to the holistic and integral development of our students with an emphasis on their moral and spiritual formation, ensuring genuine personal and social commitment" (Foreword, POC Value education textbooks). The series is written with the premise that " A fully developed human person brings glory to the god". The focus of the program is to regain the eroding value system by taking into consideration the signs of change. The Bible apostolate has been the major objective of POC publications. Since any kind of religious instruction is banned in government-aided and recognised private schools in Kerala, it is important to look at whether these values and morals are transmitted in a nondenominational manner. I chose to analyse the POC textbooks that are used in classes 6 to 10. POC textbooks are accessible in English and Malayalam, with only slight variations. I have referred to both the English and

Malayalam editions and will incorporate excerpts from the English version. However, I will include translated passages from the Malayalam edition only when they offer additional insights or discussions.

Since the schools were closed due to the pandemic for a substantial period, I could not observe the transaction of POC Value education classes. However, one of the teachers (T1) informed me about the series of sexuality education classes designed by the Angamaly Archdiocese named ' Know Thyself'. The students were encouraged to follow these series on YouTube.This contains four episodes, each episode is dealt by four different women teachers. These are pre-recorded lectures where the teacher delivers content for approximately thirty minutes, intended for students watching the class on their screens. All of them are professors of a nursing school and the third person is also a nun. Since I have not interacted with these teachers, any other information about the teachers is not available. We will be referring to them as OT1, OT2, OT3 and OT4 respectively. The POC textbooks are presented as operating within a framework that combines secular and spiritual elements, whereas the YouTube lectures are firmly situated within the realm of Catechism. These online lectures are intended to supplement the POC value education program, which was disrupted due to the pandemic (as perceived by T1), and they are authored or produced by related Catholic bodies. T1 mentioned that students are encouraged to follow these YouTube episodes. So, I carefully went through all four episodes of the series and translated and transcribed the discussion in English. Both the POC textbooks and the online lecture series serve as means to understanding the value education program. In the following analysis, I will use excerpts from both sources. My objective is to highlight the values ingrained in the curriculum. As the values presented in the textbook and the YouTube episodes largely overlap, I will alternate between excerpts from the textbook and lecture series when discussing specific values to avoid repetition.

Moral education can be easily "indoctrinating" if strict codes of good or bad are imposed. In a pluralistic society, moral education should aim to build the agency of the students to make their own choices among ethical views. Most of the criticisms against moral education are applicable to the other subjects as well. However, since many of the moral values are based on religion which itself is unquestionable, moral education is easily susceptible to indoctrination. Also, many of our moral beliefs don't have any epistemic reasons. Modern culture and society itself are organised around certain values and morals. Many times, these

moral values are a means of social control and regulation rather than empowerment. When morals and values are talked about objectively, they are diffused with certain authority. Challenging the dominant oppressive values requires us to broaden our (or society's) perspective and understanding of notions of morals and ethics.

3.3.1 An overview

The POC textbooks encompass a wide array of topics: they discuss the preamble to the constitution as well as various issues such as sexual harassment, labour dignity, self-dignity, respect for others, drug addiction, environmental issues, and so on. These textbooks also provide guidance on effective time management, fostering leadership, interpersonal capabilities, and other essential skills for students. However, the curriculum is written within the Christian value framework. Many stories presented in the textbooks centre on the idea that since God has liberated humanity, hence people should sacrifice themselves and submit to Him completely. Several stories underscore the philanthropic idea of care, often projecting a perspective that might not fully consider students from marginalised backgrounds as part of the intended audience. These narratives frequently revolve around the concept of a saviour figure, portrayed as someone who arrives to deliver humanity from sin and challenges. Here, I would be focussing on selected discourses around sexuality that are seen in the textbook and the online classes. All the observations closely align with larger literature critiquing sexuality discourses situated within a Christian framework. However, it is worthwhile to revisit each narrative in this context, as the value education curriculum within Kerala's public schools often goes unnoticed. The online series discussed topics which were particularly related to sexuality. Both the POC textbook and the online series did not differ in their arguments and worldview around sexuality.

3.3.2 Analysis of Value Education Curriculum

a) Notions of gender and sexual orientation

Both POC textbook and the online series are placed strictly within the hetero-normative framing. By adhering to a heteronormative perspective, it perpetuates the idea that heterosexuality is the normative and exclusive sexual orientation, overlooking the existence of various sexual orientations. Also, the gender binary notion perpetuated disregards the complexity of gender identity. It fails to acknowledge the existence of individuals who identify beyond the traditional categories of "male" and "female." This contributes to the

complete erasure of non-binary, transgender, and gender-nonconforming individuals, dismissing their lived experiences and perpetuating harmful stereotypes. This is even reflected in the way teachers conceptualise sexuality education, as seen below;

> *(Excerpt from the online series) OT1: Adolescent education is the process of helping you become mature individuals by happily accepting the status of being a boy and a girl.*

This rigid binary gender notion can be seen throughout.

> *(excerpt from the online series) OT2: Femininity or masculinity, which is affirmed at birth, reaches its full potential during your teenage years.*

The curriculum categorises attraction as solely between males and females and perpetuates harmful stereotypes by assigning specific qualities to each gender. The following excerpt demonstrates this,

> *(Excerpt from the POC Textbook) This attraction can be categorised as general, personal, and so on. General attraction is not just physical or individual-specific. It is an attraction that comes from the special qualities found in the male and female groups. Girls' modesty, gentleness, beauty, love and pleasantness are enough to attract boys. On the other hand, male qualities like strength, bravery, hard work, determination, thoughtfulness and leadership are attractive to girls.*

> (p.51, POC value education textbook-Pakwathayude Pathayil, Std 10)

OT4, in her lecture, discusses homosexuality as a sexual preference deviation along with masturbation, exhibitionism, sadism, masochism and pedophilia, and characterises it as sinful. She tells the students (viewers) to stay away from these for spiritual and 'health' reasons.

b) Body crafted by the divine

The curriculum is grounded within the framework of Christian creationism. Within this perspective, every facet of life is seen as a gift from god. Human beings are seen as intricately designed and purposefully created by God. It argues that human sexuality is god-given and its purpose is tied to the divine process of procreation. It therefore argues that

human sexuality should be approached with responsibility, as it is considered a sacred aspect of life that is closely tied to the divine order.

> *(Excerpt from the online series) OT2: Do you now understand how carefully God has crafted each human organ? All body organs are god given. Therefore it is our responsibility to preserve them.*

As mentioned, individuals are asked to protect the body as a gift of god. This also implies that body design has to be fixed and immutable. The emphasis on this may be to explicitly show disapproval for any sort of alteration of the body, posing challenges to individuals who wish to change their body according to their desire through medical interventions, such as hormone therapy or gender-affirming surgeries.

c) Moral Burdens: Expectations of Modesty and Purity of Women

The curriculum also singles out girls and emphasises their role in upholding chastity. This perspective places the burden of maintaining virtue solely on girls, implying that their worth is contingent upon their adherence to certain dress codes and behaviours. It suggests that girls' actions are the determining factor in maintaining their families' honour and reputation, implying that any perceived lapse in modesty or virtue could bring shame upon their families and communities, as inferred from the following excerpt;

> *(Excerpt from the POC Textbook) Girls should be especially careful with dress and manners. They should consider chastity as a precious treasure. Girls who are disciplined and avoid unnecessary meetings and conversations will make their families and communities proud.*

> (p: 53, POC value education textbook-Pakwathayude Pathayil, std 10)

The third episode of the sexuality education class is solely on the concept of body and sexual purity, even though it is discussed throughout. The crux of the discussion can be understood by the excerpt below

> *(Excerpt from the online series) 0T3:What is sexual purity? Our body is the temple of God. Sexual purity is the use of all the sexual aspects that God has given us in the way God wants and when God wants. You know that God wants this within the sacrament of marriage.*

Here, the teacher introduces the notion of sexual purity by introducing Maria Goretti as a role model, as below,

> *(Excerpt from the online series) OT3: Before starting this class let me recall a small incident. In 1902, there was a teenage girl from a farming family in a small village called Colorado in Italy. One day when this little girl was at home, a young man who seemed to be 18-20 years old came in. He came into the house and spoke very badly and incited to sin. But the girl, having a clear understanding of what the sanctity of life is, told him, that she will not do it, as it is a sin. When he saw that the little girl was not willing, he stabbed her. Not once or twice, but 11 times. She died due to organ injuries at the hospital. Who is that girl? At this point you will see her face in your mind, the girl who was stabbed to death by a man named Alessandro at the age of 11. Maria Goretti, who bravely martyred herself for Jesus in order to preserve the sanctity of life as a teenager.*

The significant focus placed on Maria Goretti's martyrdom as a symbol of chastity carries serious implications. The way her story is portrayed sends a troubling message that, if an individual is faced with the choice between being assaulted and surviving, or resisting and potentially losing life, one should opt for the latter. This portrayal suggests that an individual should be willing to die in order to safeguard the virtue of chastity. This perspective raises important ethical and societal questions. Presenting such a narrative establishes harmful notions that prioritize an abstract concept of purity over a person's right to live. This portrayal places the burden of chastity on the victim rather than on addressing the actions of the perpetrator.

The concept of sexual purity, as taught here, places a strong emphasis on aligning one's actions with God's intentions and following the path of 'righteousness' as defined within the context of marriage. Thus, the curriculum emphasises marital approval for sexual unions and excludes and marginalizes those who do not conform to traditional marriage norms, as can be seen below,

> *(Excerpt from the POC Textbook) Only through marriage can the union of man and woman be permitted and approved. All sexual relations outside of marriage are forbidden. Any sexual act performed by non-married persons for emotional relief and sexual pleasure is wrong and sinful.*

> (p.53, POC value education textbook-Pakwathayude Pathayil, Std 10)

Labeling all sexual relations outside of marriage as forbidden and sinful neglects the diversity of human relationships. Such a perspective reinforces the notion that only certain forms of relationships are valid and morally acceptable. Attributing the legitimacy of sexual acts exclusively to marriage creates a hierarchy of morality that stigmatizes individuals who do not adhere to these norms. It also disregards the importance of informed choices, consent, and emotional connections that may exist independently of marital bonds.

In this curriculum, multiple partners and extramarital affairs/ pre-marital affairs are shown as the sole reasons for STDs. There is no mention of safe sex practices while talking about STDs. Also, associating STDs solely with specific sexual preferences like multiple partners or pre-marital affairs, disregarding other contributing factors and the complexities surrounding STD transmission, can stigmatise individuals who have contracted an STD in the present society.

> *(Excerpt from the online series) 0T4: Now it is seen in society that people indulge in multiple relations or extramarital/pre-marital relations. This is a sin against sexual purity and the Sixth Testament. This leads to dangerous STDs like gonorrhoea and syphilis.*

d) Sexuality and Reproductive Choices

The Kerala SCERT science curriculum introduces the discussion on reproductive choices mostly in the Std 12th Biology textbook. In contrast to this, POC value education engages with the topic of reproductive choices as early as Std 8th. It pushes pro-life narratives very strongly through different discursive devices. While references to this theme can be found in various chapters, there is one distinct chapter that takes centre stage in addressing abortion consistently from Std 8th to 10th. I will provide a few (of many) textbook discourses to illustrate the stance.

The class 8th POC textbook narrates the story of a woman, Gianna Beretta Molla, who while expecting her fourth child, developed a fibroma in her uterus. She was given the option of abortion, hysterectomy or removal of fibroma by the doctors. She chose the third option despite knowing the risk to save the child and consequently dies due of the complications.

> *(Excerpt from the POC Textbook) In today's world, where we are constantly bombarded by news of cruelty and a total lack of respect for life. Gianna's*

decision may seem foolish to many. Yet it does not seem foolish if we look at it through the prism of love. Gianna's love for her three living children in no way diminished her love for her fourth unborn child. Her love gave life to her fourth child. Love and life are two sides of the same coin. Life can be fostered only if love is present while mutual respect and regards are essential to foster life.

(p: 25, POC value education textbook-Effective leadership, Std VIII)

This story is presented as an exemplar of self-sacrifice and maternal love, highlighting Gianna's choice to prioritize the life of her unborn child even at the cost of her own well-being. This constructs the narrative that all efforts should be made to preserve and protect foetal life. As it can be seen, this may curtail women's autonomy and agency over their own bodies and reproductive decisions. It can reinforce the idea that women's choices are secondary to the preservation of foetal life, potentially undermining their rights to make personal decisions that align with their circumstances, health, and well-being. Reproductive health decisions are often influenced by complex factors such as health, economic circumstances, relationships, and personal beliefs. A singular pro-life narrative might disregard these complexities and oversimplify the challenges individuals face in making reproductive choices. This is reflected in the quotes that the textbook uses from well-known people,

(Excerpt from the POC Textbook) I have noticed that everyone who is for abortion has already been born - Ronald Reagan.. It is a poverty to decide that a child must die so that you may live as you wish"- Mother Teresa

(p: 28, POC value education textbook-Effective leadership, Std VIII)

These narratives contribute to the stigmatization of abortion and other reproductive choices. This can contribute to feelings of guilt, shame, and self-doubt and restrain individuals from making reproductive choices that are in line with their circumstances.

By focusing on a pro-life narrative, POC textbooks neglect discussions about safe abortion practices and contraceptive methods. The textbooks highlight a statistic indicating that the number of deaths related to abortion in the country is approximately 20,000, referencing data from the Consortium on National Consensus for Medical Abortion in India. While the intention behind the consortium's presentation of this statistic is to raise awareness about the

importance of safe abortions, the textbooks employ this statistic to suggest that the act of abortion carries significant risks.

The textbook often emphasizes the sanctity of life from conception to argue against abortion. The textbook also romanticizes parenthood and the child.

> *(Excerpt from the POC Textbook) It is sad for us when someone plucks a flower bud standing on a plant we have planted and stomps it on the ground. We are saddened that it is destroyed when it is bare before it blooms. This is the same grief we feel for a child that is destroyed in the mother's womb.*

> (P: 43, POC value education textbook- Pakwathayude Pathayil, Std X)

The textbook tries to convince the students that the foetus is not a blob of tissue (as pro-choice supporters argue), but a 'living person' by presenting an image of 21 week-old-foetus. More persuasive arguments based on science are offered to demonstrate that the foetus is a living being. According to the text, abortion is the deliberate killing of the unborn child because the genetic blueprint is already determined at the time of conception.

> *(Excerpt from POC textbook) It is a scientific fact that the genetic blueprint of a human being is complete at the moment when he/she is conceived. Blood type, fingerprint and gender are all determined by that time. Thus abortion is not the removal of some extra tissue, but the conscious killing of a human child even before he/she is born. No circumstance or selfish reasoning can justify this cruel and cold-blooded murder.*

> (p: 38, POC value Education textbook-Responsible Personal life, Std 9)

The textbook uses religious worldview as the primary framework for understanding the world, with scientific methods serving as tools that are directed by and interpreted within religious beliefs. In other words, the textbook interprets scientific concepts and methodologies through the lens of religious beliefs. Even though religious beliefs serve as the foundation or occupy a central place, the textbook integrates scientific perspectives in a way that aligns with religious beliefs. This suggests a harmony between the two ways of knowing within the textbooks, where science is directed by the overarching religious principles that guide the understanding of the world. In many more places, one can see the textbook using scientific arguments to support their arguments. This alternate use of cultural/religious and

scientific arguments can be seen in the science classrooms as well, which will be discussed in chapter 5.

More similar discourses that push pro-life narratives are tabulated below. Only one is from Malayalam and the rest are from English textbooks.

If you must choose between me and the baby, no hesitation; choose-and I demand it-the baby. Save her!	P. 24, Std 8
Say this pledge together as a class. Life is precious. I pledge today to always respect and honour all forms of life including my own.	P. 30, Std 8
Sadly we live in a world where it is not unusual for fathers to abandon their families, mothers to kill the children in their wombs, Siblings to fight-examples of this lack of love in the world are endless. Each and every individual is concerned only about one's own comfort. The selfishness is what results in horrendous atrocities like abortion, infanticide, suicide, euthanasia, etc. Media glosses over the fact that all these acts involve the killing of a human being-however, tiny or however elderly, no one is spared for the sake of convenience- from the tiny foetus in the womb to the old who have worked hard all their life for the betterment of their families- all are considered a burden on personal comfort.	P. 27, Std 8
Did you know that the world almost lost the greatest scientist Isaac Newton even before he was born? Newton's mother was expecting him when her husband passed away. Thinking that the baby would be an additional burden, she decided to abort the child. Thankfully, Newton's grandmother intervened and persuaded her against this horrible decision. Little Isaac was born and was cared for by his grandmother. The rest is history. This great man of science and his beneficial discoveries would have been lost to mankind if his mother had destroyed him even before his actual birth.	P. 37, Std 9
Abortion or Medical termination (MTP) involves destroying the foetus in the early stages of its life. Mother Teresa once said, " I feel that the greatest destroyer of peace is 'Abortion' because it is a war against the	Pg 37, Std 9

child…'Murder' by the mother herself… And if we can accept that a mother can kill even her own child, how can we tell other people not to kill one another?	
Abortion is often justified by the argument that the foetus is not really a living person, but just a blob of tissues. Would you say that the foetus in this picture- "The hand of hope", is a non-living blob of tissues? In fact, the freelancer photographer who took this image - Michael Clancy, who till that point was pro-choice, was so shaken by what he had witnessed, that he became a strong speaker and advocate for pro-life from that day onwards.	Pg: 38, Std 9
Would you say that 'it is okay' to kill a one-month-old living child if the circumstances are not perfect for its upbringing-like health, economic and emotional stability of the parents, societal norms, etc.? If no, how is the killing of an unborn child justified for the same reason?	Pg:40, Std 9
God alone has the power to give life. So it is our duty to value and cherish it. Anything that leads to the deliberate destruction of life is wrong. The world has slowly realized that life must be fostered and not extinguished, whatever the circumstances may be.	Pg: 41, Std 9
Every human child has an individuality that needs to be recognized, respected and nurtured. No one has the power to deny the personhood of a child born in the womb or born on earth. Human personality begins with formation in the mother's womb. There is a personality in the embryo that needs to be developed and believed. Therefore foeticide is murder. An unborn child has many abilities that need to grow and develop after being born on earth.	Pg:43, Std 9 (translated from Malayalam)
Will any mother in the world agree to kill a baby sleeping in her lap? Isn't the answer no? Then no mother would consent to destroy a child who sleeps safely in her own womb. Every child born in the world is proof that God has not abandoned this world	Pg: 44, Std 9

The textbook and the Youtube episodes reduce sex primarily to a means of reproduction, disregarding the numerous other aspects that contribute to a fulfilling and healthy sexual experience. Thus by exclusively framing sex within the context of procreation, the textbook overlooks the emotional, psychological, and intimate aspects that play a significant role in relationships. The portrayal of procreation as the highest form of expression of love and self-giving may inadvertently undermine the worth of relationships that do not involve reproduction. It creates an idealized standard that fails to encompass the diversity of relationships, orientations, and personal choices that exist within human society. One of the excerpts to illustrate this orientation is provided below,

> *(Excerpt from the POC textbook) Sexuality has three dimensions: biological, psychological and social. A new life is born through the relationship between a man and a woman. The biological aspect of sexuality lies in this reproductive process. Procreation is not just the fulfilment of carnal desires for man. It is a noble manifestation of mutual love and self-giving. Again, this is the psychological aspect of sex, and through the use of sex, men and women are willing to take on greater responsibility. A moral couple has the duty to raise the children resulting from intercourse into complete individuals. This performance of responsibility indicates the social dimension of sexuality.*

> (p.51, POC value education textbook-Pakwathayude pathayil, Std 10)

Not only do textbooks encourage individuals to have children in future, it encourage them to have large families. This is mostly achieved by arguing children as gifts of god that should not be denied. The textbook puts forth the idea that large families are linked to the emergence of extraordinary talent. An excerpt from the textbook is given below:

> *(Excerpt from the POC textbook) Large families often create a supportive environment conducive to the growth of genius and talent. Rabindranath Tagore had fourteen siblings. William Shakespeare was one of 8 children. Former President John F. Kennedy had 3 brothers and 5 sisters. Michael Jackson was born into a family of ten children. Singer Celine Dion is the youngest of 14 children. The famous A.R Rahman is the second of 4 children. Academy Award winner Resul Pookutty is the youngest of eight children.*

> (P: 41, POC value education textbook- Responsible personal life, Std 9)

This reflects the recent pro-family initiatives by the Syro-Malabar church in Kerala. This includes several welfare schemes like offering cash, educational and medical support and

other incentives to the couple who produce more children. These initiatives are driven by concerns over the declining Christian population and aim to counteract this trend. This pro-family approach stands in contrast to government population growth initiatives, which advocate for family planning and controlled population growth. As a result, these differing discourses within the education system create a juxtaposition between the perspectives presented in the value education textbooks and the science textbook.

3.4 Discussion

This chapter has provided an account of how schools try to construct particular sexual identities and regulate some non-preferred sexual identities. The analysis of teachers' narratives indicates that the formal and informal school discourses on sexuality have been shaped by power relations and dominant macro-discourses that exist in society and serve to sustain these. The conceptual framework of interlocking domains of power put forth by Collins helps us understand how dominant sexualities are privileged within the school. This framework allows an understanding of how different systems of domination interlock and operate in different domains of power. The chapter tried to engage with the complexities of cultural and religious notions of which and whose sexualities are considered good or bad and suggests that personal values teachers carry are reflections of the dominant notions of what's seen as 'right' and 'wrong'.

The chapter provides exemplars that demonstrate that power operates in different domains in visible and invisible ways to control, classify /categorise and discipline individuals. The school ensures that actors in the school are not only disciplined sexually, but they become agents who can administer and take part in the disciplining system of the school to sustain the overall larger structure. Thus, the school produces subjects who are in agreement with the dominant values and ideologies that circulate in the school and society. The actors who resist the dominant values are disciplined and surveilled. Two broad themes emerged from the analysis: how schools monitor the 'undesired' sexualities of students and how schools monitor the sexualities of 'undesired' students. Both students and their sexualities are marked, categorised, and placed in hierarchies and disciplined into acceptable sexual norms of society. Here, these norms and expectations are different for different participants. Patriarchal, heteronormative, religious, and cultural norms intersect to decide what an individual of a specific location should enact. We saw that some school practices are targeted

at students from non-dominant groups. Even though all bodies are encouraged to conform to specific ideals, there is a stronger disciplinary mechanism focused on women and marginalised bodies. Their bodies, attire, gestures, speech, and expressions are monitored with greater intensity.

Surveillance has become integral to school practices. This is because surveillance not only becomes very important to the school's functioning but also because of the school's role in the production and reproduction of social inequalities in relation to sexuality and religion. We could discern covert and overt forms of surveillance achieved through a network of the gaze of teachers, parents, and students, which worked both individually and together. I have not looked at whether communities play a role in the surveillance of students' sexualities. This could be a possible study that can be considered in the future.

Some of these acts elaborated above as surveillance, disciplining, etc. could be considered as violence (as experienced by the students). Many aspects discussed in the interviews have not been discussed in the chapter as they fall outside the theme of the paper. The study has not looked deeply at the missing/silenced discourse and its politics. In the interviews, I could see students were categorised and identified by the community to which they belonged. After looking at the interview transcripts, I realised that teachers talked very little about students from the scheduled tribes despite their presence in school in large numbers. I failed to observe these students' absences in the process of the interview. Here class-caste privilege of both the interviewer and the teachers has normalised their disappearance. The analysis mostly has looked at how Muslim students are perceived by the teachers and ignored the experiences of other more marginalised students. A teacher mentioned that ST students are very innocent and don't talk much; hence do not create any problems. The muslim students appear in the narratives as they have some power which helps them to negotiate and resist the structure. Hence the conflict between teachers and Muslim students (where both have a certain amount of power) became an important theme of our analysis.

The second half of the chapter examines sexuality discourses within the value education curriculum through POC textbooks and online classes titled 'Know thyself', offering a direct view of the values officially supported and promoted within the school setting. The analysis demonstrates that these discourses are embedded in a Christian moral framework that influences the curriculum's approach to the human body, sexual ethics, and moral

responsibility. While it can be read as an intention to foster a sense of respect and responsibility towards oneself and others, the program's strictly heteronormative framing and emphasis on immutable divine design raise significant concerns. The discourses were observed to be predominantly shaped by heteronormative and binary notions of gender and sexuality, failing to acknowledge the diversity of sexual orientations and gender identities. The alignment with Christian creationism restricts its perspective on human sexuality to procreation within a specific religious framework, potentially marginalizing other viewpoints. Chastity, modesty, and sexual purity remained central to the discussions. It was also seen that the curriculum pushes pro-life narratives and large families very strongly across different classes. The curriculum's framing of human biology within the context of Christian creationism posits that every aspect of human anatomy has a divine purpose, particularly in the context of procreation. This simultaneously challenges contemporary understandings of gender identity and the right to bodily autonomy. By deeming any alteration of the body as contrary to divine intent, the program indirectly stigmatises and delegitimizes the experiences of transgender and gender-nonconforming individuals seeking gender-affirming care.

Chapter 4

Exploring Narratives of Teacher's Emotional Experiences

4.1 Introduction

In this chapter, I examine the various emotional experiences that shape teachers' personal and professional positionalities, and how these influences impact the narratives they bring to the classroom. The collective and individual experiences created by shared narratives between teachers and students are pivotal in shaping their subjectivities within the classroom. Recognizing that teachers are profoundly influenced by their contextual surroundings, both individually and collectively, it is essential to consider the emotional underpinnings of teacher's subjectivity formation when analysing classroom discourse. For this exploration, I decided to focus on the experiences of a single teacher, Wilson Sir. I look at both classroom discussions and his interviews for this purpose.

By examining the emotions that permeate the teacher's lived experiences, this analysis sheds light on how these feelings shape teachers' identities and pedagogical choices. Furthermore, recognizing the broader contextual forces that impact these emotions is crucial in understanding teacher emotionality and imagining new possibilities for alternative pedagogical relationships and spaces. This exploration into the emotional dimensions of teaching and teacher identity was not preconceived during data collection but emerged as significant during the analysis process.

Emotions are not only individual or personal experiences but are shaped by societal beliefs and cultural factors, including scientific understandings (Zembylas, 2016). Emotions are not seen as private, individual experiences but as social and cultural phenomena that move across and between individuals, affecting how groups and individuals relate to one another (Ahmed, 2004). These emotions do more than just reflect personal feelings; they perform work within the social sphere, shaping actions, reactions, and interactions.

This chapter also aims to explore the political dimensions of emotions, examining and questioning the norms and expectations about emotions that have emerged within our culture.

This analysis will explore how certain norms and expectations surrounding emotions are tied to the subject matter being taught, knowledge acquisition processes, and how emotions are communicated and expressed in the classroom setting. I don't intend to draw a reductionist correlation between these factors and the shaping of narratives. I also don't intend to elaborate on the consistencies and inconsistencies between the teacher interview and the classroom discussions, as I understand that various constraints in the classroom limit the teacher from fully practising their positionality.

Teacher's emotions are not solely influenced by their personal experiences but are also moulded by various norms, practices and constraints within the school environment. Bericat (2016) says that sociology research should analyze three types of social emotions: interactional emotions related to individuals' positions in the social structure, group and collective emotions experienced within specific social situations, and emotional climates and cultures shaped by the essential characteristics of a society or social unit. As Beauchamp and Thomas (2009) argue, the relationship between emotion and the teacher's professional identity is reciprocal. The teacher's emotional responses to various aspects of their work, interactions with students, and the overall teaching environment can bring about changes in how they perceive and define their professional identity. Emotions, whether positive or negative, can impact a teacher's sense of self within the broader context of their role in education. Thus, emotions are not just individual expressions but are tied to larger structures and hierarchies within the school (Yuan & Lee, 2016).

Teachers' emotions could reveal the power dynamics inherent in the context of science teaching within the school. There are emotional rules (Teng, 2017; Zembylas, 2004) which serve as guidelines, outlining the practices that teachers are expected to adopt in order to fulfil the societal expectations associated with the teaching profession. These rules act as norms, which suppress, control, and regulate emotional responses, particularly concerning conformity and deviance. Conforming to these emotional norms requires teachers to not only manage their overt behaviours and moral conduct but also to regulate their inner emotions and moods. These hidden emotional rules play a part in hindering teachers' ability to attain their desired roles and live up to their aspirations and expectations. Experience and expression of emotions depend on learned convictions or rules. Even though emotions are improvisations based on individual interpretations of situations, or are seen through personal and cultural lenses, they are socially, culturally and politically constructed (Jeffrey, &

Woods,1996). Emotional rules, delineate acceptable emotional expressions, reflecting power relations and disciplining human differences in emotional expression and communication (Zembylas,2003; 2002b). In the context of curriculum and teaching, emotional rules govern teachers' emotions through prescribed forms of emotional language, shaping how teachers express and regulate their emotions in daily school life. This self-regulation creates a space where disciplinary mechanisms intersect with subject formation, illustrating how teachers are urged to follow these rules, define themselves accordingly, and establish principles for navigating their professional lives (Zembylas, 2005).

Timoštšuk and Ugaste (2012) demonstrate that high expectations of teaching practice are associated with both positive and negative experiences. They emphasize that negative emotions carry a stronger impact than positive ones, particularly in cases of significant negative incidents. These incidents draw more attention, induce higher levels of anxiety, and take a central role in teaching-related experiences. The intensity of these negative occurrences tends to overshadow concurrent emotions, making it challenging to have a complete perspective and choose positive strategies. Teachers are tasked with exhibiting positive emotions while suppressing negative ones during their interactions with students, leading to emotional labour (Schutz & Lee, 2014). Emotional labour encompasses the exertion teachers invest in portraying specific roles or identities during the teaching process. This expectation may result in emotional dissonance, a situation where teachers experience internal conflict between their authentic emotions and the prescribed display rules they are obligated to perform. To navigate this conflict, teachers typically employ two strategies: "surface acting," involving the presentation of emotions that do not genuinely resonate with their feelings, similar to a metaphorical mask, and "deep acting," where teachers strive to genuinely undergo the emotions they aim to convey.

4.2 Analytical Framework

I look at some instances of classroom interaction between the teacher and students through the Zembylas (2002,2005) framework, as it has the potential to explore how teachers' emotions and teaching practices are intertwined. The framework (Zembylas, 2002) explores teachers' emotional lives as linked to individual, social, and socio-political components. This offers a tool for examining different dimensions of emotional engagement in the teaching profession, particularly when addressing complex and socially sensitive topics. It looks at

how emotions are shaped, expressed and experienced in the science classroom, influenced by values and beliefs. The framework also focuses on events that make certain emotions present or absent, exploring how these events and emotions are embedded in science teaching. However, this framework does not assume a linear progression from individual to social levels, rather, it recognises that emotions intersect and shape each other at various levels. For example, a teacher's personal emotions may influence their interactions with students, which in turn can affect the broader cultural and political context of science education.

Expanding on the three levels proposed in the framework by Zembylas (2002), the individual/intrapersonal level looks at how teachers construct and navigate their emotions while teaching. Here, we look at the personal dimension of teachers' emotional engagement. Moving to the social/interpersonal level, the framework invites exploration into the ways in which teachers actively engage with their emotions during the teaching process. Finally, at the socio-political/intergroup level, the framework prompts an examination of how teachers' emotions are interconnected with the broader social and cultural context. It aims to understand the significance of various emotional expressions, silences, and rules in the context of cultural and power relations in science teaching. Emotions could be also viewed as sites of social resistance and transformation within a broader cultural and power context (Zembylas, 2003b). Emotions play three key roles: they help teachers evaluate their classroom, students, and teaching methods; they are connected to how teachers relate to others and how these relationships change over time; and they influence how teachers view themselves based on accepted emotional rules (Zembylas, 2004).

4.3 A note on Wilson Sir

The teacher, who I will be referring to by the pseudonym 'Wilson Sir', has been teaching Biology in a government-aided school in Wayanad for the last 11 years, before which he has had another 5 years of teaching experience. The choice of selecting the particular teacher is due to many reasons. The primary reason is that I engaged with Wilson Sir more extensively than with other teachers as he was willing to dedicate additional time to teaching the specific chapters. Wilson Sir brought many stories to the class to build his narrative in comparison to the other teachers I observed. He communicated the way he conceptualised my research explicitly at various points in time. He also mentioned that I should not 'judge' his students when he was describing classroom incidents. Another significant factor was that Wilson Sir

taught at a Christian management government-aided school. Therefore, I assumed I could gain insights from Chapter 3. However, these two schools differed in many aspects, including the demographics of teachers and students. Since students in Class 11 are admitted through a single-window system, the diversity in terms of caste, class, and religion is better, resulting in a more heterogeneous student body. The teachers also reflected some diversity in terms of religion.

Wilson Sir had worked on a research-based government project aimed at sensitising people about AIDS and STDs in the early years of his career. He mentioned that he could understand how difficult data collection is based on his research experience, and hence readily agreed to allow me to observe his class even though I approached him at the last moment. He was not intending to teach the two units due to the COVID circumstances, until my request. In the first conversation when I mentioned details of my research he said "You (indicating researchers) would call me regressive, but I know the realities of the classroom, I can not stay away from talking about certain things". He felt that in my analysis, I would probably criticise his protectionist discourses which he was comfortable with. He expressed his understanding that my thesis would not have any consequences on him or his professional career, and he stated that critiquing his narratives is part of the process of finishing my thesis.

Before looking at how Wilson Sir's emotions serve as a mirror to understand his core beliefs, values, or personal investments in his role as a teacher, I will discuss some broader aspects of his interaction which would throw more light on his positionality. I will begin by describing how he conceptualized the two specific chapters and the intended outcome. He expresses that the particular textbook is well written compared to the earlier one and mentions that the textbook has some 'modern elements.' He perceives the textbook more as a reference material, which is evident when he says, "The textbook is only a brief indicator; it all depends on how we develop it." He recognizes the chapters 'Human Reproduction' and 'Reproductive Health' as a continuation of another physiology chapter, hence feels that the textbook needs to discuss the scientific aspects, and teachers need to expand it to include social aspects. He feels that the purpose of the chapter is to provide information to the students that would help them stay safe until their marriage. This is evident in his classroom discussions where most of the stories that he shares in class are about people who are of a similar age to the students or have just entered college. He says, "Among Christians, 'pre-marital/pre-marriage' courses are common, and Muslim students also receive some guidance. Similarly, although discussions in

the Hindu community are limited, they tend to receive some guidance around the time of marriage. These classes aim to equip students with the knowledge necessary to navigate safely until marriage". He mentions that students after this year will be staying at hostels and will start to enjoy their individual freedoms. Consequently, he emphasizes the critical need for students to acquire sufficient knowledge about aspects related to personal safety and relationships. This approach reflects the societal understanding that individuals are considered safe once they are married. Therefore, much of the discussion focuses on how to preserve 'virginity' for marriage and remain physically safe in relationships until marriage.

He doesn't feel that the chapter is very significant from the examination point of view, however it is significant for an individual's personal life. While beginning the teaching of this chapter, he says "There will be only four questions that will come for exams from this chapter, but the chapter is designed to help you in your future life". This approach was evident in his classroom teaching as well, where the amount of time he spent talking about relationships and other values was much more than the textbook content.

4.4 Analysis

4.4.1 Emotions at the Intrapersonal level

Here, we look at how Wilson Sir feels and show his emotions on a personal level. This involves reflecting on his personal and life experiences and trying to understand how these factors impact the way he expresses emotions while teaching science. In this process, I recognise the uniqueness of each teacher, as they bring their backgrounds and subjectivities into the science classroom, shaping how they teach and convey feelings. Through conversations and classroom observations, I aim to illustrate how this particular teacher's expressions and actions, influenced by various emotions, play a pivotal role in moulding the approach to science teaching and learning.

Wilson Sir passionately describes his motivation and enthusiasm on numerous occasions, he attributes it primarily to his role as a resource person in various projects. A significant aspect of his dedication lies in his identity as a facilitator of the Sauhruda Club, an informal platform for students and teachers to engage in discussions related to adolescence at the district level. Having attended training workshops for this role, he conducts at least three sessions in other

schools within the district. He says that this role has enabled him to bring broader discussions into the classroom, extending beyond the conventional boundaries of a science teacher. While he doesn't lead the Sauhruda Club in his own school, he values the freedom and informality that characterises his interactions with students from different schools during these sessions. In contrast, he acknowledges that discussions are more limited when engaging with students within his school. His enthusiasm can be seen in the following excerpt from the interview:

> *"Before Sauhruda Club, there was a program called the Adolescence Health Program, where we discussed topics like sexual health, nutrition, and physical well-being. We even created resource materials for this. There was a state-level workshop for resource people from each district, and I was part of that. The program has stopped now. However, I continue it in the class. There is a box outside where students can ask questions and discuss problems. The important thing is to provide students with proper guidelines even if the program is over."*

Wilson Sir mentions that volunteering for the Sauhruda Club, along with his involvement in the HIV-AIDS program, has given him confidence in addressing sensitive content. These diverse experiences contribute to an elevated sense of self-efficacy and self-confidence within the specific context. Existing literature indicates that these self-efficacy beliefs significantly shape teachers' perceptions of themselves in their professional roles, impacting their emotional well-being, including feelings of anxiety and stress (Berkant & Baysal,2018). Teachers with high self-efficacy demonstrate a greater capacity for emotion regulation.

He shares his experience in the awareness program for HIV-AIDS, where he collaborated with hospitals and the community including patients living with HIV. He mentions that this experience deeply impressed upon him the seriousness of the illness - both the physical and emotional aspects of the illness. By sharing the narratives of these experiences in the class, he provides emotionally resonant discussions in the classroom. He shares a few narratives in class about HIV-AIDs, one among them is as follows

> *"There was a couple whom I met during this project; both of them tested positive. Their three children were also positive. This man, in his early twenties, went to different places and worked in mills. He didn't have a moral life then. Upon his return, he married and began his new life. Once, his father was hospitalized and needed blood, which he tried to donate. The lab attendant had doubts while confirming the blood group and tested for HIV. The doctor*

made some excuses, took blood from another person, and later discussed this with him. He was so shocked, travelling here and there without idea for three days. He came back and told his wife. His wife on hearing this said that she also wanted to get tested, and unfortunately, she, along with their three children, tested positive. Consequently, they decided to shift here. They come to the programme to share their experience with other patients and receive some monetary benefits. This man talks about how he felt when his wife didn't accuse him but simply said that she also needed to test. See, that makes a huge difference. He said if she had behaved any differently, he would not have lived. Later, I met the wife during the program where she mentioned his death. She mentioned that only the principal of the school where the kids studied knew that they were HIV positive. Since the principal was supportive, the kids could continue their studies, and they completed their schooling. I followed them until they finished their schooling, but later lost contact"

As he shares the details of the family's struggles and experiences, there's a sense of empathy and compassion that he expresses, even when accusing the person of having led an 'immoral' way of life. The emotional weight of the husband's initial shock, the wife's supportive response, and the tragic loss can be seen here. One possible reason for Wilson Sir selecting this narrative could be to direct student's attention to the lasting consequences that decisions made during adolescence can have on one's life. Fostering collective empathy also helped in stressing the gravity of the issue. However, Wilson Sir's account appears to concentrate primarily on the moral judgment of the man's past behaviour, specifically his multiple relationships before marriage. This focus on his "moral life" implies a moralistic stance that overshadows more critical aspects of the situation, such as the lack of safety precautions and the failure to disclose previous relationships to his primary partner. By emphasising the man's past promiscuity, the teacher implicitly places the blame on his character rather than on his actions and their consequences. Moreover, the narrative neglects to address the importance of safe sexual practices and the responsibility of disclosing one's sexual history to a partner.

Wilson Sir's emotional response to these specific chapters is predominantly characterized by a deep sense of discontent. His active engagement in discussing adolescent issues is rooted in a concern for the challenges faced by students, as articulated in the following interview excerpt:

"Many students drop out of school. When they first join, they usually have good grades – and I am talking about the past, not now. But after coming here, they start getting into relationships and end up leaving their studies. It doesn't

always involve physical relationships or get reported, but it affects them mentally. I talk about this in class, even though it is disheartening, in a satirical way.”

The tone suggests a sense of frustration and disappointment, especially when contrasting the initial promising academic performance of students with the subsequent challenges they face. Beyond a mere dissatisfaction with the status quo, Wilson Sir's emotional investment hints at caring for the well-being of his students. I understand Wilson Sir's emotions as not just born out of discontent but grounded in some desire to grapple with the challenges faced by students.

He also talks about his worry and fear while dealing with 'sensitive' topics. His worry revolves around the challenges and potential repercussions of teaching these specific chapters. Even when he considers himself as more experienced and trained (from his experiences working as a resource person), he talks about the vulnerability that he feels. This vulnerability is exemplified by an incident he recounted in the interview:

> *“This is the experience of a teacher. The teacher from another school, not from this district, taught this chapter. He brought two colour prints of the reproductive system, both male and female, to the class and asked students to compare and write the differences. Students wrote and discussed them in class. The teacher forgot to take the diagrams back. A girl took the prints home, and either she showed them to her parents or they found them themselves. The next day, as you can imagine, all the parents were at the school, and the teacher was suspended.*

> *Interviewer: So, do you have this fear?*

> *Sir: Yeah, one should fear. There is no point in showing guts. We should be able to talk about the content in a non-vulgar way. We should be clear about what we should talk about.”*

In other instances also, he emphasised the necessity of caution and asserted that feeling fear is warranted. This highlights the fear, in Wilson Sir's case, and is not merely an individual response to potential difficulties but a reflection of the collective concerns and responsibilities he has to perform as a teacher. This emotion of fear is collectively constructed and shared within the teaching community. Here, emotions are part of a broader

collective experience within the community of teachers, the group with which he strongly identifies.

4.4.2 Emotions at the Intergroup level

This section will explore how Wilson Sir actively employs his emotions as a driving force in his teaching practices. This involves understanding how his emotional experiences contribute to the formation and expression of his teacher identity. I will be looking at the ways in which emotions play in social interactions, examining how they shape the teacher-student relationship and the overall classroom environment. I will be exploring how Wilson Sir's emotions are interconnected with values, beliefs, knowledge and self.

Wilson sir draws heavily from movies while teaching in the classroom as well as during the interviews. He says that his goal is not merely to convey information but to immerse students in a more emotive experience. This approach suggests a conscious effort to transform the science classroom into a dynamic and emotionally impactful learning environment. By drawing from the movies, Wilson Sir aims to capture the attention and engagement of students, recognizing the significance of emotions in the process of learning.

> *"Students are very familiar with movies, so I include them. At least one person in the class would have seen this. For instance, to describe in vitro fertilization, a good movie is Lucky Star. The emotional trauma happening around those processes is clearly conveyed through the movies, and students quickly recognize that."*

Movies serve as an implicit channel to express his emotions and hence the choices of the movies reflect his positions. Another example of the narrative that he brings in the classroom discussion where he draws from the movie is the following:

> *"If someone approaches us with a sexual intention, many of us are scared to react. In many cases, it would start with love, and then they will slowly ask for pictures. We think that this person likes us and we will send the pictures; then, he starts blackmailing that he will publish these pictures online. There was an incident where a lady was blackmailed in a similar way. Which movie was this? Yes, Operation Java. It is the first incident from the movie. What happens to this lady is, in the movie, Vinayakan (the name of the actor who did the role of the husband) stays with his wife. The lady went to the Supreme Court to prove that this photo was not hers. Just think, how many of us in our society*

have the guts to do that? If this happens to us, many of us would resort to suicide. Just think. Someone has published some random photos online; why should you waste your life? We can't blame anyone. We are all concerned about what people say. We think that they will stare and laugh at us. We should convince ourselves that this is not true. In a recent movie, there is a dialogue; the girl after getting raped tells the boy that - 'I have to take a bath to clean the filth on my body, but the filthiness in your mind can't be cleaned'. Yeah, it is true. It is as simple as this."

Here Wilson Sir, not only draws instances from the film but also emphasises the emotional complexities that each character goes through. He also selects incidents from the news, elaborating on those in which most individuals are of a similar age to the students. He shares that students might have had similar experiences, albeit not on the same scale, but may be apprehensive about discussing them. So drawing references from the movie is his way to make the students emotionally connect with the incident.

Wilson Sir's role as a father influences his relationship with students, as evidenced by the numerous references he makes to his daughters while teaching and during the interview. His deep concern for their safety and well-being is evident and is reflected in how he approaches his teaching style. He prioritizes building trustable relationships with his students and acknowledges that it is crucial to listen to their opinions and perspectives, similar to how he values his children's thoughts and decisions as a father. This can be seen in the excerpt from the classroom excerpt provided below, where he emphasizes the importance of having a healthy relationship between parents and children or teachers and students,

"In some cases, parents impose their decision on children - we cannot say that it is healthy. Everyone has their opinion. My children have their opinions. I should listen to them and value them. We can decide if they are correct or not later. But unless my children feel I listen to their opinions, I am not a good father. Similarly, I ask you whether something is possible or not. If I don't listen to your opinion, I am not a good teacher. When I say something, instead of running away, you can say, 'Sir, it's not possible.' This should be a give-and-take. It is important to have this notion of a healthy relationship in every relationship."

Wilson Sir's understanding of students' vulnerability and curiosity is shaped by his experiences as a parent. This influences the narratives he brings to the classroom as well as the relationships he establishes with his students. He often makes explicit references to his

children, drawing parallels between his experiences as a parent and his approach to teaching, in an effort to make himself relatable and approachable.

However, Wilson Sir also elaborates on his different dynamics with boys and girls within and outside the classroom. He approaches boys with a fun and friendly tone, whereas he maintains some distance with girls, particularly when discussing topics related to the body. He mentions using colloquial language when conversing with boys, noting their comfort in approaching him. This reflects a form of gender socialisation within the classroom setting. These differential interactions based on gender can shape how students perceive and internalise their own gender identities and roles. For boys, the casual and friendly interactions may align with societal expectations of assertiveness and camaraderie typically associated with masculinity. Conversely, maintaining a more reserved approach with girls, especially in discussions about the body, could reinforce stereotypes about femininity and modesty.

Wilson Sir shared with me how he understands what students feel about chapters on Human Reproduction and Reproductive Health. He demonstrated an understanding of students' emotions, particularly curiosity and excitement. His classroom interactions also reflected his comprehension of students' emotions. The following excerpt shows how he perceives students' emotion around these chapters,

> *"Students are expecting some 'masalas,' so we need to give them what they want to know without turning it into masala. A colleague of mine overheard some students of the other school discussing this chapter on the bus - 'I expected that she would teach the chapter in detail, but she didn't explain it all.' So, there is some curiosity. It is the teacher's task to satisfy this curiosity."*

He talked about the significance of recognising students' curiosity about aspects of sexuality. He elaborated on his response to curiosity, illustrating it with an example from the Sauhruda club;

> *"I inform them that the women you see around have nothing more than the women in your home. I try to convey this message by making them sit together as they are curious about it. Once I teach them about reproductive organs and processes, their curiosity tends to decrease. However, they begin to compare things and start to worry. So, I separate them during the doubt-clearing session. Only then do we talk openly. If they are hesitant to speak, I encourage them to write."*

Here, Wilson Sir responds to the student's curiosity by normalising the female body. When talking about students' emotions, he recognises boys' curiosity only among boys whereas fear is a shared sentiment among all the students.

Wilson Sir expressed his discomfort with students' questions on a few occasions. He mentioned that he is also surprised that students could think or ask these questions explicitly. One instance he mentioned is;

> *"In a class, one child asked if he wouldn't have kids if he masturbated continuously. He asked- 'Isn't this blood that is ejaculated? Will I die of becoming anaemic?' When we inquire where these questions are coming from, it is pornographic content. Another one - I don't know if I can say - one boy asked if the girls' skin glows if they consume semen. These are the kinds of questions students ask."*

Wilson Sir's hesitancy to openly discuss certain questions, as evidenced by his statement, "I don't know if I can say," reveals a struggle between the desire to address students' queries and the perceived boundaries of appropriateness. This hesitation may be influenced by a concern for maintaining a professional atmosphere during the interview. This discomfort is reflected in his classroom interaction as well. His discomfort is not only expressed through his choice of words but also through his hesitation to openly discuss certain questions. An excerpt from classroom teaching illustrates this,

> *"When I went to teach in a school as part of the Sauhruda club, a boy imagined that he had a severe disease. He is different from the boy sitting next to him. So he thought he had some problem. When he approached some other people, they made him more nervous, and he was devastated. What he mentioned can not be told in this classroom."*

The phrase "What he mentioned cannot be told in this classroom" suggests that the details of what the student mentioned were too explicit or uncomfortable to be openly discussed within the educational setting. This acknowledgement reflects an awareness or fear of the boundaries and constraints within an educational setting. Wilson Sir's discomfort is expressed through the recognition that there are limits to the explicitness of discussions, and some topics may not align with the classroom's norms or expectations.

Even when Wilson Sir expressed discomfort, shame, and anger over students' questions, he remained sympathetic to the students. He genuinely felt sorry that students were being misinformed, recognizing the struggles they faced with harmful ideas about sex and the human body. As he mentioned, his empathy towards the students drives him to address these misconceptions with care and understanding. He says that "49 out of 50 ideas the students have are misconceptions".

He continues,

> *"They receive a lot of content from external sources. You can't imagine; it is the extreme of vulgarness. These people think it's real and use colloquial words. To address this, we need to set a metaphorical fish trap. When discussing the topic of masturbation, I will explain how I go about this. Students ask how many times they can do it. I tell them that if we twist the ear once, nothing will happen, and if done a few times, nothing will happen again. But if we keep on twisting, what will happen? I've been asked this in a few places, and I feel sympathetic. They ask if there will be trouble after masturbation, believing that replicating what they see in porn will help them. I don't ask them directly. I discuss something about blue films and inquire if they have watched any. At least, boys will mention that somebody else has watched it or share the content they've seen. If I ask them directly in a confrontational tone, they will never admit it. Directly questioning them about blue films could instil a sense of guilt, which could become a problem later. For boys, the concern is penis size and masturbation. Almost all the boys are addicted to a higher level of pornography and think it's real. Not all the students, but a remarkable number".*

Here, Wilson Sir's expressed sympathy enables him to meticulously choose pedagogical methods, ensuring that students are not burdened with guilt. He emphasizes that the guilt absorbed during this critical age can persist throughout life. Wilson Sir aims to navigate these sensitive discussions with care, fostering an environment that promotes understanding and acceptance rather than instilling negative emotions or judging the students. This understanding he says comes from reflections on misconceptions he had during his school days. He mentions,

> *"I had to wait until my undergraduate studies to clear up many misconceptions, especially those related to physiology and embryology. During my pre-degree years, I mistakenly believed that women with more facial hair were more sexually active. Later, I realized that this could be a symptom of*

PCOS. We now understand that it may be due to some changes in hormone levels in the body. It took me until my degree program to rectify this misconception. Since I chose zoology as my major, I could address and correct these misconceptions. If I had pursued literature, perhaps I would have lived with these, lacking a platform to address and correct these misconceptions."

Here, he highlights the significance of being a science student in dispelling numerous misconceptions. This sentiment extends beyond personal reflection and manifested during class discussions, where he openly empathised with students in non-science batches. Even though he expressed discomfort over questions from boys, he seemed comfortable responding to them in a classroom where students are segregated by sex. He talks about how he feels free in Sauhruda club discussions. Wilson Sir talked about his interaction with girls. He acknowledged that girls do keep a distance since he is a man. He showed less familiarity with the worries and questions that girls usually have as compared to those of boys. When asked specifically, he mentioned,

"Among girls, concerns often revolve around menstruation. Many lack knowledge about proper hygiene practices during this time, leading to various uncertainties. Stomach pain, experienced by some, can become a source of mental distress."

Wilson sir consistently communicated his moral dismay or astonishment, openly at various instances. When he conveyed this sense of shock, there was an underlying belief that his students are likewise affected by the same moral gravity. His emotional reactions, particularly those of shock, serve as a mirror reflecting the core values he identifies with. In these moments of explicit expression, he not only shared his personal sentiments but also sought a resonance of shared values within the student body, emphasising a connection based on common moral understanding. The following excerpt from the classroom discussion illustrates this;

"There was an ad for i-pill. A girl who stays in the hostel calls her mother and says 'It happened'. Mother says 'Take I-pill' -problem solved. Only this much is in the advertisement. The girl calls, Mother tells use i-pill" (He laughs followed by the students).

In this context, the laughter serves as a distinctive expression of Wilson's shock regarding the sexual morality embedded in the situation. By incorporating laughter, he strategically frames the entire narrative in a manner that encourages students to perceive the situation through his

moral lens. Here, gestures like laughter play a significant role in conveying and reinforcing gender roles without explicit verbalisation. Wilson's laughter could imply a discomfort or disapproval regarding the portrayal of female sexuality and contraception. This reaction suggests societal norms that may view women's sexual agency as taboo or requiring moral judgment. The laughter, shared by the students, reinforces a collective understanding of the topic through a lens of moral concern. Another instance where he uses laughter to convey his moral panic is as follows,

> *"You might have seen on the back of some lorry/truck, there is this advertisement with the tagline 'we two, two of ours'-this was a long back. Now it is 'we two, our one child'. But now some people are saying 'We two, why do we need one'" (He laughs followed by the students).*

Wilson sir also talked about his beliefs and values explicitly while teaching. One place this was very evident is when discussing the topic of Medical Termination of Pregnancy. He initially started the discussion by saying that abortion is a complicated issue and very subjective. He discussed MTP as an option that should be considered only in the instance of rape. The following is an excerpt from the classroom teaching where the disapproval can be seen,

> *"(Reads from the textbook) Administering progesterone IUDs within 72 hours of coitus…… The i-pill, which we discussed in the last class, comes under this category. Usually the pills -contraceptive pills need to be taken before intercourse, but there are certain pills that provide contraception even after coitus. (Reads from the textbook)-They could be used to avoid possible pregnancy due to rape and casual unprotected sex…. You ignore the second part. In cases of rape, if the girl is in her ovulation period, we could use contraceptive pills to save her."*

His emotional engagement becomes more pronounced when discussing contraception in the context of casual unprotected sex. By asking students to ignore this part of the discussion, he reveals a certain discomfort or hesitation to talk or discuss casual sex. He makes his position more clear with another discussion,

> *"In our country, the rule is that abortion is legal within three months. In some cases, especially when conception results from rape, families may find it challenging to support the decision. In other instances, individuals decide to abort the child after they change their minds. Simply put, abortion is complicated. Let me share an incident that happened in this district. A girl of*

your age got pregnant—by whom?-by her brother. The parents were abroad, and it was the grandmother who was taking care of them. The boy was in eleventh grade, and the sister was in 12th. When he joined 11th grade, he made new friends and started using drugs. When he came home, you know, we won't be fully dressed like when we go outside, so seeing this, he raped his own sister. After three months, the grandmother started having some doubts. The girl came home and locked herself in the room without much interaction with others. The boy forgot this incident as soon as he became sober. The grandma was confused and called the parents. They went to the doctor and asked for an abortion. It was over three months, and the legal time had passed, but the child was healthy. The parents made many excuses; at last, they said that it was the brother. The doctor sent them to a counsellor, anticipating emotional trauma. The doctor then directed them to Bangalore, to his friend's hospital, where she delivered the baby. They chose to give the baby up for adoption. They went for counselling, and things were fine. She completed 12th grade, and her life settled. The reason I shared this is that, in real life, the word 'abortion' has depth. In this case, was the doctor right? The doctor was absolutely right. By the third month, the baby has a life—a small human being with some sensation by then. We can't brutally kill them. Humanitarian considerations should be at the forefront."

Here, we can observe Wilson Sir expressing his personal values explicitly. He reiterates the prevalent argument that tends to victimize the person who is raped by suggesting that he (the brother) was tempted because the other person was not fully dressed. He aligns with and justifies the doctor who denied the reproductive rights of the girl, who might be a minor. Emotions take precedence over legal reproductive rights, as he mentions that it was over three months, making it legally prohibited. It may be noted that the MTP (Amendment) Act 2021 approves abortions up to 20 weeks with one doctor's approval or 20-24 weeks of the gestation period with the sanction of two medical practitioners. As we can see, Wilson Sir's emotions are shaped by the gendered discourses. The cultural and religious influences also likely contributed to the lens through which he perceives and discusses aspects of MTP.

4.4.3 Emotions at the Intergroup level

Now, I try to broaden the exploration to encompass the contextual landscape within which Wilson Sir navigates his teaching role in the school environment. Wilson Sir's emotions are not solely shaped by personal interactions but are profoundly influenced by the overarching structures and norms of the school. The prevailing said and unsaid rules shape the pedagogical approach to science in his school and contribute to his emotional responses. This

section explores the interplay of cultural, political, social, and institutional factors that shape his emotional encounters and expressions.

As mentioned earlier, Wilson Sir shows his worry about the potential backlash and criticism from parents and society in general. He expresses caution at many instances, which can be seen in the below excerpt,

> *"Safe sex demands sacrifice. This is true with relationships. I don't use the word sexual act. I use only sexual relations. Because the students are vulnerable, the society is vulnerable. It should not be going towards loose talks."*

Wilson Sir's perspective on relationships reflects an interaction of his identity as a father, societal expectations, and his own values. The emotional burden of conforming to these values while potentially recognizing the evolving nature of relationships in modern society may bring certain internal struggles, however, he identifies closely with the traditional paternal protectionist discourse.

> *"We don't encourage relationships. I tell them that affection is okay…when it's time for marriage, if you are settled and with the consent of your parents…It can be looked down on as backward, but our society is not as modern as others. Whatever we say, parents are conservative. They won't be able to accept this. We should think from their side as well. I say that the relationship should end in marriage"*

The emphasis on avoiding "loose talks" may reflect institutional, cultural or societal norms that prioritize modesty and discretion within the classroom.

In the initial informal conversation with Wilson Sir, he expressed his worry about girls from marginalized communities eloping with their boyfriends, resulting in them dropping out of school. This reflects a real and immediate challenge in the classroom context, where the decisions related to relationships and marriage directly impact the educational trajectories of girls from tribal communities. Despite Wilson Sir noting that there haven't been any dropout cases in the last two or three years, he describes how the cases of girls eloping is normalized within the tribal context. He mentions that he focuses more on protectionist discourse as this is classroom reality. In the district of Wayanad, tribal communities with their unique customs, rituals, and social norms surrounding marriage, differ from the legal framework established

by the state and are often penalised. The cultural disparities between tribal communities and the dominant legal framework create a challenging scenario, wherein the dominant value framework, concerned with instances of girls dropping out and their agency, struggles to reconcile and accommodate these cultural differences. The prevalent understanding of marriageable age within tribal communities differs from the dominant perspective, yet these communities are compelled to conform to the mainstream conceptualization and are subsequently penalized for non-compliance. Wilson Sir's emotion reflects and is shaped by the complexity arising from disparities in the conceptualisation of marriage, marriageable age, and social justice within communities at different positions in the power hierarchy.

4.5 Discussion

As teachers engage in the discourse around aspects of body, sexuality and reproduction, they are prompted to grapple with their own beliefs, values, and societal norms. The complexity arises from the intersections of their identities—gender, cultural background, personal experiences, and professional roles—intersecting and influencing one another in different ways. The discursive spaces in which teachers operate become sites for negotiating meaning and constructing their identities.

This chapter argues for a recognition of the affective and emotional dimensions, foregrounding the political and ethical implications of teachers' emotions. Wilson Sir's emotional experiences highlight the relationship between emotion, identity, and power. Wilson Sir's emotions are not mere reactions but integral aspects that shape his pedagogy choices. The emotional stance encompasses the array of feelings, attitudes, and sensitivities that Wilson sir brings into the classroom. The adoption of Zembylas's integrated approach, which considers intrapersonal, interpersonal, and intergroup dimensions of teachers' emotions, offers a perspective for understanding the complexities of Wilson sir's emotional experiences. This approach acknowledges that emotions are not isolated but are intricately connected to individual, social, and socio-political dimensions, providing a holistic framework for analysis.

Emotions are inseparable from issues of power and politics. The analysis of Wilson Sir's emotions highlights the interconnectedness of personal experiences with broader institutional structures. This analysis delves into how Wilson sir, negotiates his emotions, influencing not

only his decisions on what to teach but also setting the overall tone for the science classroom. It's through these emotions that Wilson Sir's values and attitudes toward the subject matter are manifested, creating a unique emotional atmosphere within his teaching space.

Wilson Sir's interactions with students are not only professional but also carry a personal, caring dimension. These relationships have a profound impact on his teaching, influencing both his emotional stance and the enactive nature of his emotions in the classroom. His emotional expressions are not merely reactive but play an active and productive role in shaping his identity.

The emotional experiences of Wilson Sir, particularly shame and fear while teaching the particular chapters, arise from stepping outside the usual boundaries of teaching which reflects the emotional labour of diverging from expected school norms (where all the teacher discussions are expected to be sanitised and not evoke sexual aspects of the body). This can be attributed to the affective cost of deviating from the normative scripts of teaching (Ahmed, 2004). These emotions are not merely personal but circulate within the "affective economy" of the school environment. The affective economies within which teachers operate are shaped by cultural and institutional norms that dictate appropriate emotional expressions. The shame and fear are tied to potential backlash from parents, societal judgment, and institutional norms. These emotions act as a barrier, preventing teachers from fully engaging with these topics, even if they recognise the importance of the topic for student well-being. Wilson Sir's attempts to manage his emotions and expressions in the classroom (choosing when to express discomfort, how to navigate sensitive questions, and when to employ empathy) can be read along with Ahmed's discussion on the politics of emotions. Teachers perform emotional labour, managing their feelings to conform to the emotional rules prescribed by the institution and societal expectations. Thus, this labour is not neutral but deeply political, reinforcing or challenging power dynamics within the school setting.

Within this context, Wilson Sir's emotions are influenced by a sense of responsibility and a perceived duty to protect, guided by traditional norms and expectations associated with masculinity. This protective instinct could manifest in various emotions, such as concern, anxiety, or even a heightened sense of responsibility. While there is genuine care and concern embedded in these emotions, there can also be a need for teachers to reflect on how these emotions are influenced by societal expectations. While it is important to remember that the

students are vulnerable and need to be protected and teachers and institutions have the responsibility to ensure safety, we should be reflecting on what we consider as perceived danger. The important question raised is whether our understanding of perceived danger is influenced by a patriarchal value system. In a patriarchal context, certain risks or challenges may be overemphasized or downplayed based on gendered expectations. This value system may shape not only how he perceives his role as a teacher, but also how he experiences and expresses emotions within the broader context of gendered expectations. Hence it is important to reflect whether traditional gender roles and expectations shape the lens through which teachers and institutions assess and respond to potential risks for students. Such an examination prompts a reevaluation of priorities, policies, and interventions to ensure a more equitable and inclusive approach.

It is also important to recognise teachers' emotional experiences, particularly those related to shame, discomfort, fear, and worry while teaching about aspects related to body and sexuality. Teacher capacity-building programmes acknowledging these emotions allow for the development of practical pedagogical strategies. These programmes should aim at supporting teachers to manage and channel these emotions positively, ensuring a more effective and comfortable teaching experience. Similarly, these programs should look into emotions such as empathy and care that teachers express, recognizing them as valuable attributes. Exploring these emotional dimensions can provide insight into how teachers can leverage empathy and care as powerful tools in their teaching practice. These emotions could be transformed into sites of resistance and reformation.

The emotional dynamics in science teaching, when carefully examined, have the potential to reshape the discourse and practices in science education, making it more responsive to the needs of both teachers and students. Teacher capacity-building programs should therefore help the teachers to introspectively analyze their emotional experiences, understand the impact of these emotions on their teaching, and consider how to align their emotional expressions with desired pedagogical approaches. There should be opportunities to discuss the influence of cultural and historical contexts on moral perspectives and examine biases by engaging with voices beyond one's comfort zone. The discomfort of these discussions is crucial for teacher preparation. Understanding the power and political dimensions involved in negotiating or transforming emotional rules helps teachers exert their agency. Teacher capacity programmes could encourage teachers to question how societal discourses have

influenced their self-perceptions and emotions. It should recognise the importance of teachers reflecting on their role in perpetuating existing power structures, where teachers often carry unconscious biases rooted in heteropatriarchy. To attain this critical consciousness, teachers must engage with the world in a thoughtful and disciplined manner, questioning not only their perception of reality but also the external forces influencing their lives and profession. They should try to construct an understanding of the structures and patterns within the cultures in which they teach, including the prevailing orthodoxies and sacred beliefs, and recognise their roles in the sense-making process. Thus, teacher capacity programmes should help teachers to actualise lived curriculum (Maxwell & Roofe, 2020) in which teachers do not focus on rigidly adhering to a predetermined curriculum, instead, they reorient themselves to both their own and students' lived experiences. It is important to recognize and appreciate that their students, too, possess unique narratives. Teachers need to realign themselves and open themselves to introspection and self criticism. Teachers should engage in self-transformation by gaining a richer understanding of their situatedness—recognizing that their many emotions hold powerful epistemological and affective qualities that can generate resistance.

Chapter 5

Exploring the continuum of Scientific and Moral Discourses on Sexuality

5.1 Introduction

In this chapter, I aim to explore the interplay between distinct scientific and moral/cultural discourses within the confines of a classroom space. I start with a few questions, the central one being- can we distinguish between scientific and moral arguments within biology teaching, particularly when teaching about sexuality? Do moral arguments have an influence on scientific reasoning when discussing aspects around sexuality within the context of biology education and, in turn, shaping the student's worldview? I contend that in the discourses of science teaching, moral and scientific arguments are intertwined. While clearly marking out boundaries is difficult, I use the term "scientific argument", to refer to arguments by the textbook or teachers which are presented to students as developed using accepted scientific inquiry[11] techniques, and that, at a specific moment in time constitute a part of the body of scientific knowledge. I use the term "moral arguments" to refer to those types of arguments influenced by social, cultural, political, and personal values. In this chapter, with a few exceptions, I refrain from differentiating between social, cultural, political, and personal values, but I concede that doing so could provide greater insights. The intention here is not to examine how each value interacts differently with science, but to provide a general understanding of the role values play within science classroom discourse.

Scholars in the field of the nature of science, particularly those engaged in the feminist philosophy of science, have extensively explored related questions. They have demonstrated how social and cultural values operate within scientific contexts, leading to biases in the research design, data interpretation, and dissemination of scientific knowledge, as highlighted

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[11] Scientific inquiry involves the processes through which scientific knowledge is developed, encompassing conventions related to its creation, acceptance, and practical application. It includes making observations, asking questions, researching existing information, considering assumptions,planning investigations, analyzing data, proposing explanations, evaluating alternative explanations and communicating results (Lederman et al., 2014).

by works such as Martin (1992) and Fausto-Sterling (2012). Allchin (1999) mentions three different ways through which values intersect with science. Firstly, epistemic values guide how scientific research is conducted. Secondly, values intersect with science through the influence of cultural values brought in by practitioners. Thirdly, values can emerge from science, both in terms of what it produces and the way it operates and can spread in society and culture. As Allchin (1999) argues, in many instances and across diverse settings, scientific conclusions have been significantly biased, reflecting the motivations of the practitioners. The race, nationality, religion, class, and other personal and social attributes of scientists can contribute to establishing foundational conditions or proximate values that shape the development and validation of knowledge within the scientific community. These racist and misogynistic scientific explanations and findings were regarded as valid or credible within the scientific community and were accepted as part of the scientific discourse of the time (Allchin, 1999). Many studies have also emphasised the value-laden nature of science textbooks and their heteronormative biases (Bazzul & Sykes, 2011; Raveendran & Chunawala, 2015; Snyder & Broadway, 2004; Nehm & Young, 2008). With this backdrop, I try to understand two of the prominent actors in the classroom- the textbook and the teacher.

During my initial observation of a class led by Susmita Miss, I came across two notable examples where scientific reasoning was applied to support cultural beliefs and practices. Firstly, she introduced the concept of 'mental age,' portrayed as a scientific idea, to endorse the cultural norm of age differences in heterosexual relationships, specifically advocating for older men based on the claim that men's mental age is typically lower than that of women of the same chronological age. Secondly, in the context of discussing the male reproductive system, she cited the necessity for a cooler temperature for sperm production by the scrotum as a rationale for cultural advice against wearing tight-fitting jeans, a recommendation traditionally passed down by elders. These instances highlighted a seamless integration of scientific explanations with cultural rationale within the classroom, prompting a deeper inquiry into how scientific and cultural narratives are intertwined within the scope of biology education.

This chapter aims to explore this interplay through a thorough examination of these two topics. The first topic pertains to the representation of the human body and genitals within science textbooks, while the second topic examines the discourse surrounding safer sex in the classroom by the textbook and teachers. Throughout both sections, I explore the interaction

between scientific and cultural values as they converge to construct a shared narrative. I will also delve into the potential consequences of these discourses on students' perceptions, agency, and their sense of autonomy.

5.2 PART 1 : Artistic mutilation of genitalia: An interpretive analysis of representations of genitalia in Indian school science textbooks

This section aims to investigate various scientific depictions of genitalia and examine cultural and moral values that are manifested through visuals in relation to the human body. Here I try to unpack the visual representations of genitalia in different discursive spaces within Indian science textbooks from 6th to 12th grade. The textbooks chosen are (1) NCERT (National Council for Educational Research and Training) science textbooks of 6th to 10th standard, (2) KSCERT (Kerala State Council for Educational Research and Training) science textbooks of 6th to 8th standard, (3) KSCERT Biology textbooks of 9th and 10th standard, (4) NCERT/ KSCERT Biology textbooks of 11th and 12th standard (KSCERT uses NCERT textbooks for higher secondary science). These textbooks were chosen as they are used by most schools in the state of Keralam. I reviewed these textbooks from the cover to the back page, paying close attention to the visual representation of the human body and genitalia.

I position my approach within the critical hermeneutic methodological landscape (Kinsella, 2006) and attempt to interpret the subjective meaning of visual narratives within their sociocultural, political and historical context (Schmid, 2012). The hermeneutic approach requires a researcher to go beyond describing the overt meaning found in the text by continually iterating between singular interpretation and a holistic understanding of macro-sociocultural and micro-situational contexts (Kinsella, 2006). Rather than providing an authoritative reading, the goal is to seek an understanding of the text through reflective practices. Every interpreter is located in a specific social network and practices, i.e., the meaning of the text is evoked through the researcher's perception and experiences, which are historically and culturally situated (McClain, 2014). I approached the textbooks through a feminist lens to develop open codes. To further interpret the visual images and the ideological apparatus which produces the visual images, I adopted a socio-semiotic framework proposed by Serafini (2010). I compare the visual modes used in these representations to the process of

genital mutilation, which involves hiding, modifying and cutting the genitals. This is inspired from Sullivan's somatechnics, which prompt us to consider the complex ways bodily being is shaped by discourses (Sullivan, 2009, quoted in Sperling 2021; pg 587). Here the surgeon's hospital space is metaphorically transformed into the high school classroom where the textbook discourse serves as the metaphorical "surgeon's knife".

5.2.1 Politics of Visual Representation[12]

The creation of visual representations occurs within prevailing ideological frameworks. As a result, they are neither innocent nor free of ideologies; instead, they mirror and perpetuate mainstream discourse (Shields, 1990; O'Neill, 2013; Blakesley, 2012). Visual representations in a particular context are chosen over multiple possible alternate representations by the author or the artist; so is the expression of particular values over others (Blakesley, 2012). In the context of textbooks, the dominant frameworks within which the policy makers and curriculum developers operate may play an important role in making these choices. Each visual representation generates and indicates the existence of a collection of ideas, i.e., they represent the presence of a discourse whose limits are culturally defined (Rosello, 1998). Their modes of production reflect certain purposes or the desire to construct specific social order, and accordant identities (Schmid, 2012). Hence, as Rosello (1998;pg 338) puts it, 'there are layers of images within images'.

The meanings of any representation are products of the interaction of the message encoded during its production (or the interest and motivation of the artist) and the subjectivity and prior experiences the viewers bring while viewing (Shields, 1990). The meaning also depends on other factors like the context of viewing and the cultural expectations set by the area of the display (Helmers, 2012). Visual features like placement, cropping, and captioning also influence the meaning produced (Helmers, 2012). This is akin to what Mason, Morphet, and Prosalendis (2006) refer to as the channelling or mathematisation process, which involves eliminating all visual information that is irrelevant to the intended meaning. They also discuss the steps of framing, focusing, and filtering which are parts of the channelling process. Hence, each visual representation can have numerous interpretations.

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[12] Visual representations include photographs, diagrams, charts, graphs, artwork, videos, or films.

In science textbooks, visual representations play a crucial role in transmitting scientific knowledge and are seen as an important pedagogical tool. They may range from physical or material objects to abstract-conceptual constructs or immaterial entities (Pauwels, 2006). These serve different functions, from providing visual depictions of physical objects or abstract concepts, as models to simulate complex systems, to serving as evidence to support or challenge scientific theories (Evagorou, Erduran, & Mäntylä, 2015). Visuals are used as instruments for reflecting on and about the phenomenon; hence, these are epistemic objects that enable knowledge production (Evagorou et al., 2015). By inspiring awe and reverence in the viewer, visual representations about scientific concepts can produce an intensely moving experience that goes beyond the straightforward dissemination of knowledge. However, every form of representation entails some sort of translation, conversion, or fabrication in which the original source is captured, altered, or even recreated through a series of choices made by many actors (scientists, artists, and technicians), technological tools, and settings (Pauwels, 2006). Hence, scientific visual representations are not entirely objective depictions of the natural world; rather, they are made to allow a particular interpretation by emphasising certain characteristics and hiding the 'less relevant'. This significantly influences 'what can be known and how' (Pauwels, 2006; p. 5).

Mason et al. (2006), explain how, despite scientists' understanding of evolution as a chaotic, unpredictable procession of random processes, the amoeba-to-man icon promotes a linear, smooth, gradual, goal-directed hierarchy of evolution. They explain how placing man-the tallest figure, in the far right corner and amoeba- the shortest figure, in the far left corner, conveys to the viewer the hierarchy of species, and how removing the background makes evolution appear autonomous and automatic. In another study, Navare (2021) explains that an entity's shape and colour in an illustration reflects how the scientific community views and values the entity and its contributions. Navare argues that in the illustrations of fertilisation in popular biology textbooks and education websites, use of colour shade, brightness, and the shape of sperm depicted with pointed heads (despite the fact that normal human sperm have oval-shaped heads) suggest a greater level of importance and agency attributed to sperms than eggs in fertilisation. This cultural imagery portrays men and their organs as active, aggressive, and important, while women and their organs are portrayed as recipients who are passive and submissive. Moore and Clarke (1995) analysed clitoral depictions in American and British anatomy texts from the twentieth century and observed that female sexual anatomy received lesser attention, both in terms of literal representation and symbolic

significance. Gender-neutral depictions frequently defaulted to male representations without clear labelling. The clitoris was consistently portrayed as smaller or inferior to the penis.

Analysis of seventeen anatomy textbooks for medical students, conducted by Parker, Larkin, and Cockburn (2017) revealed lack of diversity in ethnicity, age, and body type and also bias in the portrayal of stereotypical gendered emotions, roles, and settings. The study suggested that these anatomical representations largely adhered to a sex/gender binary. Diego and Spadavecchia (2022) analysed Mexican textbooks for sexuality education programs of 4th to 6th graders over the past three decades. Their findings revealed that the majority of images (realistic or metaphorical) conveyed underlying meanings and societal values rather than simply representing anatomical features. These images predominantly depicted slim, feminine, and primarily white bodies, often omitting the vulva. Further, recent editions showed a growing trend of sexualized imagery.

Since visual representations have the power to shape one's perception and consciousness, they are useful tools for propagating counter-hegemonic discourse and resistance (Schmid, 2012). As a result, representations are fraught with controversy and come under the scrutiny of governments as well as religious and political groups. The state often assigns responsibility to different sanctioning systems (like film censor boards), to regulate and ensure that cultural norms are not violated. An important arena under the scrutiny of the state is the expression of sexuality and the state ensures, through these regulatory systems, that visual representations communicate socially endorsed notions of sexuality. When describing the struggle to have Gill's film 'Mardistan' certified by the Indian censor board, Gill mentions how the terms 'penis' and 'anus' were deemed offensive and unacceptable (Gill, 2017). In Gill's opinion, the censor board promotes a 'nationalist, paternalist, heteronormative' goal of the nation-state by using the legal definitions of obscenity and vulgarity, which are largely moulded by colonial and social morals. Often, the artist together with the context and the canvas in which the art is made is monitored along with the art. For example, an event in which body activist Rehana Fathima's son painted a phoenix surrounded by flowers over his mother's semi-nude upper body, sparked moral panic and led to the labelling of Rehana Fathima as a folk devil who corrupts children[13] .

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[13] https://thewire.in/women/rehana-fathima-pocso-body-painting

The censoring, meanwhile, is not necessarily external. The creators (authors, translators, artists) may apply self-censorship, which the audience may be aware of (Scandura, 2004). Thus, looking at the relations between the visual representation, its social context and its connection to power, which Schmid (2012) together calls visual politics, provides insights into the ideological apparatus which shapes its mode of production. The potential of images in the construction of perception has been widely explored by school textbooks as well, which are directly and indirectly regulated by the state and religious and political groups. Textbooks contain a wide range of visual representations, including photographs, illustrations, and diagrams, that are used to represent and explain various concepts and ideas, which are produced and consumed in specific social and cultural contexts. The way these visual representations are presented can have a significant impact on how students perceive and understand the world. The appropriateness of visual representations in school textbooks has often been the subject of debate and hence textbooks continue to have 'loaded sanitised images' that do not challenge the dominant value system. These visual texts offer limited possibilities of interpretation and perspectives (George, 2013). Thus, visual representations in the school textbooks (and textbooks, in general) also undergo some form of censorship and self-censorship.

Here, I attempt to investigate textbook depictions of genitalia and examine how ideologies manifest themselves in relation to the human body. I try to unfold the socio-cultural understanding of the body manifested through these depictions. Understanding the visual politics of textbooks can help us to critically evaluate the messages and values that they promote, and to recognize the ways in which we could redesign them and bring alternate representations that can broaden students' perspectives.

5.2.2 Analytical framework

Serafini's (2010) socio-semiotic analytical framework is used to interpret visual images in this study. This framework consists of three interconnected analytic perspectives: perceptual, structural, and ideological. These perspectives can be seen as a set of three concentric circles, with the perceptual perspective at the centre, the structural around the centre and the ideological as the outer circle. The perceptual perspective involves noting the denotative content of the image, the design elements or modes, such as fonts, designs, patterns, colour, composition, layout, and so on, and serves as the basis for further interpretation. Structural

perspective involves understanding the relationship and interaction of various design elements and interpreting the meaning they make and communicate within a given cultural context. Because the overall meaning of the image is distributed across different design elements, it is necessary to examine the function of each element and its contribution to the whole. This perspective can examine the image's content (ideation metafunction), the relationship between the image and the reader (interpersonal metafunction), and meaning-making through various elements (compositional metafunction). The ideological perspective tries to analyse how socio-cultural, historical and political context influenced the creation of the image and further how the image contributes back to the cultural setting. This entails taking a closer look at the social function of images - how images reflect social relationships, power, identities, and ideology- and how these images function to produce them (Serafini, 2010).

5.2.3 Analysis

I describe seven visual features/modes employed in textbook illustrations of the human body and genitals frequently. I here make an effort to interpret these modes from a structural and ideological perspective. A summary of the analysis is presented in a tabular form at the end.

a) The hidden and the non-existent

Different versions and forms of 'The road to homosapiens'/'The march of progress' illustrations are used in textbooks to represent the evolutionary history of modern 'man'. This illustration generally has received criticism for its racial bias (Mason et al. 2006) and for misrepresenting evolution as a linear, one-dimensional path from a primitive to a higher-evolved organism (Mason et al. 2006). The textbook illustration depicts the physiological changes of every body part in the evolution from ape to human. However, it conceals the organisms' genitals between their legs (the penis in this case, as all of them, are the illustrations of the evolution of men). The concealment suggests that genitalia (or their evolutionary modifications) are either not important
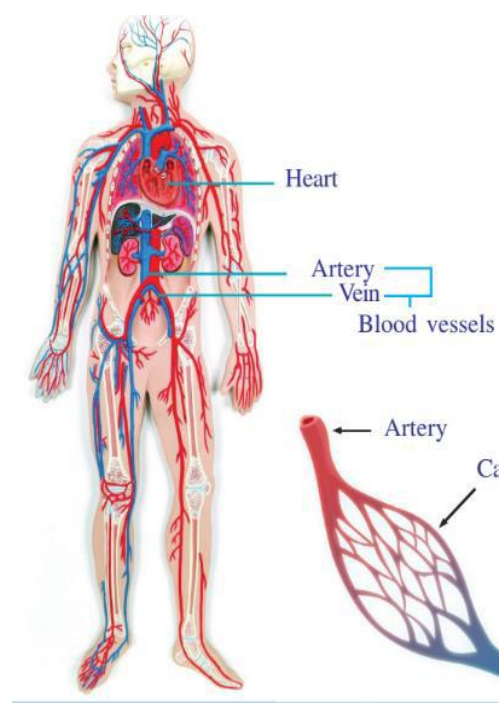

Figure 1: Std 7th - SCERT (2016:111)

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or that we do not talk about them. Many contemporary depictions of human evolution on the internet show the genitals clothed as the organism evolves. The covering of the genitals is marked as a sign of evolution itself and conveys the impression that shame is something that is 'naturally/biologically' acquired through the course of evolution. This can also be read in conjunction with the Bible's account of Adam and Eve becoming ashamed of their genitals and covering them after eating the fruit from the 'tree of wisdom' . It is also observed that many depictions of the human body depict only the upper body and end above the genitals in order to avoid illustrating them. Genitalia are also frequently missing from portrayals of the full human body. In place of genitalia, legs connect to one another. Despite the fact that one sees genitalia every day and is aware of their presence, an impression is created that they do not exist. Since a strong connection between genitals and sex is made, genitals are barred from any public discourse and are considered a source of shame and repression. The assumption of the absence of genitals is an attempt to obstruct the discourse around genitals, body, desire and pleasure. Braun and Wilkinson (2001) call this physical absence in the representation as a 'conceptual absence' which renders discourse on the genitalia, vagina in particular, absent in the public domain, making knowledge about it scarce. The figure below is one such, where the body is depicted without genitals. This image in the textbook is to explain circulatory system however, most external body features (which are not part of circulatory system) except the genitals are represented.

Genitals are typically absent from depictions in textbooks for lower grades and are present in textbooks for higher secondary classes. This is perhaps a result of the boundary that is put in place to separate children from the sexual domain. Children, particularly young ones, are viewed as needing to be shielded from knowledge about sex and the body in order to engage in desirable sexual behaviour in the future (Egan & Hawkes, 2008a). Although there is a discussion of genitalia in the written text, the genitals have been removed in the graphic portrayal in a few instances. As was previously noted, this results from apprehension about the ability of visual representation to conjure up more mental images and emotions.

b) The censored

Many textbooks' representations of the human body blur or censor the genitals. Such images illustrate the moral prohibition of a repressive social structure that attempts to limit sexual performance or its discussion. Possibly, the censoring of genitals is done to protect the 'dignity' of the image and the audience and to protect the latter from embarrassment and

shame. By forbidding the public representation of genitalia, the discourse surrounding it is likewise forbidden. This censorship functions as a social mechanism to control and regulate sex practice, representation, and expression. Thus, it represents the desire to deny sexuality and denotes the restrictive attempt to stifle sex. Textbooks legitimise some forms of knowledge while delegitimising others and define what can and cannot be spoken or shared in the classroom in specific. Hence, the genitals could have also been removed from representation to protect sanctity of the textbook.

Figure 2:Std 10th - SCERT (2019a:13)

c) The disowned genitalia

Many representations of the reproductive system are drawn in isolation from the body. Body systems like respiratory, digestive and circulatory are drawn with the backdrop of the body. The figure below highlights the contrast between the representation of the reproductive system and the respiratory system, with only the latter positioned within the body whereas the former is depicted without the body. The excretory system is also depicted as an abstract entity existing independently of the body in many instances.

It is easier to analyse an object's perceptual properties when it is embedded in the usual context with other relevant objects (Bar, 2004). Thus, abstracting the genitals does not give the students a sense of their location and size. This lack of understanding of the size, shape, and location of the genitalia and other organs could have an impact on students' sexual and reproductive health. The fear of representing the position of the genitalia and the pelvic region stems from cultural intolerance and discomfort around the genitalia. It underlines the patriarchal imperative that human bodies, particularly those of women, and the regions around the genitalia should be kept hidden from public view.
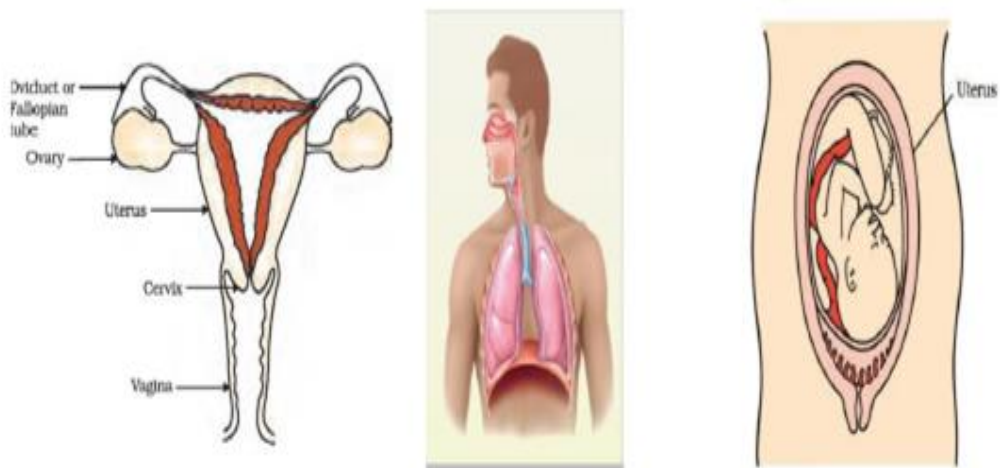
Figure 3a: Std 10th - NCERT (2022a:123) ; 3b: Std 7th - SCERT (2016:104) ;
3c: Std 8th - NCERT (2022b:71)

While discussing genitalia as an abstract entity, it is possible to limit the discourse within the medical or scientific arena; however, if genitalia are located within the body, it becomes more personal, which may open the door to discussions of concerns and experiences. As seen in the image, the uterus is housed within an extended, tubular-like body that lacks thighs; as a result, the birth canal is depicted as being closed. This can interfere with students' understanding of the process of vaginal birth. Cultural intolerance towards the questions about pregnancy by children (such as 'how are babies made, where does the baby come out,' and so on) has mystified the pregnancy process.

d) The incidental female genitalia

Since the normative representation of the human has been a male body, male genitals are more frequently represented than female genitals. When there is a representational body to depict a human, the male genitalia is given primacy, thereby creating a hierarchy within the two genitalia. As seen in the illustration, the male genitalia is positioned correctly in relation to the body, and the female genitalia is dislocated to make space for the male genitalia.
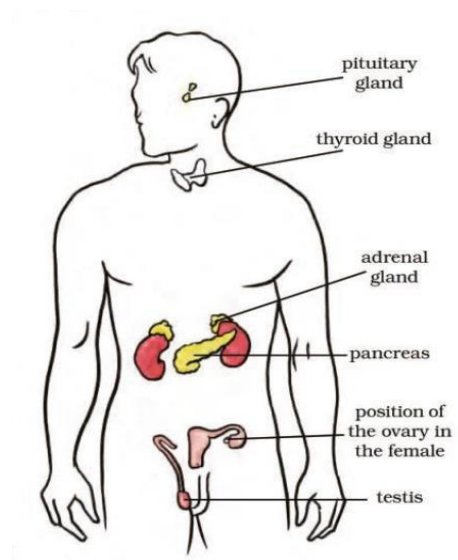
Figure 4:Std 7th - NCERT (2022b:85)

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In their work, Braun and Wilkinson (2001) explore the historical portrayal of the vagina as inferior, examining its depiction from ancient Greek beliefs of flaws, Freud's perception of it as small and inconspicuous, to models that considered it as an inverted penis. Hierarchizing genitals will prioritise the discourse and knowledge around one and ignore discourses around the other. Again, this will result in a disregard for the feelings and sensations related to female genitalia.

e) Ballooned vagina

Every depiction of female genitalia portrays the vagina as a hollow tube that can hold the penis. However, the vaginal wall meets one another in a non-aroused or relaxed state. Elliott made a similar observation in the analysis of the discourses surrounding the vagina in Aotearoa/New Zealand school health texts (Elliott, 2003). The vagina is constantly portrayed as stretched, elongated, and enlarged in shape in the selected textbooks. Vaginal walls are frequently flattened towards one another due to pressure from other organs in the pelvic area. This, together with the vagina's
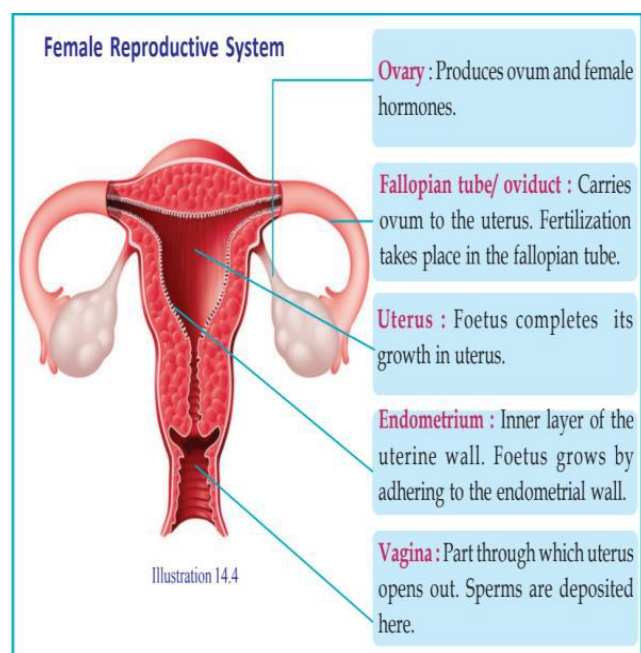
Figure 5:Std 8th - SCERT (2015:201)

capacity to stretch and extend, enables the vagina to serve as both a shield and a pathway to the cervix. Many women may be perplexed by the idea of the vagina as a hollow tubular structure and wonder whether tampons or menstruation cups can stay inside the vagina without coming out or entering the cervix and may thus refrain from using these. This conception of the vagina as a hollow tube stems primarily from a procreational orientation that emphasises the reproductive components of sexual activity.

Similarly, we can see that genitalia is only discussed and represented in the chapters on human reproduction and reproductive health. This, once again, narrows the scope of

discussion of sex for pleasure, defining the purpose of sexual activity as reproduction. Thus, textbooks play a crucial role in regulating sexuality and sexual expression.

f) The non-functional vagina

There is no mention of vaginal secretion in the section on bodily secretion and defensive mechanisms. Vaginal secretions comprise vulvar secretions from various glands, transudate through the vaginal wall, exfoliated cells, cervical mucus, and fluids from the endometrium and oviduct (Huggins & Preti, 1981).The pH of the vaginal secretions promotes the production of immunologic defences against bacterial overgrowth, kills sperm, and maintains the local flora (Wira et

Figure 6: Std 10th - SCERT (2019b:81)

al., 2011). Apart from the function of modulating immunity, vaginal secretion also helps in the self-cleansing of the vagina, lubrication and facilitation of reproduction. Despite the crucial significance of these secretions in sexual and reproductive health, the absence of their mention may not be a simple oversight. It could have resulted from apprehension over future conversations about sex and sexual arousal. The worry of portraying the vagina as an active 'defensive' organ capable of fighting against infections entering the body could potentially be another source of this fear. Making knowledge about the female genitalia, particularly its functioning, inaccessible is a tool to suppress women's sexual experience and pleasure, as well as their bodily autonomy.

g) The fair 'clean' hairless genitals

None of the textbook illustrations featured pubic hair around the genitals, nor did they show darkened genitals. Even when discussed under pubertal changes, pubic hair is absent from the images of female and male bodies. These frequent depictions of bodies without visible body hair engender socially constructed meanings about bodies that make body hair unacceptable

and also creates a new definition of cleanliness that equates hairless with hygienic. This helps to make pubic hair removal the norm and necessitates constant maintenance in order to produce the desired or typical smooth hairless body. Many cosmetic technologies and industries capitalise on this notion (Jenkins, 2019; Braun, Tricklebank, & Clarke, 2013).
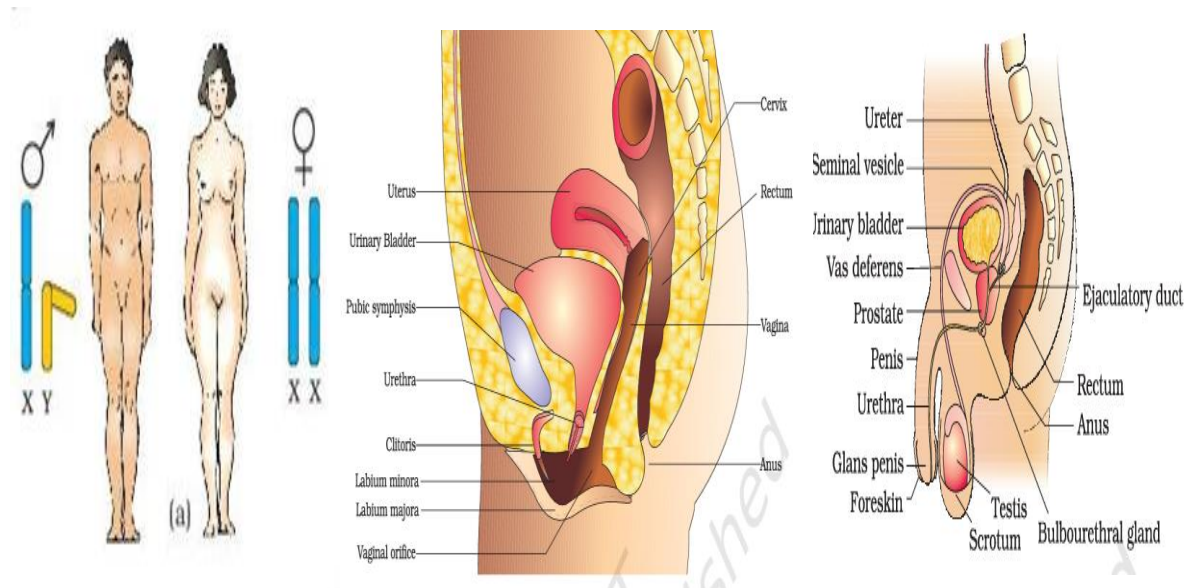
Figure 7a:Std 12th - NCERT (2022c:p. 70); 7b: Std 7th - NCERT (2022c:p. 29); 7c: Std 12th - NCERT (2022c:p. 27)

Similarly by displaying fair genitals, textbooks promote an unattainable body image ideal and set a new aesthetic standard. The body that deviates from it, such as one with pubic hair, is stigmatised and hence will be viewed with disgust. This contributes to the construction of the natural body as deficient, requiring constant maintenance and modification (Toerien & Wilkinson, 2003). Thus, the social meanings associated with bodies, sexuality, and hair create a fair hairless ideal that necessitates self-surveillance and force one to modify one's body to conform to societal standards of beauty, desirability, and hygiene (Li & Braun, 2017). The created desire for lighter-fresh-genitalia has led the way for harmful treatments like vaginal bleaching, whitening cream, (de)odorizing products and so forth. To emphasise the need of using these products, companies that previously marketed them as cosmetic goods are now positioning them as hygiene and health goods.

I now summarise and list each of the aforementioned themes according to the three analytical perspectives provided by Serafani's (2010) socio-semiotic framework.

Theme	Perceptual perspective	Structural perspective	Ideological perspective
The hidden and the non-existent.	Genitals concealed. Body ends above the genitals. Legs join each other without the genitals.	Discussion of genitalia is ignored when talking about the body.	Implies genitalia and the surrounding need to be clothed. Establishes 'hiding' genitals as a marker of evolution. These become the crux of the arguments for policing clothes, particularly of women, by society. Obstructs the discourse around genitals and limits the production of knowledge and its access.
The censored.	Blurred or censored genitals.	Social values that define what 'can be seen' and 'talked about' get communicated.	Functions as a social mechanism to control and regulate sex practice, representation, and expression.
The disowned genitalia.	The reproductive system is drawn in isolation to the body.	Abstracting the genitals does not give the students a sense of its location and size -- a possible source for misconceptions and fear.	Genitalia as an abstract entity limits it within the medico-scientific discourse, thereby disapproving the discussion on pleasure and experiences.
The incidental female genitalia.	Female genitalia is mislocated to correctly position the male genitalia w.r.t the body.	A hierarchy within the two genitalia is created.	Hierarchizing genitals will prioritise one and ignore the other. Leading to disregard for the feelings and sensations related to female genitalia, and also sexual and reproductive health of women.
Ballooned vagina.	Female genitalia shown as a long, stretched and hollow tube.	The procreative orientation restricts the conversation to reproductive functions and limits sexual	Can lead to misconceptions and fear, influencing choices of menstrual products and reproductive health in general.

		activity to penetration.	
The non-functional vagina.	Vaginal secretions are not mentioned /marked.	The functions of genitalia and its significance for sexual and reproductive health are left undiscussed.	Restricting knowledge about the female genitalia, particularly its functioning, suppresses women's bodily autonomy.
The fair 'clean' hairless genitals.	Genitals free of public hair and are non-darkened.	Constructs the notion that removal or alteration of material aspects of the body is normal, desirable and necessary.	Compels monitoring own body within hegemonic aesthetics, making the genitalia the site for control and discipline. Helps various technologies and industries which pose as solutions to flourish.

Table 1: Summary of the analysis of visual representations

5.2.4 Discussion

In addition to reflecting power dynamics, diagrams and images constitute a tool for exercising power. They are a part of the scientific discourse (a significant part of the broader social discourse) that has been ideologically shaped and also plays a role in creating discourses that shape the ideological reality. Our understanding of our bodies has been (re)constructed by these discourses and has material/ technological implications. Thus, focussing on these discourses is critical to reimagining the existing power relationships in which our bodies are embedded. Here, the objective is not to target any curriculum/board or to judge the images as right or wrong, but rather to use this critique to be aware of the power vested in visual representations, and provide scope for alternate narratives as and when needed.

The general lack of anatomical knowledge about genitalia has been reported by various studies. A study by El-Hamamsy et al., (2022) shows frequent confusions between the urethra, cervix and clitoris. This general lack of knowledge about genitalia and the body may have detrimental effects on making informed consent and decisions. Hence, it is crucial that

textbooks respect students' right to know about their bodies and try to promote a nuanced understanding of the human body, by acknowledging and representing diversity and not restricting the depictions to the two 'normative' genitalia which reinforce the binary-sex construct. Sex should be seen as a spectrum with multiple outcomes beyond just male or female, encompassing diverse combinations and expressions that are socially interpreted and sometimes falsely categorized into binary distinctions (Fausto-Sterling, 2018). Biomedical institutions often fail to prepare parents for the realities of having an intersex child, leaving them unequipped to challenge the pathologization of intersex traits (King, 2021). Integrating intersexuality into textbooks thus promotes agency and well-being, validates the existence of individuals with variations in sex characteristics and can foster awareness and acceptance. This can help in dismantling harmful binary norms and addressing human rights violations experienced by intersex individuals. School curriculum and textbook by bringing depictions of bodies and genitals that do not fit into binary boxes without pathologizing, will empower individuals to challenge societal norms and reject a false dichotomy between societal norms and unnecessary or forced medical intervention (King, 2021).

Even though the blurring of genitals attempts to conceal sexual instincts, the blurring can't dismiss their existence. By attempting to conceal the genitalia, the blurring makes itself and the discourse it represents more prominent. Thus concealment, contrary to its intention, may serve to both excite and arouse students' interest in everything that has been outlawed or suppressed. Foucault (1990) describes this idea in discussions on the repressive hypothesis in his book 'History of sexuality'. Concealment may result in an excessive emphasis on genitals and a new perception of the human body that gives it a hypersexualised connotation. As a result of this new meaning, students may feel uncomfortable and embarrassed about their bodies. The intense shame passed on to them from the sociocultural space and the classroom can inhibit them from exploring and understanding their body.

 According to Elliott (2003), concealing the genitals separates them from the rest of the body, allowing one to perceive sex and the body in isolation. It is possible that people will not prioritise safer sex practices as a result of this dissociation of sex from bodies and emotions. For this reason, it is critical for textbooks to accurately depict the human body without associating any body parts with shame so that students can develop a healthy and positive relationship with their bodies. Textbook writers need to prioritise students' health and their right to know about their bodies over sexual morals that disallow discussing genitals and

sexuality. People carry early messages about their bodies with them forever (Henningham & Jones, 2021), so the textbooks should not instil in students a restrictive perspective of the body that makes them view the body with shame. Teaching children precise anatomical words for genitalia allows them to articulate their wants or sentiments concerning vulnerable body parts. Deeming genitals as shameful and unspeakable forbids one from seeking required medical help. Dunival et al. (2014), describe how conditions like pelvic organ prolapse have been considered as the 'disease of shame' making many women feel uneasy talking about their condition with friends and medical professionals.

Once the genitalia and naked body are depicted in the textbook, the teachers have to work to foster a secure and comfortable learning environment. The social location of the individual, such as their cultural background, religious affiliations, gender, age, previous experiences and personal values, may have an impact on how one views the naked body. Since the naked body is censored in all other social spheres, students are aware of the taboo and the cultural mores (Scandura, 2004). As a result, their reactions to the naked body will be influenced by cultural shame and the desire to know more about what is forbidden. Therefore, teachers will have to be sensitive and conscious of this aspect of students' feelings. Inorder to promote a safe environment, the teacher can carefully establish classroom norms and explicit guidelines regarding appropriate behaviour. When students show signs of embarrassment, the teachers can use this as an opportunity to initiate critical discussions about the cultural and moral meanings associated with the body and sexuality.

5.3 PART 2: Exploring the continuum of scientific and cultural discourse around safer sex

In the following section, I try to explore the nuances of how safer sex is being addressed within the science classroom, delving into the matrices of values, beliefs, and practices that shape the dialogue on safer sex. I attempt to understand the intersection of various scientific and cultural discourses that surround this topic. Here, I discuss how the biology textbook and teachers talk about safer sex and the aspects surrounding it. This section is based on the interviews with Ashna Miss, Marina Miss, and Rashad Sir. One of the primary objectives is to discern how these divergent discourses, rooted in both scientific and cultural contexts, converge and interact within the classroom environment.

5.3.1 Analysis of the Textbook discourse

I begin by exploring how the 12th standard biology textbook talks about safer sex. I focus primarily on the chapter titled 'Reproductive Health,' which encompasses discussions on various facets such as reproductive health, population control policies, contraceptives, medical termination of pregnancy, and infertility. Raveendran and Chunawala (2015) have previously analysed this chapter and noted a consistent use of the term 'normal' within the discourse on reproductive health. This repetition of 'normal' implies a standardised, scientific benchmark for reproductive health, potentially sidelining individual experiences. The chapter's values on sex, gender, and sexuality are rooted in heteronormativity, ignoring diverse sexualities. As Raveendran and Chunawala argue, focusing on 'normal' excludes non-binary individuals and may pathologize those with diverse gender identities or sexual orientations, limiting understanding of reproductive health. Here, I aim to build upon this analysis by specifically investigating how the textbook discursively constructs the notion of safer sex. I use the conceptualisation of safer sex that has been expanded upon from Allen's (2005) work mentioned earlier in this chapter.

The primary observation is that while the textbook provides a definition of sexual health[14], it notably lacks a dedicated section on safer sex practices. Instead, the discourse on safer sex practices is confined to the context of discussions about sexually transmitted infections and all other discourse around the topic is silenced. Consequently, it fails to address the important aspect of consent which is essential in ensuring the safety of sexual practices. The following excerpt from the textbook is the only instance which directly refers to safer practices,

> *"There is no reason to panic because prevention is possible. One could be free*
> *of these infections by following the simple principles given below:*
> *(i) Avoid sex with unknown partners/multiple partners.*
> *(ii) Always try to use condoms during coitus."*

<div align="right">(NCERT, 2022-Biology, textbook for class XII, p. 47)</div>

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[14] I adopt WHO's definition of sexual health, which posits it as a state of physical, emotional, mental and social well-being related to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled (WHO, 2006a).

The choice of terminology, particularly "unknown partners," is noteworthy within the analytical lens. Here I try to understand the meanings that are conveyed through the category of the term 'unknown partners'. A more precise and scientifically aligned term would be "partner/s with unknown STI status." In India, premarital sexual activity is culturally discouraged, and it is assumed that individuals lack a sexual history before marriage (Majumdar, 2018). This can make discussing sexual history socially uncomfortable, especially considering gender dynamics where women are expected to maintain virginity while men have more opportunities for exploration. The term "unknown partners" in the textbook appears to avoid these issues and in turn may also imply that sexual activity with a known partner is safer, even without condoms.

The knowledge about STI status is not intended to stigmatise or exclude people but rather to inform practices accordingly. This involves understanding whether individuals have engaged in sexually risky scenarios, such as unprotected sex with partners whose STI status is unknown, and if so, whether they have undergone STI testing. It does not require discussing the frequency of sexual encounters or the number of partners involved; instead, it entails individuals having an informed understanding of their own STI status and being able to discuss it with their partners. Knowing STI status helps individuals choose practices without stigmatising or excluding anyone. While it does not guarantee safer sex practices, it allows informed decision-making (Simoni & Pantalone, 2004). The textbook's use of the term "unknown partners" is a pragmatic choice to avoid confronting societal norms and power relations.

Additionally, the textbook advises against multiple partners but recommends condom use. This raises the question: if condoms are used, does it make sexual activity with multiple partners safe? Reading both the points mentioned in the textbook does not give students an answer to this question. I argue that the textbook avoids delving into these complexities to align with prevailing societal morality and silences specific information about safer sex practices.

As we see, the discussion revolves around condoms as the only barrier method for safer sex, while silencing the discussion of other important barrier methods like dental dams, gloves, and various alternatives. This narrow focus reflects a limited perspective within the discourse on safer sex, primarily centred on heterosexual vaginal-penile penetration, which disregards

diverse sexual practices and orientations. It fails to acknowledge and therefore, tacitly invalidates the broad range of sexual activities individuals engage in, perpetuating an incomplete understanding of safer sex. Ideally, the selection of a barrier method for STI prevention should align with specific sexual activities. Therefore, it is crucial for textbooks to provide a comprehensive understanding of barrier methods, which should encompass not only a list but a discussion about the larger purpose of these. It should enable individuals to assess their own sexual practices and preferences, helping them choose the most appropriate barrier method to ensure their sexual health and safety.

Even in the discourse surrounding the consequences of sexually transmitted diseases (STDs), the prevailing focus tends to be on reproductive health risks. I selected the excerpt given below as it effectively illustrates certain commonly overlooked assumptions about women's health and bodies:

> *"Infected females may often be asymptomatic and hence, may remain undetected for long. Absence or less significant symptoms in the early stages of infection and the social stigma attached to the STIs, deter the infected persons from going for timely detection and proper treatment. This could lead to complications later, which include pelvic inflammatory diseases (PID), abortions, stillbirths, ectopic pregnancies, infertility or even cancer of the reproductive tract. STIs are a major threat to a healthy society."*

(NCERT, 2022-Biology, textbook for class XII, p.47)

A noticeable pattern emerges in this excerpt, where the discussion is predominantly centred on women being affected by STDs. Despite the existence of numerous other severe consequences associated with STDs, such as cirrhosis, urethritis, hemorrhoids, insomnia, anorexia, and mental distress, these non-reproductive health issues[15] are conspicuously absent from the narrative or are silenced. Only effects related to the female body's ability to reproduce are recognised as challenges to maintaining a healthy society. This foregrounding of concerns of normative society over individuals' well-being is what was seen in the discussion around AIDs. By focusing primarily on the reproductive consequences of STDs, the discussion overlooks the broader spectrum of women's health issues. By neglecting these aspects of women's health, the discussion perpetuates disparities in healthcare access and resources, further marginalising women. This selective emphasis on factors that directly

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[15] https://emedicine.medscape.com/article/775507-overview?form=fpf

impact reproductive capabilities effectively confines women's health and bodily concerns within the narrow sphere of their reproductive functions. This narrow focus on reproductive health reinforces societal norms that prioritise women's roles as mothers and caregivers above all else, marginalising their agency and autonomy in matters beyond reproduction. It perpetuates the idea that women's bodies are primarily objects of reproduction and fails to acknowledge their diverse experiences, aspirations, and contributions outside of traditional gender roles.

The critical factor for safer sex is explicit discussions about desired practices and mutual agreement between partners. This silenced / missing discourse in the textbook reflects the larger politics within which the textbook has conceptualised the notion of 'safer sex'. The conspicuous absence of this discussion can lead to misunderstandings, miscommunication, and ultimately, increased risk of sexually transmitted infections (STIs) or unintended pregnancies. Without open dialogue and mutual consent, individuals may engage in sexual activities without fully understanding each other's boundaries, preferences, or risk factors. Failure to prioritise consent and respect for boundaries can have significant repercussions for sexual wellbeing. It may lead to feelings of violation, distrust, or trauma if one partner disregards the other's boundaries or pressures them into unwanted sexual activities. Thus, it is imperative that discourse on sexual health and practices should emphasise the importance of open communication, mutual respect, and informed decision-making in sexual relationships.

The textbook's failure to address the necessity of contraceptive agency is troubling, especially since many women encounter challenges when attempting to use condoms themselves or with their partner. These challenges often stem from limited autonomy over their own bodies and the prioritisation of men's sexual pleasure within heterosexual relationships. The absence of discourse on the contraceptive agency may reflect a deliberate avoidance of discussing power dynamics within relationships, which play a significant role in perpetuating unsafe sexual practices.

The textbook discourse can be viewed as socially and politically situated and is intertwined with broader societal norms and power structures related to who gets to define and regulate acceptable sexual practices and non-hetero orientations. This biomedical representation of safer sex is not objective or politically neutral, rather, it actively influences and defines the different elements and aspects of how safer sex is understood and discussed within society.

This influence extends to the framing of the issue, the definition of what is considered healthy or acceptable in terms of sexual behaviour, and the setting of boundaries for discussions and policies related to safe sex. Hence, this discourse serves as a useful tool for governance, allowing for intervention in both individual bodies and the broader body politic (regulation and governance of society as a whole).

5.3.2 Analysis of teachers' discourse

In this section I explore teachers' perceptions of the concept of "safer sex" and how they address it within the classroom. As teachers approach the topic of safer sex from various perspectives, I analyse their discussions under different themes. Highlighted here are selected excerpts, of particular analytical interest, categorised under relevant subthemes. These excerpts shed light on taken-for-granted assumptions, silenced discourse, inconsistencies, subjective perspectives, and strategies employed to justify their arguments.

a) Teachers' perception of 'objectivity' and values in science classroom discourse

As Allchin (1999) highlights, teachers often seek comfort in the idea that science remains neutral and purely objective, detached from any values and morality. I found that in the interviews, teachers initially tended to avoid getting into discussions about values, perceiving these to exist beyond the realm of science. They asserted their identity as a science teacher and student of science, underscoring their commitment to maintaining objectivity and neutrality in teaching. However, over the span of the interview, teachers did acknowledge the presence of values within the classroom-scientific discourse, which they felt were necessary to be incorporated. This is particularly discussed from the analytical perspective since this highlights an inconsistency or a shift in teachers' perspectives. The excerpts below illustrate this,

> *Ashna Miss: As a science educator myself, I would continue to explain this (safe sex practices) from a scientific standpoint, even though there may be moral implications. I am not suggesting that moral values should be disregarded, but in this context, it's crucial to provide a scientific explanation to these science students. This is a key point. The textbook addresses both aspects—avoiding certain behaviours to prevent STDs and teaching about contraceptive methods. We do not label it as strictly 'moral.' In our culture, we promote monogamy, and the textbook conveys this through a deeper "inner" meaning. It communicates certain values—moral values. In the classroom, we go beyond the syllabus. When we discuss contraceptive methods, why they are*

used, we also discuss the other side as well. For instance, the reasons why one should stick to a single partner.

Interviewer: Are you suggesting that the textbook takes culture into account?

Ashna Miss: Yes, I believe it does. Our culture is universally accepted. In our culture, having a single partner is the norm. It does not endorse multiple partners. Our relationships are lifelong, and this is admired by others as well. So, we can affirm that cultural values are indeed incorporated here, alongside scientific ones.

We can observe that Ashna Miss employs various strategies to validate her statements, such as asserting that our culture is universally respected. By asserting that our culture permits only monogamy, she presents this cultural norm as an unquestionable truth, thereby legitimising her argument. This strategy reinforces the idea that cultural values hold inherent validity and should be upheld in discussions about safer sex practices.

b) Alignment and Tension: Personal values in classroom discourse

Teachers generally trust and uphold scientific perspectives when they align with their personal values and practices. In such cases, there is a seamless integration of personal convictions and scientific text. However, when there is a misalignment or departure from their personal values or practices, teachers may tend to view scientific consensus with suspicion and may question its validity. However, professional obligation and curriculum guidelines urge teachers to adhere to scientific perspectives despite their personal values. The excerpt below illustrates how Marina Miss says she deals with this situation,

Marina Miss: I am a strong believer (in religion), so I find it hard to fully accept the theory of evolution. I often pose questions about science to my students. I ask them whether the evolutionary hierarchy is accurate. I encourage them to use their reasoning to decide whether they want to accept the theory. Similarly, contraceptives are a relatively recent invention.
In earlier generations, people practised birth control differently. They would wait until their first child was around two years old before having another. However, things have changed now, and women can become pregnant even when their first child is only 3-4 months old. I personally believe that it's in God's hands, and these matters are beyond our control. I am unsure whether this perspective is right or wrong.

Interviewer: Are you talking about the limitations of technology, such as the effectiveness of condoms?

Marina Miss: Yes, at times, technology can fail. Even in previous generations, people used natural contraceptive methods like coitus interruptus, periodic abstinence, and lactational amenorrhea. Women who breastfed their children for the proper duration typically conceived again after two years. So, it's mostly due to changes in our lifestyle. I emphasise to my students that this change in lifestyle is a significant factor. Previous generations were unaware of barrier methods but still practised birth control.

Research also indicates the substantial impact of religious ideology on attitudes towards condom use and other aspects of sexual behaviour (Agha et al., 2006; Sarkar, 2008). Even though all three teachers are from the same religion, they each hold distinct viewpoints on the subject of condom use. To explore how religion shapes individuals' perspectives on condom use and other aspects of their sexual lives, various measures of religiosity, including group affiliation, attendance at religious services, attitudes towards religious teachings, perceptions of negative sanctions (the fear of potential consequences or punishments for deviating from religious norms), and adherence to these sanctions need to be analysed individually (Sarkar, 2008). However, I will not analyse these elements individually in order to remain focused on the broader research question.

In relying on what is perceived as experiential knowledge, Marina Miss in her discourse appears to lean on a perspective where individuals propose plans, but ultimately, divine forces dispose of the outcomes. By attributing the chance failure of contraceptive measures to divine control, her discourse seems to limit the role of human choice and rational decision-making in family planning processes. This perspective may also inadvertently perpetuate a sense that all contraceptive measures are equally (in)effective leading to helplessness among individuals when it comes to their reproductive choices. Furthermore, the discourse places the blame on women for the perceived failure in family planning, attributing it to their lifestyle and not breastfeeding the baby long enough.

c) The values around Love, Lust, and Monogamy

It was also seen from the interview that sexuality was placed within two discourses that were considered incompatible—the discourse of love and the discourse of lust. These two discourses were often seen as incompatible, and they were primarily constructed within the framework of heterosexual morality. In the discourse of love, there is an idealisation of heterosexual monogamy, where sexual activity within a committed romantic relationship is

considered safe, moral, and acceptable. This discourse tends to associate sex within the confines of such a relationship with love, emotional connection, and moral virtue. On the other hand, the discourse of lust often portrays sexual activity outside the boundaries of committed monogamous relationships as immoral, risky, and potentially associated with diseases. This discourse tends to focus on the physical aspects of sexual desire and often stigmatises sexual experiences that do not fit within the framework of romantic love. The following excerpts are selected since they illustrate how the concept of monogamy is socially constructed and how it maintains a hold, much like heteronormativity, by infiltrating various discourses, both in subtle and explicit ways.

All three teachers argued for a monoamorous relationship for different reasons that reflected their experiences and location. Ashna Miss, coming from a culture where polygamy was accepted, goes further into the challenges that women encounter within such relationships, primarily stemming from their limited agency. Her perspective is deeply shaped by her subject position within the community. She teaches at the community school, and being someone who questions religious norms, she often finds it challenging to navigate within the institution. Moreover, the school where she teaches provides a home for destitute students and children who come from broken families within the community. This environment amplifies the complexity of her feelings.

> *Ashna Miss: In the case of Muslim community, polygamy gets portrayed in a wrong way because the Prophet had married many women. He married not to produce more children or to satisfy his sexual desires. He married to help the destitute. Ignoring this, many people in Islam, take advantage. They argue that if the Prophet can do this, why can't they? They ask what the problem is if they look after all their wives equally. It is these same people, who marry one person as soon as they get a divorce or marry three to four women at the same time. I can't say that the students won't think about this in class. I am strongly opposed to the concept - I have opposed this all the time. I can't support this, never. It's not just about your husband having multiple partners. It has social repercussions that affect women adversely. I cannot accept my husband getting married to another woman- never. All the women will feel the same. Students who have grown up in such communities would never support this. They are the ones who have seen all the bad sides. Especially in my school which has more students from the orphanage.*

Marina Miss emphasises the concepts of loyalty and faith when discussing heterosexual relationships, using these notions to illustrate the significance of monoamory. For her, staying with one partner isn't just a choice but a sign of trust in the relationship.

> *Marina Miss: After marriage, you receive a licence for sex, it should not occur before marriage. We ought to maintain a single partner throughout our lives and engage in sexual intercourse exclusively with that person. I emphasise these moral values when discussing STDs in class. Engaging in sexual activity with multiple partners leads to various issues, so it's important to avoid having multiple partners in our lives. These are some things that I stress. Since this is also my policy in life, I try to bring this in class.*

Rashad Sir takes a notably distinct perspective on this matter compared to the other two teachers. As seen above, the perspectives on sexual relations are influenced by gender location. It was also observed that when addressing these aspects, teachers tend to direct their discussions more towards students of the same gender as seen in the following excerpt,

> *Rashad Sir: When discussing STDs with students, we talk about sexual pleasure. I share with them (students) a concept I encountered in my readings, which says that the experience of pleasure remains the same even if it is the most beautiful woman in the world. This was found in some studies. So I tell them that for this pleasure, one need not have to go to multiple partners. So try to stick with a single partner.*

Thus, teachers have distinct approaches when it comes to addressing the concept of pleasure in the context of safer sex education. Ashna Miss and Marina Miss acknowledge that many individuals may aspire to engage in relationships with multiple partners but emphasise the importance of self-restraint and the need to refrain from pursuing this desire. They recognize the allure of multiple partners but highlight the necessity of resisting such temptations for the sake of safe and responsible sexual behaviour. In contrast, Rashad Sir while also supporting monogamous relationships emphasises that the experience of sexual pleasure remains the same across all types of relationships.

We could also find the gendered sexual double standard that has been a longstanding characteristic of monogamous institutions. Usually, men are granted greater freedom to engage in multiple romantic and sexual relationships, while women are expected to hold to strict monogamous standards and face severe consequences for deviating from them. Teachers' discourse also depicts subtle pressure on men to pursue romantic multiplicity while

reinforcing the ideal of "one true love." Women, on the other hand, are subjected to more stringent expectations within these narratives. Rashad Sir mentioned how he explained the textbook recommendation to avoid multiple partners and use condoms,

> *Rashad Sir: I will explain how I approach this, although I am uncertain if it's right or wrong. The textbook advises, first and foremost, to avoid having multiple partners and suggests using condoms as a preventive measure. For instance, when considering individuals with low literacy levels, like lorry (truck) drivers, they have historically had higher rates of HIV infection. Therefore, using condoms is a recommended option for those who refrain from reducing their number of sexual partners. The discussion on condom usage primarily pertains to such individuals. It's like people who stay away from home have an option to use condoms. Ideally, we should focus on not having multiple partners.*

The term multiple partners was used by all three teachers to refer to sex workers. Marina Miss provides further clarity by saying, "Coming back, I use the term multiple partners for when one goes to different places like red light streets to do sex in different ways." Here she stresses "different ways of doing sex". This discourse carries the implication of pathologizing non-normative sexual practices.

d) Concerns about Paternal Uncertainty

While all three teachers argued for monogamous relationships in the context of sexual health, it's essential to recognize that their primary concerns differed. A prominent concern that emerged from their discussions was the issue of paternal uncertainty. This concern highlights the complex interplay of gender roles and expectations within the context of monogamous relationships and how these considerations often place a significant burden on women. Both Ashna Miss and Marina Miss prioritised paternal uncertainty as the major concern.

> *Marina Miss: I primarily discuss STDs when talking about sex. We are aware of people's practices within our household. Therefore, if either of the partners experiences itching or swelling, we can both go to the hospital to confirm whether it's an STD or not. I bring scary pictures of STD affected people so that most students will understand that this should not be opted. The major concern is, when it involves multiple partners, there can be paternal uncertainty.*

The persistent fear surrounding paternity uncertainty despite scientific advancements underscores the dominance of cultural anxieties over scientific solutions. Stemming from

concerns about family stability, inheritance rights, and social status, this fear is deeply ingrained in cultural norms and societal expectations.

Ashna Miss articulates her concerns regarding the potential erosion of cultural values when individuals engage in multiple partnerships. Her worry centres on the idea that when people freely explore multiple partners without constraints, it could lead to what she calls "sexual anarchy." She says,

> *Ashna Miss: This is the main reason against multiple partners - the paternity uncertainty. In cases where one uses condoms and has multiple partners, that is their individual choice. But I do not feel that this should be told to the students at this age. Otherwise it can lead to sexual anarchy. Our culture will change, our lifestyle, all will change.*

Ashna Miss acknowledges individuals' autonomy in sexual choice but refrains from discussing condom use and multiple partnerships with students due to fears of disrupting traditional values, potentially leading to "sexual anarchy." This concern reflects the broader anxieties about societal norms and cultural values impacting sexual choices. She suggests that openly addressing such topics could precipitate significant changes in societal norms and lifestyles, upholds traditional values by promoting monogamy and shielding students from destabilising perspectives. This reluctance reinforces traditional power structures and suppresses alternative views on sexuality.

5.3.3 Discussion

The textbook and teachers emphasised heterosexual, monogamous relationships as the only means to ensure sexual safety. This could lead to a limiting discourse at a time when individuals have access to a range of safer practices, including choosing barrier methods, undergoing regular testing for STIs, and selecting vaccines for certain infections. Recognizing and respecting the diversity of sexual behaviours and relationships is crucial in promoting an inclusive approach to sexual health and safety. Therefore, the textbook and teachers should work towards empowering individuals to assess their unique sexual practices and preferences, enabling them to make informed choices about the most suitable barrier methods for their specific needs. Furthermore, a conversation about condom use and other methods that does not take into account the formidable challenges confronting women, often due to circumstances beyond their control, may not be fully helpful. For many women,

condom use might not be a feasible option, as their value is frequently tied to their fertility and their capacity to satisfy men (Chayadevi & Bambah, 2017). Therefore, it's essential for the textbook and teachers not to overlook the complex factors guiding people's choices and to address the fundamental causes leading individuals into situations of unsafe sex.

Teachers, in their approach to the topic, have not considered the moral constraints imposed by the discourse shaped by both scientific principles and cultural perspectives. As Allchin (1999) suggests, gaining a deeper comprehension of science, nature, and objectivity can be greatly enhanced by examining historical case studies. Examining historical cases within the context of scientific discourse surrounding AIDS offers an opportunity to recognise the interconnections between morality and science. These studies allow us to clearly discern the outcomes of specific values, while observing how these values operate within their respective contexts. It provides a nuanced perspective on how moral values have shaped scientific narratives, influenced societal responses, and left enduring imprints on our understanding of complex issues like AIDS. Engaging teachers in a discussion about the historical progression of scientific conversations related to AIDS can offer them an opportunity to reflect on how particular scientific discourse has contributed to the shaping of the concept of "normalcy" and the reinforcement of specific societal values. These discussions can help teachers to reflect on the classroom discourses and offer many ways to discuss topics around sexual safety that are more inclusive.

Although the interpretation of safer sex is highly subjective, there are specific facets that need to be addressed. The textbook primarily confines its understanding of safer sex to the prevention of sexually transmitted infection (STI). It tends to prioritise physical health and disease prevention, which are undoubtedly important. One crucial aspect that appears to be underrepresented is the discussion of the mental and psychological well-being of individuals engaged in sexual practices. Safer sex is not merely about avoiding physical health risks. Engaging in sexual activity, even when precautions are taken, can have profound emotional implications for individuals. Hence, expanding the paradigm of safer sex is essential within the context of biology education. Safer sex goes beyond just physical health; it extends to the emotional well-being within intimate relationships. It involves recognizing when emotional safety is compromised and taking steps to prioritise one's emotional health. This includes setting boundaries, open communication about feelings, and preserving one's agency. It is crucial to have discussions that could enable students to recognise the emotional and physical

cues, such as tension, discomfort, or unease and take appropriate measures, including asserting boundaries, expressing emotions, or disengaging when necessary.

This chapter has tried to illustrate that science and morality are not isolated domains but are intricately linked, mutually influencing and shaping each other within discussions of sexuality in classrooms. Together, they construct, govern, and standardise sexual behaviours. The language we use, the narratives we create, and the social perceptions we hold around sexual practices are influenced by the interplay between cultural and biomedical discourses. Thus discussions around sex within the class are not simply a matter of science versus culture, instead, there is a continuum of discourse that incorporates elements of both cultural and biomedical perspectives, and these discourses together shape the way we talk about and understand aspects around safer sex. Recognizing this continuum is essential for fostering classroom discourses that are non-restrictive in nature.

5.4 Summary

The chapter explored two important themes within biology education: the representation of the human genitalia in the textbooks and the discourse surrounding safer sex. These themes are explored to understand the interaction between scientific and cultural values and how they together shape the narrative presented within the classroom. The chapter discusses some potential implications of these discourses on students' perceptions, agency, and autonomy.

The first part of the chapter explores various scientific depictions of genitalia and examine cultural and moral values are manifested through visuals in relation to the human body. To interpret the visual images, I use socio-semiotic analytic framework developed by Serafini (2010), consisting of three analytic perspectives: perceptual, structural, and ideological.The analysis of visual texts reveals a recurring tendency to censor or obscure depictions of genitalia, potentially contributing to a limited understanding of the human body. This censorship reflects the textbook's failure to perceive the human body as a biological entity and instead constrains it to a gendered and sexualized subject.

Transitioning to the discussions on safer sex, in part 2, the chapter looks at the interplay of values, beliefs, and practices that shape the dialogue on this topic. Firstly, I analyse how the Biology textbook talks about safer sex in the context of sexually transmitted diseases and

how scientific knowledge produces specific sexual subjectivities and categories. The discursive devices used by the textbook to fit the scientific claims in a culturally appropriate value framework are examined. I argue that 'scientific facts' are presented as going hand in hand with moral sensibilities. The textbook puts forth a morality that is shaped by Science, Technology, and Medicine and is in agreement with the socio-cultural norms.

I further move to explore how teachers discuss safe sex. Teachers use scientific and socio-cultural moral arguments interchangeably on various occasions. The chapter discusses some examples where teachers use cultural and moral ideals to justify the scientific claims in the textbook and use scientific arguments to justify the cultural practices. For instance, when the textbook focuses on how 'promiscuity' produces disease, teachers emphasise how it can lead to sexual anarchy, father-less children, unsatisfied spouses and broken relations. Thus I argue that the medico-moral discourse put forth by the textbook and the teachers forces a romantic ideal of sex confined to a committed, faithful, monogamous heterosexual relationship.

Chapter 6

Linguistic challenges and discomforting moments in classroom discussions of sexuality

6.1 Introduction

The discussions in biology classes about the physical and sexual aspects of the body can disrupt what Allen (2007) refers to as the "official school discourse" that tries to make students' sexuality invisible and unheard. While these classroom discussions can undermine the formal nature of the classroom and the power relation between the teacher and the students, teachers try to navigate this situation through certain conscious and unconscious choices and actions. This chapter aims to describe some instances that demonstrate the troubled and tense environment in the classroom invoked through these discussions as well as to discuss some general patterns in actions that teachers used to re-establish classroom 'normalcy'. The strategies adopted by teachers in the classroom may not always benefit students; sometimes, they may be chosen to curtail or end the conversation, aiming to hide the teacher's personal discomfort and disagreements with the textbook discourse.

Various dimensions of the challenges that teachers encounter during sexuality education classes have been discussed in literature. Engaging in discussions about sexual intercourse and the human body, particularly with young people, presents a complex ethical dilemma for teachers, as societal norms often deem such topics forbidden (Mbananga, 2004). This ethical tension arises from the conflict between the educational content and the personal or cultural values of teachers, leaving many feeling uneasy (Ahmed et al., 2009). De Haas and Hutter (2019) argue that teachers' cultural schemas are shaped by traditional and modern societal norms, creating conflicts between their values, beliefs, and approaches to discussing aspects related to sexuality. These schemas encompass beliefs, emotions, and values, guiding how individuals interpret their experiences and interact with the world around them. These schemas influence how teachers perceive their role, the content, and their comfort level in

teaching topics related to sexuality and sexual health. Cultural schemas can be personal, unique to an individual, or shared within a group.

The evolving social dynamics between teachers and students further complicate these conversations, particularly since some teachers may not have received the same type of education they are now expected to provide, leading to heightened anxiety. A significant source of discomfort for teachers is the fear of inadvertently encouraging sexual activity among students through these discussions, potential opposition from parents, and the risk of being perceived as shameless (Francis, 2012). The socio-cultural and historical construction of the discourse surrounding 'childhood innocence' adds another layer of complexity, with the notion that any imparted sexual knowledge could harm the perceived innocence of students (Bhana, 2009). This paradigm forces teachers to view students as 'non-sexual beings,' a perspective that has its roots in the broader societal understanding of adolescence (Allen, 2007).

Teachers' confidence in addressing these sensitive topics depends not only on their pedagogical and content knowledge but also on their personal and cultural values, as well as the perceived necessity of engaging in these discussions. Simayi and Webb's (2019) exploration of taboo restrictions in rural Eastern Cape schools reveals that teachers, influenced by traditional values, tend to avoid using specific reproductive terminologies deemed offensive in their culture. Reproductive terminologies, across various cultures and languages, have unfortunately transformed into derogatory and sexist slurs (Borah & Bhuvaneswari, 2020), further complicating discussions about reproduction and sexuality. The reluctance to directly reference sexual acts and organs in native languages is a common challenge faced by teachers, as these terms may be considered insensitive and offensive across cultures (Doidge & Lelliotte, 2017; Helleve et al., 2009). This linguistic taboo restricts teachers from using certain terminologies in their native languages. In navigating these multifaceted challenges, teachers express the need for considerable courage, describing the teaching of sexuality as requiring "guts" (Francis & DePalma, 2015).

Baxen (2006) highlights the challenges that teachers face in preserving a consistent 'stable teacher identity'[16] while teaching sexuality and HIV/AIDS. This often leads to presenting the subject matter in a sanitised manner, to align with dominant discourses of sexuality and disease. Teachers, in their effort to maintain a 'stable teacher identity', tend to normalise and depersonalise the discourse, thereby distancing themselves from the content. This normalisation, while aiming to maintain authority and stable identity, often limits the discourse to transmission of factual information.

Baxen illustrates that teachers employ various strategies to navigate the challenges of integrating sexuality and HIV/AIDS into their curriculum. Teachers referred to as "exaggerators," attempt to normalise the discourse but struggle to sustain a stable identity. They tend to rely on dramatic and caricatured behaviour to involve learners and encourage participation, often leading to inconsistent interactions and outcomes that do not accomplish intended goals. They attempt to actively involve students, but their interactions can lack depth. "Normalisers" maintain control through their expertise, exhibiting a well-modulated demeanour and incorporating authoritative knowledge, thus positioning themselves as the main source of information. While aiming to meet curriculum goals with well-structured lessons, they may not fully engage in new pedagogical strategies that promote critical thinking and behaviour change. They engage students in a controlled manner, often dictating the flow and outcomes of lessons. "Framers" use their authority to dictate from within the curriculum, often sidelining official texts, and control both the content and learning process, which limits open discussion and exploration. They shape lessons based on their judgement and rely on their position as gatekeepers of knowledge to frame classroom discourse to fit their perspectives. "Binders," use their position of power to simplify or downplay the complexities of certain subjects. They mimic expected behaviours superficially but often fail

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[16] "Stable teacher identity" refers to a concept of teacher self-perception and role that remains consistent and unaffected by external influences or internal conflicts. It implies a sense of continuity and coherence in how teachers understand their professional selves, their values, beliefs, and practices in the classroom. This concept contrasts with the notion of "troubling" or "performative" teacher identities, which are seen as more fluid, dynamic, and subject to change based on interactions, experiences, and the social, cultural, and educational contexts in which teaching occurs. Baxen (2006) argues that teaching about sensitive topics like sexuality and HIV/AIDS challenges the notion of a stable teacher identity, as teachers navigate complex social norms, personal beliefs, and institutional expectations, potentially leading to shifts in how they perceive their roles and enact their teaching practices (Baxen, 2006).

to achieve coherence or meaningful engagement with the content. These teachers create strict boundaries around what is discussed in the classroom through the use of rules or guidelines. By doing this, they maintain an appearance of being knowledgeable and in control.

Given the challenges brought on by COVID-19, I don't want to fit the teachers in the study into the above-defined categories. The pandemic's restrictions, added to a tight academic schedule and examination demands, forced most teachers, aside from Wilson Sir, to primarily rely on textbook material, offering only brief explanations. This approach was largely a pragmatic response to ensure that the syllabus was completed in the time available. Additionally, these categories can not be extended to online classes where the major part of classroom teaching is scripted. However, I draw from the insights based on the above categories of teachers, their approach towards curriculum and pedagogy, adaptations and strategies they use for my analysis.

6.2 Tension, discomfort and unease - the troubled atmosphere in the class

This chapter explores challenges or moments that caused discomfort in classroom teaching and the ways teachers dealt with the situations. Baxen calls the latter 'ritualised practices', which include a range of behaviours, strategies, and pedagogical choices that teachers make to navigate the complex socio-cultural landscape of teaching about sexuality. These practices can be seen as responses to societal norms, institutional policies, and personal comfort levels with the subject matter.

6.2.1 Sexualising Bodies

I begin by citing a specific instance from an online class for 8th grade in the chapter "For the continuity of generation" that is uploaded on YouTube. The female teacher (OT5) who seemed to be in her late 20s or early 30s interacts with the students through chats while teaching and hence constantly monitors and responds to the chat while teaching. Towards the beginning of the class, the teacher received many comments that sexualised her on the chat and she decided to ignore these. There were multiple comments which were similar to "Miss is looking hot".

It is also possible since the class is streamed on a public platform that these comments are not from students, but rather from other people who are watching the class. Similar instances of attributing sexual qualities to the teachers (leading to sexualisation) in the classroom were shared in the previous interviews with high school teachers.

Another female teacher (OT7) of a similar age who taught the chapter "Reproductive Health" for 12th standard shared similar experiences with the online class. This teacher used these chats as an example to illustrate unhealthy behaviours.
She says,

> OT7: In the chatbox of this chapter,..recently I eliminated the post from this person who was reproductively unhealthy. The reason is that his mind isn't right. During the class, what the person said is the best example to illustrate and prove that the person isn't reproductively healthy. When we refer to reproductive health, it's about total well-being, including physical and emotional health. What has happened is an emotional explosion, indicating that the person is not emotionally healthy. When they see a woman, they perceive something else. They lack the mindset to view a woman as a woman and a man as a man. This behaviour is concerning. Since you are all healthy, you don't post or say these words or engage in such behaviour. However, there are other kinds of people as well, proving that our society is not reproductively healthy. During the marathon class (revision class), there are numerous chats to prove that our society is unhealthy. Our team is putting in so much effort to clear these chats.

The inherent sexual content and the expectations around them can sometimes change the classroom dynamic, leading to an increase in sexualised behaviour or comments among students.

Beyond the sexualisation of teachers, there are instances where students try to create awkward situations for teachers. For instance, when the teacher (OT5) started talking about the process of fertilisation, a comment "teacherk chiri varunu-teacher is about to laugh (meaning to say teacher is shy)" appears on the comment box to which OT5 responds as

> OT5: There is nothing to laugh about here. This is a natural process that happens with all males and females. There is nothing to make fun of or laugh at. This is something which all of us have. Don't we have kidneys and a liver? Male and female reproductive organs are also something as normal as these.

Here, when a student attempts to sexually shame or embarrass the teacher, OT5 purposefully undertakes a conscious effort to normalise the discourse. This normalisation is achieved by emphasising the inherent naturalness of both the physiological process and the human body itself. Most teachers, especially during the beginning of the conversation emphasised the innate naturalness of emotions, feeling and acts of sex.

The normalisation discourse, emphasising the inherent naturalness of sexual aspects, has evolved into an interactive practice consistently employed by teachers during their class, as evidenced in the following section.

6.2.2 Laughter And Whisperings Within The Classroom

According to Wilson Sir, laughter and cross-communication among students are frequently observed during lessons about anatomy and reproduction. Wilson Sir explained that when students are caught laughing, they are singled out and asked about the ongoing discussion among their peers. This questioning renders the students speechless and helps regulate the students' behaviours. However, in the classes that were observed, this occurred infrequently. This may be attributed to the unfamiliarity of the students with each other and the arrangement of spaced seating, which potentially hindered the natural occurrence of such interactions.

On one occasion, Wilson Sir heard some noise from the students' section and wrongly assumed that one student was laughing. Wilson Sir decided to use this moment to stress the importance of the specific discussion and explain why there should be no shame associated with it. He believed the laughter or whispers were triggered by the sexual nature of the content. However, the student was trying to borrow a pen from someone else, something I noticed from my spot at the back where I could see their exchange. Wilson Sir, here had an assumption (could be from his teaching experience) that students would laugh or whisper with each other while teaching this chapter, which usually will be used by the teacher to explain the naturalness of the reproduction process and human body. Hence, when he heard some noise, he assumed that it would be some student laughing or whispering about some sexual aspects. This might not have been his assumption with any other topic.

Leveraging moments when students laugh or whisper to start conversations that emphasise the naturalness of the body and reproduction, represents a strategic, ritualised practice. This approach may serve multiple purposes. It could help in normalising the discourse as well as ensure that there is no laughter/whispering in the class that can cause awkwardness. This is also illustrated in another example by Lathika Miss, as shown in the excerpt below:

> *Lathika Miss: I am expecting an interactive class today. (She notices that a girl is laughing) Why are you laughing? This is the problem. Just by seeing the title, you started to laugh. This is inappropriate behaviour .... Why is it so? This is the same attitude that society has. This mentality is the root cause of all molestations and abuse. In the previous year, we learnt about all other systems of the body based on different psychological functions. You had no issues or laughter while learning them. No facial expression, nothing peculiar, right? But today, as soon as I wrote the title, even students who used to behave well, started to laugh. Is this topic a joke? This is as normal as all other systems that you have learnt. Above that, we learnt that reproduction is a characteristic of living organisms for the propagation of the species.*

Lathika Miss's approach reflects an understanding that student reactions, such as laughter or whispering, are not merely disruptions but symptoms of societal taboos. By directly addressing these reactions (laughter and whispering) and labelling them as "inappropriate", teachers try to bring about an interaction with the content as well as reinforce the classroom as a space for serious learning rather than embarrassment.

6.2.3 Gendered Inhibitions

In another online class about the same 8th standard chapter, produced by the Kerala SCERT and telecasted on their official channel called "Kite Victers," the teaching style was notably different. This class was led by a male teacher (OT6), possibly in his 50s. This teacher stuck closely to the textbook content, covering everything from the biological processes of menstruation to the importance of hygiene and nutrition. Interestingly, the class also featured a female doctor who discussed the social aspects and cultural beliefs surrounding menstruation. From the professional training, we might expect a medical professional to explain the biological details, while the teacher might handle the social discussions. However, in this case, the roles are reversed. The excerpt from the doctor's conversation is below,

"Hello, friends. I am Dr. (Name). I have come here to talk about menstruation today. Your teacher has already taught you in detail about what menstruation is and what happens during menstruation. I want to add that there are superstitions among us that say menstruation is impure, and we are impure and unhealthy when we are menstruating. These don't have any scientific basis. Not only that, it is our duty as people with a scientific temperament, to not allow these superstitions to be passed to the next generation. The purpose of this chapter is to enable you to stay away from these beliefs, question them, and affirm loudly that it is a very natural process. Another important aspect is cleanliness……"

Since we do not know about the production process of this teaching episode, there are limitations to interpreting and speculating about the reasons for such a division of teaching roles. However, drawing from insights gathered during teacher interviews allows for some interpretation. One potential reason for this division might be the influence of the teacher's gender when addressing menstruation in class, especially regarding its social implications. This observation aligns with what Wilson Sir expressed: he worried that discussing menstruation might lead girls to think uncomfortably about their bodies. Wilson Sir also shared that the girls find it difficult to ask their queries to him, whereas boys are comfortable asking their queries in a separate section exclusively for boys. A similar story is mentioned in Chapter 3, where a male teacher faced criticism from colleagues for discussing menstruation, which discouraged him from continuing such conversations.

Male teachers, in particular, may face inherent inhibitions and a degree of social scrutiny. These constraints are not just internalised feelings of discomfort but are often reinforced by broader societal expectations and norms that govern what is deemed appropriate for discussion within school settings.

6.2.4 Negotiating Textbook Content and Personal Beliefs

Teachers encounter a notable challenge when they find themselves at odds with the narrative presented in the textbook. This presents a dilemma where, on the one hand, teachers have a professional obligation to convey the textbook content, while, on the other hand, personal and cultural values may not align with the prescribed material (De Haas & Hutter, 2019). Negotiating this tension in the classroom observed, teachers often resort to selectively presenting the content or constructing a broader narrative that aligns more closely with their belief systems, achieved through smaller narratives introduced at various instances during

instruction. Baxen (2006) would call these particular teachers in discussion as "Framers" who control the learning process and use their authority to dictate what is important and limit genuine exploration.

I chose one case to illustrate this. A shared stance among some teachers, reflecting the cultural schema, becomes evident when addressing the topic of Medical Termination of Pregnancy (MTP). The following is an excerpt from the textbook under the discussion of MTP

> *Why MTP ? Obviously the answer is –to get rid of unwanted pregnancies either due to casual unprotected intercourse or failure of the contraceptive used during coitus or rapes. MTPs are also essential in certain cases where continuation of the pregnancy could be harmful or even fatal either to the mother or to the foetus or both.*

<div align="right">(NCERT - Biology textbook, 12th standard,p.40)</div>

As we can see, the textbook discusses the topic of abortion within the context of unwanted pregnancies, whether due to casual unprotected intercourse or the failure of contraceptives during coitus.

Interestingly, many teachers tend to exclude or downplay these aspects during their discussions. This can be observed in Susmita Miss's approach, where she eliminates the discussion of abortion in the context of casual unprotected sex. She lists all scenarios mentioned in the textbook except casual unprotected sex, which can be seen from the following excerpt-

> *Susmita Miss: Abortion occurs in two scenarios. The first one is natural abortion. Up to the first three months, there is a chance of a natural abortion. The second is when the doctor identifies a risk during pregnancy—either the child might have a serious issue or the mother is unable to continue the pregnancy. Usually, in rape cases, the court now allows the termination of unwanted pregnancies.*

Wilson Sir, as we see in the previous chapter, read this paragraph from the textbook and explicitly told the student to 'ignore this part' of the textbook (where they mention casual unprotected sex).

In instances like the above, teachers attempt to reconcile conflicting values by adopting a strategic approach, creating space for alternative perspectives within the framework of the textbook narrative. Here, the teacher predominantly supports abortion only in two scenarios: when either the baby or the mother's health is at risk or in cases of rape.

With reference to Susmita Miss, her stance towards MTP is communicated through a series of smaller stories within different segments of the chapter. These stories collectively form a broader narrative in which she adopts a pro-life viewpoint. She achieves this by humanising the zygote and portraying the procreational process as a decision made by a supreme power.

> *Susmita Miss: Through the fallopian tube, our first journey begins. The ovum and sperm meet at the ampulla-isthmus junction, then proceed straight to the fallopian tube and gradually advance towards the uterus. All of us share this same story, so our first journey was through the fallopian tube to our mother's uterus. Now, we can realise the importance one should give to the mother.*
>
> *There can be four children born in a single birth. You might have come across the news of this quadruplet who got married recently. Our mother's uterus is capable of delivering them. There are aspects of childbirth that go beyond the explanation of science.*

Through emotional and rhetorical strategies, Susmita Miss tries to emphasise the sacredness of early life stages and depict childbirth as a miraculous event beyond scientific explanation. The narrative shifts from scientific to a more awe-inspiring tone, especially through examples like the one about the quadruplets (which is a relatively rare case). The statement that "there are aspects of childbirth that go beyond the explanation of science" introduces the idea that the journey from conception to birth is filled with mystery and potentially holds divine or extraordinary significance that needs to be valued. This approach subtly advocates for a pro-life stance suggesting that life begins at conception and therefore has intrinsic value and rights from this point forward. This approach illustrates how teachers use cultural schemas to discuss the textbook content that aligns with broader societal values and beliefs.

6.3 Barriers in using the vernacular while teaching about sexuality

This section explores the reasons why teachers often resort to English during discussions on topics around sex and genitals. By opting for a language that may not carry the same emotional weight or immediacy as one's native or vernacular language, teachers try to reduce the intensity of shame or embarrassment that may be experienced by both students and teachers in these conversations. The analysis will discuss how this language switch may impact classroom interaction and, consequently, the learning experiences of students.

6.3.1 The classroom context

Before the pandemic, classes were usually taught in two languages which makes a bilingual learning environment (From teachers' accounts). The pandemic has introduced specific language challenges for students. A considerable number of students completed their 10th grade in the Malayalam medium, and the abrupt transition to English instruction poses significant hurdles to their learning. The one-year reliance on online sessions has further complicated the adaptation to English as the primary medium of teaching-learning. The constraints due to the pandemic on teaching hours compelled teachers to prioritise conceptual understanding over the language of instruction. Consequently, teachers have adopted Malayalam as the primary communication medium, acknowledging the students' struggles in comprehending and expressing themselves in English. While the textbooks continue to remain in English, a practice has emerged where students are granted marks even if their responses are written in Malayalam (and this has been communicated to the students). Relying on this, the teachers predominantly use Malayalam during their teaching. They used English mainly when reading directly from the textbook. Even in those scenarios, teachers often engaged in code-switching. However, the code-switching occurred less frequently during discussions about fertilisation and genitals. All three teachers, despite predominantly using Malayalam, incorporated more English vocabulary specifically when addressing sexual acts and genitals. I was doubtful about the students' knowledge of these English terms as they demonstrated difficulties with other words in English. Therefore, I explored this aspect more during the conversation with teachers, where the teachers talked about their inhibitions in using Malayalam terms in the class. The teachers discussed their reasons for feeling uneasy about using Malayalam and the perceived consequences, which are discussed below. The switching of language would not have been a well-thought-out process. This could be seen as

reasons that the teachers came up with while reflecting on their teaching practices during the interviews.

6.3.2 Silent words: The challenges faced in using Malayalam terms while teaching

The absence or the infrequent use of specific words pertaining to sexual acts and genitalia in the public domain has made it difficult to incorporate these Malayalam terms into the classroom setting. This has led to a general unfamiliarity with and resistance to these terms. For example, Malayalam, like many regional languages, lacks non-vulgar terminology for vaginal penetration and other sexual activities. The commonly used words to refer to any sexual act are "lyngika bhandam" or "sambogam" which translates to sexual relationship. The use of any other colloquial language for such acts is often shunned in public discourse, branding those who use them as vulgar. This paucity of terms for discussing sexuality in Malayalam suggests a wider cultural hesitation towards open discussions on this topic, reflecting a global trend where language is both a mirror and a perpetuator of societal norms and prohibitions. Hence, this scarcity is not just a linguistic barrier but also indicates a deeper societal unease with addressing sexuality openly.

The following section will explore teachers' narratives on the preference for English over Malayalam and how this choice shapes the classroom discourse.

a) Linguistic Divides and Inequities

The prevalence of English in discussions about sex is notably evident in popular Malayalam sexuality education platforms such as 'Maya's Amma,' 'Asiavilla,' and various news debates/TV news channels. These platforms highlight a consistent trend where speakers switch to English when addressing sexual acts and genitals. This linguistic shift can also be attributed to the reliance on Western literature to teach and discuss sex, evident in contemporary safe touch programs like 'Good Touch Bad Touch.' These programs, borrowing heavily from Western teaching models, employ English vocabulary due to the perceived lack of a suitable Malayalam lexicon for discussing sexuality. This adoption of English in sexual references by the media also serves as a means of filtering the audience. This choice may unintentionally alienate those who are not proficient in English, including children. By focusing on an English-speaking audience, there is an implicit assumption of a more 'progressive' community where discussing sex is considered less taboo. This approach also

creates a dichotomy, limiting the accessibility of sexuality education platforms to a smaller one, giving it an elite nature. This is evident in the classroom setting, as highlighted by Lathika Miss.

> *Lathika Miss: For academically better students, the language will not be an issue; however, the low-performing students will not be able to understand the English terms, especially these sorts of words.*

b) The "Dirty" Colloquial

> *Lathika Miss: In Malayalam, colloquial words are used more than formal words in the context of sex. These colloquial words cannot be used inside the classroom. For instance, for penis, we use 'lingam' in the standard language, but in colloquial language, there are other words. The issue is that we cannot use it in the class as they are used as curse words. I use the standard Malayalam words and English both together. The students will not be able to understand the formal Malayalam words as they use only the colloquial ones. So standard Malayalam in that way is no different from English.*

Sanskritised Malayalam words, though prevalent in public discourse, find limited use in everyday private conversations. People typically lean towards colloquial versions, which might seem inappropriate or even offensive in formal settings. The colloquial terms have the characteristics of the class, caste and the location of the speaking crowd. Most of these sexual references are barred from the middle class-upper caste Malayali's speech, even in private spaces. For instance, penis is introduced to a growing child as 'nanam' meaning shame and does not have a specific word for it. Whereas, the non-upper caste people have other vocabulary of these words and are perceived with less taboo.

The disapproval of the colloquial words is also the disapproval of the people who use them. Subramanian and Visawanathan (2023) discuss the same issue in the context of Mathematics education in the context of Tamil Nadu. Through examples from State Board mathematics textbooks and insights from interviews with teachers and students, the authors discuss the challenges posed by the use of "pure Tamil" terms for everyday concepts and technical mathematical terms, which can be alien to students and hinder their understanding of the subject matter. The study points out that for learners from marginalised backgrounds, the alienation caused by linguistic purism is compounded by systemic inequalities in education.

The unease associated with colloquial words seems to vary based on gender. The limited familiarity with these terms among women can be attributed to societal expectations that dictate women should maintain an appearance of sexual ignorance and innocence. This gendered dynamic was reflected in discussions with the teachers. Wilson sir expressed relatively less discomfort when using colloquial language in the context of sexuality education, in contrast to Lathika Miss, as can be seen below,

> *Wilson Sir: The next is the colloquially used words. They (students) will not use it while talking to me. They talk about it indirectly by saying "it"' "that" and so on. I do not use colloquial language unless students use them in questions. If I use the colloquial terms, each student perceives it differently.*

c) When Everything Becomes a Slur

> *Wilson Sir: Boys use the word "samanam" to refer to the penis. If I use the word samanam in the class, that will bring mixed feelings among students coming from different locations. I don't use them because, in many homes, fathers abuse wives and children using these unparliamentary words.*

Many of the swear words (used for abusing) in Malayalam, like other languages, are directed at the gender, sexuality and genitals of a person. The swear words reflect the societal norms around gender and sexuality and also the repressed desires and fantasies of people. It becomes the only outlet for people to talk about the things that are forbidden. These swear tones make these acts more and more offensive, immoral and dangerous, leading to the control and policing of sexuality in society. This cultural and linguistic influence has perpetuated generations of fear and shame surrounding sexuality.

Similarly, the words to refer to the genitals make those body parts offensive, shameful and private. For instance, a commonly used Malayalam slur is ' Mairu' which translates into pubic hair. (Additionally, many of these profane words are directed at women and other oppressed members and have misogynist origins, for example, 'Kundan', 'Koothara', 'thevidichi', 'thaayolli', 'pulayadi mone', 'Koothichi' -which means Homosexual male, low-class, prostitute, mother-fucker, son of a whoremonger, slut). Hence, the stronger emotion these words evoke forbids the teacher to use them in the class.

d) Preventing Visualisation

Teachers in general, emphasise improving students' visualisation in the teaching-learning process; however, when it comes to topics related to sexuality, teachers try to hinder visualisation. This is achieved by using a less familiar language. Teachers are aware that students cannot make much sense of the meaning of English terms and hence will not be able to create a mental image of what the teacher is talking about. The official nature and the uneasiness that English brings to the students also change the classroom into a formal and academic space. As Wilson Sir states;

> *Wilson Sir: We use English terminology to teach anatomy. I tell them the Malayalam meaning of these words. For instance, I tell them that vagina is the "yoni ", the uterus is "garbapathram", and explains "andasheyam", "andavahinikuzhal", and so on. I keep in mind that I tell the Malayalam words only once; otherwise, it will lead to visualisation.*

As most Malayalam words for genitals, even the formal medicalised terms such as "yoni" and "lingam" are hyper-erotised in erotica, which students often read or view, teachers fear that these can evoke these erotic images in students' minds. According to Wilson Sir, English helps the speaker to distance oneself from the speech and feel less vulnerable. He added,

> *Wilson Sir: The students won't be able to understand the English terms. They write the English terms in Malayalam. They write 'va' 'gi' 'na' in Malayalam. During exam evaluation, we understand that they can't spell and write these words in English, so they write in the Malayalam script. Very rarely I have seen students using Malayalam terms. Many girls find it difficult to write 'yoni' as they think that it is related to oneself. 'Vagina' is someone else's. I have noticed that they are more confident to use 'vagina' than 'yoni' while talking.*

Thinking, seeing and touching one's own body, especially the genitals is scary for many, especially women, because of social conditioning. The body is a source of shame in our society that requires it to be hidden and not talked about. The alienation that English as a formal and foreign language provides from one's body makes it easier to communicate. The teachers also do not want the students to think about their bodies as that can be shameful/embarrassing. Discussion on sexuality is an uncertain realm which can go into rugged terrains and evoke different emotions (pleasant and unpleasant) among students. English helps to talk about the body objectively without associating any emotions.

e) Language, Power, and Uncomfortable Questions

Teachers expressed concern that using Malayalam words in the context of sexuality education might be perceived as 'loose talk.' This apprehension is rooted in the fear of losing power and control over the class during discussions, as documented in literature (Khan et al., 2020). Interestingly, the fear of a shift in power dynamics becomes particularly pronounced when discussing topics related to reproductive/sexual health. The fear of change in the power relation seems more threatening for teachers when they are talking about the issues around sexuality as compared to other topics. Even though any talk about sexuality is disturbing and uncomfortable, it becomes more difficult when one is required to maintain a power hierarchy with the audience. This is based on the fear of the unpredictable nature of the students' questions that can arise in an informal setting.

Wilson Sir illustrates this uncertainty, stating, "You can't imagine what kind of content they watch; once, a boy asked if it was okay to swallow it (semen)."

The familiarity of students with diverse aspects of sex through sources like pornography leaves teachers feeling vulnerable. The limitless and explicit nature of content and its widespread availability, make the class unpredictable. Thus teachers fear being confronted with uncomfortable or inappropriate questions. Teachers also worry about appearing less knowledgeable than their students. Responding to what teachers perceive as "culturally inappropriate" questions[17] also raises concerns about being perceived as shameless.

To mitigate these challenges, some teachers resort to using English, a foreign language, during these specific discussions. This linguistic switch is seen as a strategic move to assert control and maintain the adult-child distinction in the classroom. The adoption of English, being a formal and foreign language, provides teachers with a means to re-establish a formal environment within the classroom, allowing them to regain a perceived level of authority and reduce their vulnerability.

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[17]Culturally inappropriate questions are the ones that disregards the cultural norms and values, potentially causing offense or discomfort through its perceived lack of respect towards the cultural context in which it is asked. According to Wilson Sir, the question from the student "Can we swallow semen" would be a culturally inappropriate question.

How public discourse enables certain classroom dialogues

Recent shifts in societal discussions have also helped in using specific terms within classroom environments. This transformation in the public sphere is reflected or contributes to a healthier dialogue around sexuality in educational spaces. This shift is seen in the broader acceptance of terms like "arthavam" (meaning menstruation), which were previously avoided in formal discourse. The Sabarimala temple entry debates[18] significantly contributed to normalising this term by challenging its taboo status. Moreover, campaigns like "Arppo Arthavam," aimed at confronting menstrual stigma, have gathered widespread attention[19]. These events have encouraged women to share their first menstruation stories, shedding light on the discrimination and challenges they face within their families, thereby promoting a more inclusive and sensitive dialogue around menstrual health.

This transformation and acceptance of the terminology (or menstruation) is acknowledged by George Sir as seen in the following excerpt,

> *George Sir: It was challenging to say menstruation earlier. Now it is not that difficult. Previously, students did not use the word menstruation; they talked about it indirectly. They refer to menstruation as the time of blood loss. Now it has changed completely. They talk about their menstrual dates and home rituals.*

The frequency and popularity of the word "arthavam" has reduced the taboo and made it more acceptable in everyday language. The acceptability of the word has enabled teachers and students to discuss menstruation effectively. This demonstrates the potential for language to evolve and adapt in response to shifting cultural norms free from the constraints of shame and taboo.

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[18] The Sabarimala incident is about a landmark Supreme Court verdict in India that allowed women of menstruating age to enter the Sabarimala Temple, challenging long standing religious taboos and sparking widespread debate and protests. This decision represented a significant moment in the country's ongoing struggle over gender rights and religious practices. Despite the Supreme Court verdict allowing their entry, women attempting to visit the Sabarimala Temple faced physical blockades and aggressive protests.

[19] https://www.thenewsminute.com/kerala/arppo-arthavam-kerala-campaign-against-menstruation-untouchability-gains-momentum-92088

6.4 Discussion and Concluding Remarks

The chapter looks into the challenges faced by teachers when teaching biology chapters related to human reproduction, specifically the linguistic challenges. These challenges include instances of teachers being sexualised during classes, especially when teaching chapters related to reproduction. Additionally, teachers encounter attempts by students to make them feel awkward during discussions on sexual topics. In response, teachers consciously work to normalise these conversations by emphasising the naturalness of physiological processes and the human body. Teachers also grapple with a significant challenge when they face a discrepancy between the content presented in the textbook and their personal or cultural values. This dilemma prompts them to selectively present or construct alternative narratives that align with their belief systems, often conveyed through smaller narratives during the teaching.

The linguistic challenges stem from various factors, primarily rooted in the prevailing moral codes and taboos surrounding discussions on sexuality and genitals. The fear of using Malayalam terms arises from societal norms, making teachers apprehensive about potential discomfort and awkwardness in the classroom setting. The language shift to English is prompted by a desire to mitigate shame associated with explicit words, as English is perceived as less loaded with societal judgments. Interestingly, the same audience may view Malayalam and English words with identical meanings differently. Teachers often opt for English to prevent students from visualising and fantasising about sexual content, utilising the non-familiarity and formal status of English to maintain a decent and legitimate discourse. Language alienation serves a dual purpose of steering students away from introspection on their bodies and facilitating objective discussions on sensitive topics.

Many Malayalam words related to sex, whether formal or colloquial, also double as offensive terms, hindering their usage in educational settings due to the varied emotional responses they evoke. To overcome these challenges, Malayalam terms need to be normalised through consistent usage in public spaces. Breaking the taboo associated with these words requires repetitive, open discussions, fostering an environment where communication about reproductive health becomes more accessible.

The vernacular, or mother tongue, is deeply embedded within specific social, cultural, and historical contexts, shaped by lived experiences (Kramsch, 2014). When discussions shift to a different language, such as English, it creates a psychological distance from these contexts, potentially reducing the shame historically associated with certain topics in a given culture. This linguistic distancing enables individuals to step away from the immediate emotional and cultural connotations embedded in their mother tongue. The act of discussing topics that are taboo in a non-native language can serve as a buffer against the direct impact of cultural and social norms that might otherwise heighten feelings of shame or discomfort. By leveraging a language that is one step removed from the direct emotional and cultural ties of the vernacular, teachers can navigate discussions on topics like sexuality with reduced emotional charge, thus mitigating the cultural baggage and shame that might otherwise inhibit open and healthy dialogue. Here, switching to English, in many ways, is enabling the teacher to talk about aspects that are taboo.

However, this choice, although intended to navigate the sensitivities surrounding the topic by the teacher, can alienate and silence students who do not have much command over English, leaving them unable to participate fully in the discourse. This linguistic hurdle not only hampers their learning experience but also reinforces inequalities within the educational system (Subramanian & Visawanathan, 2023). Consequently, the decision to use English for such discussions, while aiming to mitigate discomfort, inadvertently disadvantages a large section of students.

Chapter 7

Unwrapping the thesis

7.1 Re-visiting the thesis

Through this thesis, I attempted to explore the discourses that shape sexual subjectivities within biology classrooms, emphasising the influence of broader societal and school discourses on sexuality. I examined public discourse, school dynamics, and classroom discussions to understand how hegemonic structures shape sexual subjectivities. While this thesis has provided insights into how power and structure shape sexual subjectivities within the school and science classroom, still much work needs to be done to fully understand these processes and to develop strategies for promoting inclusivity.

I will start by providing a brief overview of the contents of each chapter in the thesis.

In Chapter One, I have provided a review of existing literature related to; childhood sexuality, how educational institutions shape sexual subjectivities, and how institutional structures of race, class, and caste shape sexuality discourse. Drawing upon scholarly works, I have analysed different cultural discourses surrounding childhood and sexuality, specifically within the public sphere of Keralam. I present an examination of two recent incidents that sparked public debates - the implementation of a gender-neutral school uniform in a school located in Keralam and the furore over Rehana Fathima's son's painting on her semi-naked upper body. I have tried to explore how childhood sexuality is understood and conceptualised within the current discourse of Keralam. The insights gained from this review provided a foundation for further exploration of the themes that drive my research in subsequent chapters.

I outlined my research framework in Chapter 2 and have provided questions driving the study, and detailing the methodological and theoretical approaches. The thesis used individual interviews, participant classroom observation, textbook analysis, and analysis of publicly available material which include news debates and online classes to explore the research questions. Critical Discourse Analysis is the methodology used to understand the co-

construction of discourse and subjectivities. Strategies listed by Waitt (2005) as a framework for the CDA were particularly helpful in the analysis. The larger aim in choosing CDA as a methodology was to understand how discourse can influence and reflect social, political, and cultural relations, and how it can perpetuate or challenge power relations including inequalities and injustices.

Different analytical frameworks were used to probe different questions. All the analytical frameworks, used in the subsequent chapters fall under CDA and focus on understanding the power structure, ideologies, and values within different discourses.

I focused on the sexual microculture of a government-aided Christian management school in Wayanad in chapter three. Here, I collected teachers' narratives through interviews to explore how they perceive students' sexual subjectivities. Nine high school teachers from various disciplines were interviewed, and their responses were analysed using Collins' framework of interlocking domains of power. Further, I focussed on the school's value education program by analysing POC Value education textbooks from Class 6 to 10 and the sexuality education series called "Know Thyself" uploaded on YouTube to understand the values that constitute the microculture of the school.

In Chapter Four, I explored the case of 'Wilson Sir' by examining the classroom interactions within his 12th-standard biology classes on Human Reproduction and Reproductive Health, complemented by interviews. This analysis focussed on the emotional experiences of Wilson Sir when teaching subjects related to the body and sexuality. I used Zembylas' (2002) framework that analyses how emotions are shaped, expressed, and experienced in the science classroom across three levels: the individual/intrapersonal, the social/interpersonal, and the socio-political/intergroup.

Chapter Five extended the analysis to the examination of NCERT and SCERT science and biology textbooks from standards 6 to 12. This involved an analysis of the visual representations of the human body and genitals and a critique of how these depictions may inform students' knowledge and perception of their bodies. For this purpose, I used the socio-semiotic analytic framework developed by Serafini (2010), which offers three analytic lenses: perceptual, structural, and ideological, to interpret the visual representation. The chapter further explored the diverse scientific and cultural narratives employed by teachers to shape a

broader narrative. To analyse the intersection of scientific and cultural arguments, the discourse around safer sex was chosen. The chapter involved interviews with three biology teachers about their notions of safer sex. The chapter also looked at the 12th standard NCERT textbook discourse on safer sex to explore different values within the discourse.

I have presented instances from the classroom where discourses on sexuality led to tensions and the strategies employed by teachers to manage these situations in Chapter Six. This involved discussions from 12th biology classrooms and 8th standard lessons on "Continuity of Generation" available on Youtube. The chapter looked into the challenges faced by teachers when addressing sexuality in biology classes, emphasising the friction between textbook content and societal norms. Through the analysis of interviews with three biology teachers, I examined how teachers navigate these sensitive discussions, often altering their language and methodology due to personal discomfort and the need to maintain the formal nature of classroom discourse.

7.2 Re-visiting the research questions

Here I describe how the research question and the subsequent guiding questions were answered in this thesis. The questions guided the analytical framework and underpinned the conclusions drawn in this thesis. Each chapter of the analysis works to answer these questions.

The fundamental question the thesis tried to explore is

"What sexual subjectivities are promoted in the discursive space of a biology classroom? How are these subjectivities produced, and what role do the hegemonic structures play in this?"

Different research aspects and the respective guiding questions are as follows,

- Exploring Different Sexuality Discourses within School Settings:

  R1: What are the different sexuality discourses produced within the school, biology classroom in particular?

- Social and Institutional Discourses through Teacher Narratives:

  R2: How do the social and institutional discourses on sexuality manifest in the everyday experiences of teachers and influence their narratives?

  R3: What challenges do teachers face in navigating these discourses while addressing topics of sexuality within their classrooms?

- Construction of Social Relations and Discourses on Sexuality:

  R4: How do social and institutional discourses on sexuality interact with social relations between teachers and students?

- Interplay of Different Discourses on Sexuality:

  R5: How do different discourses on sexuality interact with each other to produce a broader narrative? What role do hegemonic structures play in shaping the interaction between these discourses and the resultant narrative on sexuality?

Although Chapters 1, 3, 4, 5, and 6 together explore the above questions in many ways, I will discuss how specific chapters provide insights into particular aspects.

7.3 Addressing the research concern

R1: Different sexuality discourses within school settings were mostly explored through chapters three, four and five. Chapter three discusses how schools attempt to shape and control students' understanding and experiences of sexuality. This chapter discusses how teachers and school curricula enforce certain sexual identities while discouraging others, reflecting wider societal values of what's considered 'right' and 'wrong.' For example, the chapter shows how teachers, by closely monitoring students, restrict their freedom and surveil the places outside of school (like tuition centres or bus stops) where they can freely express their feelings. Additionally, the chapter explores how specific dress codes and interactions

(such as girls and boys speaking to each other or boys going to the washroom together) are controlled or limited. These actions aim to establish a desired sexuality that primarily values a non-sexual identity, which will transform into heterosexual subjectivity (alongside preserving their caste and religious identity) in the future. The chapter also examines the value education curriculum of the particular school and the analysis demonstrates that these discourses were embedded in a Christian moral framework that influenced the curriculum's approach to the human body, sexual ethics, and moral responsibility. The chapter also discussed how the focus on procreation and values like chastity, pro-life narratives, and larger families may have larger implications in the shaping of students' sexual subjectivity.

Chapter four discusses how the textbook, through visual depictions of the human body, genitalia in particular, puts forth a notion of a body as shameful and needing alterations or modifications. The chapter explores the socio-cultural understanding of the body manifested and reinforced through these depictions. The chapter presents the choices the textbook makes to put forth a preferred or acceptable subjectivity from a seemingly medico-scientific perspective around safer sex. The discourse of teachers around safer sex was aimed at producing individuals who are dedicated, faithful, and monogamous heterosexual partners.

Chapter Five explores how one specific teacher (Wilson Sir) engages in the discourse around Medical termination of pregnancy, family planning and STD which could constitute specific subjectivities that are aligned with the larger sexual and reproductive morality.

R2 and R3: Chapters 3, 4, 5 and 6 of the study shed light on the ways in which societal and institutional influences shape teachers' views and narratives regarding sexuality. Chapter 3 particularly explored this aspect by examining the narratives of teachers within the context of broader social discourses on sexuality and the broader power dynamics within religions in a locality. During the exploration of the school's microculture, it became evident that the dominant discourse on sexuality was structured around Christian morality. Chapter 5 presented how the textbook discourse is written within the cultural notion of body, sexuality, monogamous relations, and reproduction. The details of teachers' narratives within chapters 4 and 6 reveal how institutional and cultural norms surrounding discussions on sexuality influence teacher actions and decisions within the classroom environment. The chapters present how these culturally shaped notions on childhood sexuality within the protectionist discourse decide what can be talked about in the class and what cannot. Chapters 4 and 6

highlighted several challenges that teachers face when addressing topics of sexuality within their classrooms. These challenges include navigating societal taboos and moral codes surrounding discussions on sexuality and genitals, as well as managing students' reactions and maintaining a conducive learning environment. Chapter 6 also discussed the linguistic challenges faced by teachers, which include the fear of using Malayalam terms due to societal norms, and the preference for English to mitigate discomfort and maintain the power relation within the class.

R4: Chapter three provided insights into how the discourse on sexuality constitutes social relations and vice versa. Different accounts show that the interaction between students and teachers is informed by religious identity and that these categories shape teachers' expectations of students' sexual knowledge, experiences and expression. These narratives provided by teachers also shed light on the influence of discourses surrounding 'Muslim sexuality' on the placement and treatment of Muslim students within the school. These narratives demonstrated how beliefs and assumptions about the Muslim community shape various acts and practices within the school environment. For instance, the construction of categories such as 'Muslim boys' and 'Christian girls' reinforces power imbalances between different religious groups, especially considering the current political debates in India. Teachers' narratives also portrayed Muslim sexuality as inherently different from mainstream society, often associating features like homosexuality exclusively with Muslims. These narratives not only stigmatise Muslim men but also perpetuate negative attitudes towards homosexuality. The surveillance and disciplinary actions imposed on students varied, with Muslim girls often facing heightened scrutiny and regulation due to patriarchal structures within the school. Overall, these discourses on sexuality, as mediated by teachers, contribute to the shaping of social relations within the school environment.

R5: Chapter Five sheds light on how various discourses on sexuality interact and contribute to forming a complex narrative, influenced by hegemonic structures and sociocultural norms. It looked into the interplay of scientific, moral, and cultural discourses in shaping perceptions of sexuality within biology education. It highlighted how these different narratives intersect and influence each other, ultimately contributing to the regulation and shaping of sexualities. Through the analysis of school science textbooks and teacher interviews, the chapter brought out narratives that idealise sex within committed, monogamous heterosexual relationships, aligning with prevailing socio-cultural norms. Furthermore, it explored how teachers often

use moral ideals to justify scientific claims, entangling scientific facts with moral sensibilities. This entanglement reflects an alignment with socio-cultural norms and the influence of hegemonic structures. Additionally, the chapter examined how body depictions, including genitals, in textbooks are not solely based on scientific understanding but also reflect cultural notions of acceptable bodies. Chapters 4 and 6 also discuss instances where selective mention of scientific arguments to avoid 'complexities' in the classroom discourse produces specific molarity concerning contraceptives, abortions and so on.

7.4 Implications from the thesis

As Quilty (2020) argues, science education should transform into a critical site of resistance against oppressive ideologies and rigid normalising categories. By creating learning environments that disrupt dominant narratives, we can foster more inclusive forms of knowledge production and social change. The presumption of heterosexuality underpins science classroom discourse, which limits the possibilities for queer pedagogies that challenge normative categories. However, these concerns are not limited to queer issues but have broader implications for critical pedagogy more generally. Incorporating queer perspectives into science education promotes critical thinking and challenges students to reconsider established beliefs within various scientific areas. This aligns with the core values of scientific inquiry. By presenting diverse perspectives, particularly those that have historically been marginalised, science education can foster a more comprehensive understanding of the world and experiences. As a result, science becomes a discipline that not only seeks to study the mysteries of the universe but also respects and reflects the diversity of life it studies, making science education more relevant, engaging, and inclusive for all learners.

The primary implications of this thesis point towards the improvement of science textbooks and the designing of teacher professional development programs. This section tries to list out some suggestions for both of these.

7.4.1 Suggestions for improving science textbooks

1. The analysis of different NCERT and SCERT science and biology textbooks revealed a heterosexual understanding of body and orientations. There is a need for biology

textbooks to go beyond the binary categories and become more inclusive. This need has been highlighted by numerous scholars (Snyder & Broadway, 2004; Bazzul & Sykes, 2011; Gunckel, 2019; 2009; Reiss, 2019; Raveendran & Chunawala, 2015). When discussing sexual health, it is imperative that the discussion is broadened to include people of all sexual orientations and practices. Incorporating diverse perspectives on sexuality and relationships can help break down harmful stereotypes and promote empathy and respect for individuals of all orientations and practices. By acknowledging the diversity of human sexuality, biology textbooks can play an essential role in fostering a more inclusive and accepting society. Additionally, textbooks should emphasise the emotional aspects of sexual health, including the importance of consent and how to communicate effectively with sexual partners.

2. The analysis of visual representations of the body, specifically the genitals revealed a tendency to obscure or hide the 'shameful'. The bodies that were represented were shaped by the cultural aesthetics depicting the ideal female and male bodies. There is a need for textbooks to start including a range of images and illustrations that depict the diversity of bodies. Efforts must be directed towards making representations of bodies more relatable to students' experiences. For example, representations could acknowledge the existence of pubic hair, making the body more relatable. Many anatomy textbooks, like Gray's Anatomy, now represent public hair while depicting genitals. The representations can expand the understanding of the body and reject the notion of a 'standard' body by depicting bodies and genitals of varying sizes, shapes, and colours. Genital representations need not be confined to reproduction sections of textbooks. The anatomy of genitalia has been conceptualised within the notion of procreational sex. Textbooks need to recognise the non-reproductive functions of the genitals and incorporate representations that extend beyond the act of penetration, which include a broader range of contexts. Overall, visual representations must engage in ongoing dialogue with broader discourses challenging normative understandings of the body and remain open to revisiting and evolving.

3. Textbook visuals and discourse need to move beyond the strictly male/female dichotomy and include representations of intersex bodies. Moreover, textbooks should avoid pathologizing intersex bodies and endorsing harmful ideologies, by validating the existence of individuals with variations in sex characteristics. This can help foster

acceptance while redefining notions of body, sex, and gender. Conducting gender audits, involving both national and state curriculum boards, NGOs, and stakeholders, along with timely revisions of textbooks through collaborative consultation, are critical to making an inclusive, equitable, and empowering learning space.

4. The textbook also remains silent on numerous critical health issues related to female reproductive health. For instance, conditions such as Polycystic Ovary Syndrome (PCOS) and Polycystic Ovary Disease (PCOD), along with other hormonal imbalances, are not adequately covered. These conditions significantly impact not only reproductive health but also mental well-being. Addressing these topics is essential to promote awareness and support for affected individuals.

7.4.2 Implications for Teacher Professional Development Programs

During the interviews, a few teachers revealed that they had not given much thought to the topics discussed in the interview. When asked for their opinions or understanding, they often replied that they needed to take time to reflect on the issues. This response highlights the potential for teacher professional development (TPD) programs to facilitate discussions and provide opportunities for teachers to engage with these topics more deeply. TPD programs can be improved by taking into account the affective moments experienced by teachers during the teaching of topics around body and sexuality (Khan et al, 2020). These moments, which include discomfort, shame, and uncertainty, are crucial and can have a significant impact on teacher professional development. More discourse around sexuality within the teacher training program itself can help reduce the taboo and shame surrounding specific topics and words. The programs should provide opportunities for teachers to engage in difficult conversations about issues related to body and sexuality. Based on the study, here are some ways that TPD programs can take into consideration to better address these moments:

1. *Encourage personal reflections:* From Chapter 3, we see that the teachers were not able to acknowledge or reflect on their privileges and location, on their morals, beliefs and values. TPD programs can play a crucial role in helping teachers reflect on their social location and how it influences their understanding of sexuality. The TPD programs could encourage teachers to

reflect on their own experiences and beliefs related to sexuality, and how these have been shaped by their social location. This can help them identify any biases or assumptions they hold, and how these impact their teaching practice. TPD programs should also encourage teachers to critically reflect on the classroom expectations that hold them back from truly engaging with their students. By examining these expectations, teachers can identify ways to challenge them.

2. *Recognise and acknowledge the affective nature of the lessons*: TPD programs need to recognise biology chapters which discuss body and sexuality are not just about providing factual information but also involve emotional labour. TPD programs need to recognise and acknowledge the emotional dimensions of teaching about body and sexuality. By validating teachers' emotional experiences, programs can help them feel seen, heard, and supported. Rather than avoiding or dismissing teachers' emotions and fear, TPD programs should encourage teachers to engage with these emotions productively. Such attempts can help teachers reflect on their emotions which can lead to the recognition and critiquing of values and beliefs that shape these emotions. TPD programs can focus on reflections on the role of teachers in such situations that involve discussing sexuality and how the role can be viewed differently by different stakeholders. Rather than trying to suppress or avoid uncomfortable moments, TPD programs should use them as an opportunity for growth and reflection. TPD programs should appreciate the unique narratives of teachers.

3. *Explore the impact of cultural and historical contexts on the shaping of morality:* The thesis reveals that despite teachers recognising morality as a construct shaped by cultural and historical contexts, they did not critically engage with the cultural and historical factors that contribute to moral values. TPD programs could encourage teachers to examine how societal discourses have influenced their perceptions, values, morality and emotions. By recognising the power dynamics at play, programs can help teachers develop a critical consciousness around their roles in perpetuating existing power structures. For instance, programs can be designed to foster conversations on how specific religious values and cultural practices have moulded a set of

moral beliefs that, in turn, lead to stigmatising views towards individuals from other communities. These discussions can explore the historical and societal origins of these moral frameworks and examine how they influence perceptions of those who don't belong to the same religious or cultural groups. These discussions could break the stereotypes that pervade mainstream perceptions about specific groups, professions, and communities. Insights from the thesis reveal that teachers had stereotypes about the Muslim community and lorry drivers, perceiving their sexualities as distinct. Engaging in such dialogues can help in challenging and reevaluating these preconceived notions. The programs could also provide historical case studies, which can offer a broader perspective on how moral values have shaped scientific narratives, influenced societal responses, and shaped our understanding of sexualities. The discussion on scientific narratives around AIDS and biases within the narratives can be chosen as a case. This will help teachers to reflect on the classroom discourses and offer many ways to discuss topics around sexual safety that are more inclusive.

4. *Develop strategies for managing discomfort:* The thesis highlights numerous instances of discomfort and awkwardness within the biology classroom during discussions on the body and reproduction. By bringing more discussions on how shame is a powerful mechanism used to suppress discourse around sexuality, teachers can develop a critical stance that will help them reflect and identify how shame is produced and enacted in classrooms. Through this critical reflection, teachers can identify more instances in the classroom where they are restricted from discussing sexuality and work towards overcoming these limitations in small steps. By choosing one particular instance at a time and addressing it through practical strategies, teachers can gradually overcome their discomfort and uncertainty which can lead to a more inclusive and productive learning environment.

5. *Develop practical pedagogical strategies:* TPD programs need to also create a supportive learning environment that encourages teachers to share their experiences and reflect on their practices. This can involve creating spaces for teachers to discuss their challenges and successes, as well as providing

feedback and support from peers and mentors. TPD programs need to aim at supporting teachers to manage and channel their emotions positively in the classroom. By exploring empathy and care as valuable attributes, these programs can help teachers leverage these emotions to create a more effective and comfortable teaching experience for students. By recognising the ways in which patriarchal structures shape teachers' roles and responsibilities, programs can help teachers develop more critical consciousness around their teaching practices. TPD programs can help teachers share pedagogical practices they use in the class with each other as well as include discussion of other practices that teachers elsewhere do to enable the teaching. For instance, Dhanya[20], in her article where she reflects on her teaching on Human Reproduction, mentions that the initial sense of discomfort of students, when shown the diagrams of reproductive organs, eases out when they are asked to draw them by hand in their notebooks.

6. *Exploring alternate activities*: TPD programs could explore the alternate activities that can challenge teachers' assumptions and biases around sexuality and help teachers better understand the power invested in different discourses around sexuality. One activity which could be considered is providing case studies or scenarios that challenge teachers' assumptions about sexuality and its intersectionality with other factors. This can help teachers develop critical thinking skills and reflect on how they would handle these situations in their teaching practice.

7.5 Some available resources for teaching sexuality

Several non-governmental organisations (NGOs) in India, along with the NCERT and SCERTs, have developed educational materials that address a broad spectrum of topics related to gender and sexuality. Teachers can refer to these resources to enhance their understanding and incorporate these into their classes.

Initially, many of the sexuality education manuals were focused on protectionist discourse or situated within the feminist discourse that centred around sexual violence and abuse. While

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[20] https://azimpremjiuniversity.edu.in/teaching-human-reproduction

these concerns remain vital, there has been a notable shift in focus among many organisations towards exploring sexuality education through the lenses of identity, pleasure, and power dynamics. This shift represents a more holistic approach to sexuality education, acknowledging the complexity of sexuality beyond the realms of safety and protection. Noteworthy NGOs like Tarshi and Nirantar have been pioneers in the field of sexuality education in the country, setting the groundwork for subsequent efforts by other organisations such as Sappho, YP foundation, SEK foundation, Thatmate and numerous others. These organisations have developed a wide range of resources for children, teachers and parents, which explore the complexity of gender and sexuality, challenging traditional narratives and encouraging more inclusive discussions (However, some of their freely available materials are dated). Some of the freely available materials that teachers can refer to are below,

1. Samagra Lygigatha vidyabhyasa pankthi-Part
   https://online.fliphtml5.com/bijiw/beqq/#p=7
2. WHO (2009). International Technical Guidance on Sexuality Education.
   http://unesdoc.unesco.org/images/0018/001832/183281e.pdf
3. NISTHA (NCERT) module titled "Relevance of gender dimensions in Teaching and Learning processes"
   https://itpd.ncert.gov.in/mss/course_content/gender%20dimension.pdf
4. Gender Sensitization module: KVS RO Delhi
   https://rodelhi.kvs.gov.in/sites/default/files/Module-%20Gender%20Sensitization_3.pdf
5. Vigyan Pratibha- Understanding Adolescence
   https://vigyanpratibha.in/index.php/understanding-adolescence/

Recently, the National Council of Educational Research and Training (NCERT) module aimed at sensitising teachers and teacher educators about gender diversity, specifically focused on gender-nonconforming and transgender children, encountered significant resistance. This module titled "Inclusion of Transgender Children in School Education: Concerns and Roadmap," was designed by the Department of Gender Studies at NCERT, and advocated for progressive measures such as the implementation of gender-neutral toilets and uniforms, the elimination of gender segregation in school activities, and informed discussions on puberty blockers, among other initiatives. The module was withdrawn from the NCERT website following considerable backlash in November 2021. The reason cited was "The Draft

Module has received an overwhelming response from different stakeholders." Despite numerous public campaigns calling for its reinstatement, the module has yet to be reintroduced. This withdrawal was, in part, due to criticism from entities like The National Commission for Protection of Child Rights (NCPCR).

Teachers, as a community, should resist such backlash and exert pressure at every level to safeguard and support these crucial efforts. Teachers could also refer to this module which is available at the link-/https://clpr.org.in/wpcontent/uploads/2022/01/Inclusion_of_Transgender_Children_in_School_Education.pdf. The NCERT module's withdrawal is also a reminder that it is essential to continue advocating for and implementing policies and practices within educational institutions to ensure inclusivity and safety of every child.

7.6 Some insights and larger questions

Here, I will outline some broader questions that arose during the process of my research and require deeper explorations.

1. It was seen from Chapter 3 that teachers perceived Muslim students differently from others, believing they had more sexual knowledge that could badly influence other students. This knowledge was considered inappropriate for their age and was thought to come from religious structures and socialising patterns. This raises an important question that we must address in the context of science education: Does this dynamic manifest in the discourse of biology classrooms? How do teachers perceive the participation of Muslim students in classroom discussions about sexuality? Are their questions encouraged and welcomed? Students may also pick up on teachers' perceptions through their interactions within the school or from broader societal discourses. As a result, do students within the Muslim community feel safe and comfortable engaging and asking questions in these classrooms? There is a need for future research to explore how these cultural perceptions and dynamics influence classroom interactions and student engagement, particularly in topics around sexuality.

2. It is also noted in Chapter 3 that students were referred to by their religion in many instances. When schools prioritise religious or caste identities over other aspects of a student's identity, it can create a culture where these markers of identity are seen as more important than others. This can perpetuate discriminatory attitudes and practices, both within the school and in wider society. Another troubling pattern that emerged was while romantic relationships between students were policed and punished, those involving students from different religious communities faced even harsher scrutiny. This raises concerns about schools inadvertently fostering caste- and religion-based divisions, similar to caste-based matrimonial sites/arrangements prevalent in Keralam. The question that stays with me is; are the schools serving as breeding grounds for these caste-based or religion-based matrimonial arrangements?

3. From chapter three, it was seen that homogeneity among the teachers in the aided school is not only in terms of religion but also in terms of religiosity and larger orientation and positionality within macro-discourse, limiting the plurality of values. This creates a homogeneous teaching staff, where everyone subscribes to the same set of moral values and beliefs. This leads to a space where certain values and beliefs are privileged over others. This homogenisation has resulted in a limiting of the plurality of values, where morality is viewed as a single process rather than in its plurality. The homogenisation of teachers in aided schools can be attributed to several factors. The pressure to conform to societal norms and expectations can be overwhelming in these schools. Teachers may themselves feel compelled to adhere to certain standards of behaviour and dress, which can further limit their ability to express themselves and diversity within the classroom. More importantly, the homogenisation of teachers can perpetuate existing power dynamics within society. Students who do not share the same cultural background or identity as the teaching staff may feel invisible or overlooked in the classroom. When there is a single perspective on morality and values, it can lead to stereotyping and students may feel that their own beliefs and values are not being acknowledged or respected. Students from other communities may find it difficult to build relationships and trust in a space where they feel less valued. Future research could look at how the lack of representation and diversity among teachers affects students from other communities in greater depth. There needs to be more research that will look at how students from diverse backgrounds navigate this aided school environment and express their voices within it, particularly in

relation to issues of diversity and inclusivity. Studies could also look at the impact of a homogenous teaching staff on student learning outcomes, such as academic achievement, critical thinking skills, and social-emotional development.

There have been many appeals from the public to the Kerala government for intervention in the teacher selection process at Aided schools. These appeals are grounded in concerns that schools often demand substantial amounts of money for such appointments, leading to a system marred by favouritism. The discrimination that students experience in these schools has not been adequately highlighted in the appeals for government action. Thus, it is essential that these appeals for governmental involvement place the students' experiences at the forefront, aiming to ensure fairness and inclusivity in educational settings.

4. Many of the teachers' narratives revealed their concern and fear about children's safety. It is important to recognise that both researchers and teachers recognise the importance of creating a safe space for students, but they may have different notions of what constitutes "safe space." The idea of safe space is complex and multifaceted, and it can vary greatly between individuals. For instance, some teachers felt children are safe when they are shielded from sexual knowledge and remain innocent, while others conceived it as a space where children are protected from the risk of abuse. Thus the notion of safe space also varies within individuals, as one's own understanding of safety could be influenced by factors such as cultural background, personal experiences, and educational beliefs. For example, a safe space can be conceived as a physical location where students can feel comfortable and secure by limiting all interactions to avoid abuse, while it can be also understood as a psychological state where students feel empowered to express themselves freely without fear of judgement or repercussions. Hence, to reach this safe space, the researchers and teachers need to engage in open discussions about their understanding of safety and how it can be promoted in the classroom. By sharing their own beliefs and practices, they could work together to identify common ground and develop strategies for creating a safe and supportive learning environment.

5. In the thesis, it was observed that many perceptions held by teachers regarding students' sexuality, as discussed in Chapter 3 (for instance, the perception about

'Muslim Sexuality'), did not resonate significantly throughout the remaining chapters. This suggests that teachers have certain perceptions that are unique to the microculture of the schools. These perceptions could be influenced by or respond to prevailing larger dominant discourses in the public sphere. This emphasises that the values around sexuality are largely shaped by the specific context in which they exist.

6. The use of scientific arguments to justify cultural practices is a concerning trend that has been observed in classroom teaching. This tendency to misuse scientific arguments to maintain social order and perpetuate discriminatory practices is particularly problematic in the current political scenario, where Hindutva politics has been using such tactics to justify its agenda. Hence it is essential that we critically examine the use of scientific arguments in cultural debates within the classroom. Future studies could explore how well teachers can identify and challenge these misuses of scientific arguments, given the political climate that may support them.

7.7 Limitations of the study

1. As previously mentioned, the study adopted a sequential approach, initially exploring societal discourse, followed by school discourse, and finally focusing on the biology classroom. This design aimed to understand the mutual influence among these units. Data collection for Chapter 3 was conducted before the COVID-19 lockdown, with the intention of observing if and how school discourse may inform or influence discussions in the biology classroom. However, due to the lockdown, observing a Class 8 biology classroom was not feasible as physical classes were suspended. Each school possesses its unique microculture, rendering it meaningless to extrapolate findings from one school to biology classes in others. (Even then, I identified a similar school in terms of management and teacher-student demographics, since the initial school did not have higher secondary classes. Regrettably, the biology teacher at this alternative school declined to participate in the research). Thus the study was unable to explore how the school microculture surrounding sexuality might shape the biology classroom discourse.

2. As detailed in the methodology chapter, the COVID-19 lockdown presented significant challenges in the data collection process. Classes conducted after several

months happened under tight constraints imposed by social distancing measures, time limitations, and impending exams. Teachers were allotted only two and a half hours to cover a single chapter, a considerable reduction from pre-COVID times. One of the major limitations stemmed from the restricted teacher-student interaction and minimal engagement among students. Both teachers and students were meeting each other for the first time in the new school setting, which hindered the exploration of student interactions and inquiries within the classroom. The observed classes had minimal student participation, further adding to the limitations. The observed classes were also far removed from the typical dynamics of non-COVID times, highlighting another major limitation of the study.

3. I was hesitant to report a few narratives that teachers shared. There is a worry about how the narrative and analysis might be used or twisted to further marginalise and stigmatise communities given the political context of India. Hence some narratives have been filtered out in the thesis.

4. One significant limitation of this study is related to the constraints of language in discourse analysis. The study relies heavily on language as its primary data source, which may not fully capture non-verbal aspects of sexuality or experiences that are not easily articulated through language alone. Many emotions experienced around the discourse on sexuality, such as embarrassment, shame, and shock, are often conveyed through silences, laughter, and other body gestures rather than words. A more comprehensive examination of these non-verbal cues could have provided deeper insights into the emotional and experiential dimensions of sexuality.

5. While the thesis focuses on the social, cultural, and historical dimensions of sexual subjectivities, it significantly overlooks the individual psychological aspects. The analysis is deeply rooted in understanding how societal norms, cultural contexts, and historical narratives shape sexual subjectivities, yet it fails to account for the personal psychological experiences and internal processes of individuals. Including these individual and social psychological aspects could have provided a more holistic understanding of sexuality by integrating the internal, personal experiences with the external, societal influences. This integration of psychological experiences with the social is a possible area for future research.

6. The study places greater emphasis on religious identity compared to caste, cultural and social identities. This focus on religious identity may lead to an underrepresentation of how cultural and social factors shape sexual subjectivities. While religious identity plays a significant role, exploring their intersection with sexual subjectivities could provide more insights and can be a possible future research area.

7.8 Personal reflections

Research, especially this one which involves the exploration of different discourses around sexuality, is as much an inward journey as it is an exploration of external structures and phenomena. Through the process of research, one attempts mostly to contribute to academic discourse; however, this process mostly leads to a deeper engagement with one's subjective selves (hence, the boundaries between the researcher and the researched can become blurred). Engaging deeply with one's subjective position necessitates an openness and vulnerability that can significantly impact one's perspectives, beliefs, and understandings of social dynamics and identities (Palaganas et al, 2017). These journeys are both intellectual and emotional. Transformations are not static or singular events but ongoing processes of engagement, reflection, and adaptation. Here, I am writing about how my understanding of research has evolved or changed over time and the process of research.

Throughout the course of my study, the drive to find novel insights—those with the potential to catalyse a paradigm shift within the field—was a persistent challenge. This quest for novelty not only shaped my research approach but also limited and constrained the study. I often found myself chasing rare or exotic data. Many times, I thought I had found something special, but then I would find out that others had already discussed these ideas.

I was also hoping to find classrooms where teachers did more than just read from the textbook, maybe discuss more engaging topics or go beyond what was written. However, most of the time, I found classes where teachers just translated the textbook from English to Malayalam without adding anything extra. I initially thought this was not useful for my research, viewing it as "bad data" because it didn't give me any new information. But, the rare moments when teachers did go beyond the textbooks felt like finding treasure—though I realised these instances might not represent the typical classroom situation.

As my research went on, I started to let go of the need to find something completely unheard of. I began to see that since topics about sexuality are so personal, people already talk about them in many ways, some openly and some not. I started to look for patterns in these everyday discussions. Sometimes, these patterns were quite predictable. But understanding that every piece of knowledge is valuable was a key moment for me. This is not to suggest that all research need not produce new knowledge, rather, I learned that recognising the importance of everyday experiences can also lead to meaningful research.

In the end, accepting the ordinary and seeing its value helped me move forward with my work. This change in how I saw things showed me that finding new knowledge isn't just about looking for something no one has ever seen before. Instead, noticing and making sense of the ordinary things around us, instead of constantly scavenging for exotic data, can also add a lot to what we understand and discuss as a research community. This approach resonates with the essence of sociological imagination, which encourages us to look at how seemingly mundane occurrences shape broader social structures and individual experiences (Mills, 2000). This shift in perspective helped me in exploring the importance of considering the ordinary in social science research.

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Appendix

Appendix A

List of Public debates used in Chapter 1

	Incident	TV channel	Title of the discussion	No: of panelists
Debate 1	Gender neutral uniform	Mathrubhumi News	Gender neutralil veenduvicharam (Rethinking gender neutrality)	5
Debate 2	Gender neutral uniform	News 18 Keralam	Linga neethiyil anithiyo? (Injustice in gender justice?)	5
Debate 3	Gender neutral uniform	Media one	Gender neutralitiyum viyojipukalum (Gender neutrality and disagreements)	6
Debate 4	Gender neutral uniform	Manorama News	Vasthrathil pollunath aarku (Who sweats in others wool)	6
Debate 5	Child painting on mother's body	News 18 Keralam	Kunjungal veno nagna rastreeyathil? (Is children needed in nude politics)	3

Relevant links

https://www.youtube.com/watch?v=zRRcbGS5AKY

https://www.youtube.com/watch?v=FV7FbIjKXFI&t=488s

https://www.youtube.com/watch?v=o6ro00qUgmo

https://www.youtube.com/watch?v=BkdoonzRq_g&t=144s

https://www.youtube.com/watch?v=khKNRUlJDk0

https://www.youtube.com/watch?v=O3vOOz7XfH4&t=214s

https://www.youtube.com/watch?v=TKvDhyo4-7Q&t=1984

Appendix B

Interview Questions

1. How do you understand reproductive health-reproductive rights/reproductive justice-sexual rights?

2. In what ways does the textbook cover the emotional, behavioural, and social dimensions of reproductive health?

3. Can you explain the concepts of "functionally normal reproductive organs" and "normal emotional and behavioural interactions" as presented in the textbook?

4. How is sexual "deviance" conceptualized in your understanding?

5. What function do 'sex-specific hormones' serve, and how are they linked to gender roles such as masculinity and femininity?

6. The textbook uses biological sexes as the foundation for sexuality. Do you believe there's a need for a shift in this approach?

7. Considering reproduction's evolutionary role, how relevant do you find this concept today?

8. What does the term 'socially designed healthy family of the desired size' signify? Thought? Furthermore, how would you define a "reproductively healthy society" and "socially responsible society" as per the textbook's terms?

9. What are your thoughts on the association between homosexuality/gender identity and genetics/hormones?

10. Is the textbook content considered age-appropriate? Why is this discussion necessary?

11. Could an extensive focus on sexual education distract students?

12. How comfortable do students feel during lessons on human anatomy and reproductive health? What levels of participation do you observe? Do cultural and societal norms influence these discussions? What concerns do students typically express, and how do these affect classroom dynamics during these topics?

13. With evolving understandings of sexuality, do teacher training programs address these changes?

14. By limiting the scope of topics, is science aligning too closely with social norms?

15. Does the textbook endorse a specific sexual identity while excluding others?

16. Should non-penetrative sexual practices be included in the textbook discussions? Do topics on diverse sexual practices and identities belong within the scientific discipline?

17. Can scientific discourse promote greater acceptance of the queer community?

18. What are your views on Artificial Reproductive Technologies (ART)? Do medical interventions challenge natural processes? With advancements in science, it's becoming possible for male bodies to conceive and give birth. What are your thoughts on this development?

19. Can you share your insights on disparities in reproductive healthcare and access to contraceptives? Who are the most affected?

20. Why are contraceptives discussed, and does their promotion risk encouraging sexual anarchy?

21. Is the textbook's discussion on sex primarily focused on procreation? Why might it omit topics like recreational sex and sexual pleasure?

22. Do you believe the conversation around contraception is overly focused on preventing pregnancy, thereby excluding certain groups?

23. Is there a fundamental similarity between sexual intercourse in homosexual couples and contraceptive-using heterosexual couples?

24. The textbook discusses infertility and attempts to redefine parenthood and family structure. Do you view this direction as progressive, potentially fostering acceptance of individuals with non-conventional sexual interests?

Prompts used for the interviews

- Reproductive Health & Rights: What does reproductive health mean to you? How do you understand the concept of reproductive rights?
- Textbook definition of reproductive health - rights, justice, sexual rights interpretation.
- Emotional, behavioral, social aspects in textbook - WHO guidelines.
- Meaning of "functionally normal reproductive organs" and "normal interactions" in reproduction.
- Defining sexual "deviance" from personal and textbook perspective.
- Sexuality and reproduction linkage in the textbook.
- Biological sexes as basis for sexuality -their views and undertsanding

- Determinants of sex - genitals, hormones, physical aspects discussion.
- Roles of sex-specific hormones - masculinity and femininity.
- Reproduction - evolutionarily adaptive, Is it mandatory for everyone in today's time?
- "Socially designed healthy family, desired size", "reproductively healthy society", responsibilities of "socially responsible societies"- interpretations and thoughts
- Homosexuality/gender identity - genes and hormones viewpoint.
- Age-appropriateness of textbook content on human anatomy, reproductive health.
- Sexual Knowledge of Students
- Student comfort with anatomy and reproductive health chapters - class dynamics.
- Addressing evolving sexuality in teacher training programs.
- Textbook topics - alignment with social norms.
- Textbook endorsement of specific sexual identity, exclusion of others.
- Discussion on non-penetrative sex, sexual practices in textbook - science discipline relevance.
- Role of science in queer community acceptance.
- Science's role in criminalizing LGBTQ.
- Artificial Reproductive Technologies - altering nature's way.
- Asymmetry in reproductive healthcare - disadvantaged groups.
- Contraceptives discussion - leading to "sexual anarchy"?
- Discussion focus on procreation vs. recreational sex, sexual pleasure.
- Contraception discourse - focused on pregnancy, marginalizing groups?
- Homosexual vs. heterosexual intercourse with contraception - similarities.
- Textbook on infertility, redefining parenthood, family - progressive direction for diverse sexual interests acceptance?

Appendix C

Consent Form for Teacher Interview

PARTICIPATION CONSENT FORM

I am **Panchami Jose,** a Ph.D student at Homi Bhabha centre for science education, Mumbai. I invite you to take part in my research study. The purpose of the study is to explore teachers' understanding of students' sexuality and sexual knowledge. This is a part of my larger study which involves exploring different discourses on sexuality in biology classrooms.

The study will require approximately 45min of your time.

Voluntary Participation: Your participation is wholly voluntary. You are free to not answer any question if you do not want to answer. You are free to withdraw from the study at point.

Risks:

To the best of my knowledge, your participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

Benefits:

Taking part in this research study may not benefit you personally, but we may learn new things about the experience of teachers and their knowledge.

Confidentiality:

 a. Whatever you say will be kept confidential. Your name, name of the school and the site of the study will be changed. I may quote your remarks in presentations or articles resulting from this work. A pseudonym will be used to protect your identity.

 b. If you want your name to be revealed in the report or presentations, we request you to give your explicit permission.

 c. We will use the data we collect from you for educational purposes. It will not be shared publicly.

d. Storage of Data: The data will be coded masking all details. It will be password locked. The data will be stored for a duration of three years after the completion of the study.

Consent for Audio-Recording

I would like to audio-record our conversations to make sure that I remember accurately all the information you provide. will keep the tapes in my custody and will be accessed for educational purposes. : I plan to use the audio recordings only for educational purposes and publications (both physical and digital).

If you prefer not to be audio-recorded, I will take notes instead. **I consent / do not consent for audio-recording** (Check the option the participant chooses)

Consent for data dissemination

The data will be/ could be used for Conference presentations, education of future researchers and publications (both physical and digital). **I consent / do not consent** for data dissemination (check the option the participant chooses)

If you have any questions, you are free to ask them now. If you have questions later, you may contact me at

Panchami Jose

PH.D student, HBCSE

panchami@hbcse.tifr.res.in

(Phone number)

I have read the consent form and the research study has been explained to me. I have been given the opportunity of ask questions and my questions have been answered. If I have additional questions, I have been told to whom to contact. I agree to participate in the study. I give my consent for audio / video recording.

Signature of the Participant with date

Appendix D

Consent Form for Classroom Observation

PARTICIPATION CONSENT FORM

I am a research scholar at Homi Bhabha centre for science education, Mumbai. I am conducting a research study on understanding different discourses on sexuality in biology classrooms. More specifically, I am trying to look at how socio-cultural values play inside the class while discussing aspects related to sexuality. As a part of the above study, I wish to observe and audio record lessons on reproduction and sexual health in class 12 (SCERT Kerala- Chapter 3: Human Reproduction, Chapter 4: Reproductive Health). I request your permission to observe your classes based on the above chapters and use the insights from your class in my research study. I assure that the regular school functioning won't be affected because of my presence in the school.

Voluntary Participation: The participation is wholly voluntary. You are free to withdraw from the study at any point.

Risks:

To the best of my knowledge, the participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

Confidentiality:

.   Confidentiality will be maintained by means of using pseudonyms and any information that can help in identifying the participants and the site of the study will be kept confidential.

a.   We will use the data we collect for educational purposes. It will not be shared publicly.

b.   Storage of Data: The data will be coded masking all details. Only the research team would have access to these records. The data obtained during the study would be stored on a secure system for a period of 3 years after which it would be destroyed permanently. These

records will remain confidential and would not be shared to any other party without your permission.

Consent for Audio-Recording

I would like to audio-record the classroom discussions. I plan to use the audio recordings only for educational purposes and publications (both physical and digital).

If you prefer not to be audio-recorded, I will take notes instead.

I consent / do not consent for audio-recording.

Consent for data dissemination

The data will be/ could be used for Conference presentations, education of future researchers and publications (both physical and digital).

I consent / do not consent for data dissemination.

If you have any questions, you are free to ask them now. If you have questions later, you may contact me at **panchami@hbcse.tifr.res.in** *or Prof. Sugra Chunawala at* **sugrachunawala@hbcse.tifr.res.in**.

Sincerely,
Panchami Jose
Ph.D student, HBCSE
(Phone number)

I have read the consent form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the study. I give my consent for audio recording the class for the required duration.

Signature of the Participant with date

Appendix E

Letter to the Principal of the School

To

The Principal, (School address)

I am a research scholar at Homi Bhabha Centre for Science Education, Mumbai. I am conducting a research study on understanding different discourses on sexuality in biology classrooms. More specifically, I am trying to look at how socio-cultural values play inside the class while discussing aspects related to sexuality. As a part of the above study, I wish to observe and audio record lessons on reproduction and sexual health in class 12 (SCERT Kerala- Chapter 3: Human Reproduction, Chapter 4: Reproductive Health). I request your permission to observe zoology classes based on the above chapters and use the insights from the class in my research study. I assure that the regular school functioning won't be affected because of my presence in the school.

Voluntary Participation: The participation is wholly voluntary. The teacher is free to withdraw from the study at any point.

Risks:

To the best of my knowledge, the participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

Confidentiality:

.   Confidentiality will be maintained by means of using pseudonyms and any information that can help in identifying the participants and the site of the study will be kept confidential.

a.   We will use the data we collect for educational purposes. It will not be shared publicly.

b.   Storage of Data: The data will be coded masking all details. Only the research team would have access to these records. The data obtained during the study would be stored on a secure system for a period of 3 years after which it would be destroyed permanently. These

records will remain confidential and would not be shared to any other party without the teachers' permission.

I would like to audio-record the classroom discussions. I plan to use the audio recordings only for educational purposes and publications (both physical and digital). If the teacher prefers not to be audio-recorded, I will take notes instead.

The data will be/ could be used for Conference presentations, education of future researchers and publications (both physical and digital).

If you have questions, you may contact me at **panchami@hbcse.tifr.res.in** *or Prof. Sugra Chunawala at* **sugrachunawala@hbcse.tifr.res.in**.

Sincerely,
Panchami Jose
Ph.D student, HBCSE, TIFR, Mumbai