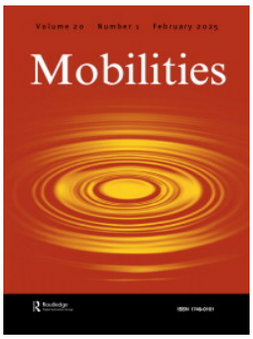

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The affects and emotions of everyday commutes in Kolkata: shaping women's public transport mobility

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ABSTRACT

Public transport inherently involves encounters with other people. For women, negotiating everyday overcrowded, unsafe, and unreliable conditions is a major barrier to accessing public transport mobility that triggers emotions. Using qualitative research methods – in-depth interviews and visual surveys – this study delves beyond understanding the barriers and looks at the affective realm to comprehend how affects and emotions shape accessibility, acceptability, and affordability of public transport for women in Kolkata. The disruptive affects of overcrowded, unsafe, and unreliable conditions produce emotional ordeals, increase travel time and costs, and restrict mobility. The sense of despair that emerges compels women to adjust, accept, and even opt out of overcrowded, unsafe, and unreliable public transport more often than not. This paper argues that affects, emotions, reactions, and consequences are entangled and impact the accessibility, acceptability, and affordability of public transport. The contribution of this paper lies in bringing to the fore the need for feminist inquiries into gendered mobility inequalities and the role of affects and emotions therein.

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Affective atmospheres; emotions; accessibility; acceptability; public transport; India

Affects and emotions, the underlying essentials

> People were rushing to get down, the bus was still running, I fell from the bus and my mother freaked out, 'Why is the conductor rushing people to get down when the bus has not stopped, my daughter fell, what if something had happened?' (Servicewoman, 27 years)

The anxiety, the fear, the frustration – such affects and emotions are a part of women's everyday commutes in Kolkata and a reminder of how lives are constructed and lived through emotions. Public transport and commuting are profoundly gendered, as this study unwraps. In many Global South cities, the lack of reliable and safe public transport, absence of intermodal facilities, and sexual harassment while walking, waiting at bus stops, and traveling in buses and rickshaws, particularly when overcrowded during peak hours and deserted at night, pose serious barriers to women's

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commutes and mobility (Dominguez Gonzalez et al. 2020; Quinones 2020). These barriers trigger undesirable feelings and psychological, physical, and emotional distress (Jirón, Carrasco, and Rebolledo 2020; Malik et al. 2020; Quinones 2020), influencing women's responses to everyday mobility barriers (Chowdhury 2020b; Shaker 2021; Tironi and Palacios 2016). In Iran and Pakistan, most women avoid public transport and are willing to pay up to five times more for door-to-door services to steer clear of overcrowded and unsafe atmospheres (Iqbal, Woodcock, and Osmond 2020; Lak, Aghamolaei, and Myint 2020). The affective atmospheres are inseparable from affects and emotions, arising and enveloping things, people, and places, always constructing and reconstructing, and 'shaping how the world is disclosed' (Anderson 2014, 161). The emotional dimensions of social life are so integral to humans that they cannot be ignored, as (feminist) geographers have increasingly realized (Anderson and Smith 2001; Davidson and Bondi 2004; Sharp 2009).

Increasing attention to affective and emotional geographies that engage with one's experience of place and space in a wide range of domains is encouraging (Bondi 2005; Pile 2010). To some extent, this attention also extends to work on commuting and transport geography; for example, Bissell (2010, 271) argues that 'affective registers of communication whilst traveling on public transport can significantly impact on the journey experience and what passengers can do'. However, much research in transport geography and on commuting, if taking into account emotions at all, still tends to focus on quantitatively measuring concepts such as travel satisfaction, emotional well-being, and subjective well-being and is often focused on the Global North (Ababio-Donkor, Saleh, and Fonzone 2020; De Oña 2021). From such research, it becomes clear that commuting is more stressful than other daily activities due to crowding, congestion, and unpredictability. Travel satisfaction is found to decrease with an increase in travel duration due to higher stress (Chatterjee et al. 2020). A study in China finds that long travel duration significantly decreases emotional well-being due to lower job satisfaction and health (Sun, Lin, and Yin 2021). Lunke (2020) notes that in Oslo, Norway, a shorter waiting time and reliable public transport impart higher travel satisfaction than direct routes, particularly for those undertaking longer commutes. Moving beyond a strict and static view of travel satisfaction and well-being, recent developments in emotional, affective, and sensorial geographies outline the need to specifically focus on people's emotions and affective experiences (Jensen 2012; Shaker 2021; Tironi and Palacios 2016).

Regarding research on gender and transportation, the focus is mostly on infrastructural barriers (Dominguez Gonzalez et al. 2020; Shah et al. 2017; Uteng 2021). There is a need to integrate emotions and affects more strongly in this field to focus on the journey and experiences, not only infrastructural barriers. Where authors do focus on emotions about gendered transport mobility and justice, the focus is often on anxiety and unsafety, e.g., in relation to sexual harassment. For instance, in Mexico, Pakistan, and South America, sexual harassment in public transport and associated persistent anxiety cause long-lasting effects on women's travel behavior and emotional well-being (Hoor-Ul-Ain 2020; Infante-Vargas and Boyer 2021). A study in Spain notes that anticipatory feelings of anxiety about trip conditions trigger negative emotions, and women, particularly younger women, feel less safe inside transport exchanges (Lois, Monzón, and Hernández 2018). Jirón, Carrasco, and Rebolledo (2020) note in their study on understanding the complexity of mobility strategies in Chile how walking or using public transport at late hours in Chile involves emotional stress for women and how their sense of vulnerability makes them avoid going out at night or being accompanied or paying for a taxi (Jirón, Carrasco, and Rebolledo 2020). Mejía-Dorantes & Soto Villagrán (2020) in their study on how women's travel experiences in Mexico City influence their well-being find that the experiences reflect deep inequalities and make commuting a stressful, unpleasant, and unbearable experience. Another study on young women finds that though mobile technology helps them create a personal space amid unknown co-commuters and increases feelings of safety, they still feel helpless as they do not expect support if required from co-commuters (Honkatukia and Svynarenko 2019). Some studies do go into different aspects of safety, e.g., the emotions brought up by infrastructural barriers; for older adults in Canada, navigating streets without sidewalks and boarding and

alighting from buses cause stress, anxiety, and anger (Ravensbergen et al. 2021). Shaker (2021) provides another nuanced, intersectional lens by recounting how public transport for Muslims in Amsterdam is packed with intense encounters and emotions because of the 'othering' they experience as minorities, which is further differentiated by gender.

Much remains to be explored in the Global South to ensure equitable mobility. Understanding how emotions shape travel decisions, and the corporeal and emotional consequences on women is important (Jirón, Carrasco, and Rebolledo 2020). Our research focuses on the predominant affects of women's everyday commutes in Kolkata – overcrowded, unsafe, and unreliable public transport, and how these construct emotions and shape mobility. We focus on overcrowded public transport, which poses significant safety challenges, specifically for women (Dominguez Gonzalez et al. 2020; Iqbal, Woodcock, and Osmond 2020), demonstrating deep intersectional gender inequalities.[1] It triggers sexual harassment inside the buses and while boarding and alighting (Das 2020; Malik et al. 2020; Quinones 2020). We focus on unsafe atmospheres as the discomfort and inconvenience they inflict increase travel time and costs and limit mobility, causing emotional barriers to using public transport, resulting in considerable exclusion from public spaces and activities, perceiving the city to be hostile and a sense of fear of losing their place in public spaces (Das 2020; Iqbal, Woodcock, and Osmond 2020). We focus on unreliable services, as unreliable buses in Kolkata are a major concern (Bose and Pandit 2020).

The contribution of this paper lies in going beyond the barriers and bringing to the fore the affective atmospheres and emotions pertaining to women's experiences of everyday commutes and negotiations, which are crucial for formulating effective policies, strategies, and interventions. Public transport is where people, mostly unknown to each other, travel together in a continually changing environment where affects and emotions, too, get continually constructed and deconstructed. The emotional geography of commuting can capture the gendered nuances of everyday public transport experiences essential for understanding and tackling transport inequalities. Therefore, we aim to open transport studies to feminist inquiries into gendered mobility inequalities and the role of emotions and affect therein. The following sections discuss the concepts of affects and emotions, Kolkata and its public transport, and the methods. The following section illustrates the findings of this study on the affects and emotions of everyday commutes, followed by a discussion of the findings and how the layers of commutes are interwoven. The final section stresses the need for feminist inquiries into gendered mobility inequalities and the role of affects and emotions.

Theoretical framework

Tackling transport inequalities requires understanding the barriers women face while accessing and using public transport, as scholars have time and again noted (Carruthers, Dick, and Saurkar 2005; Uteng 2021) and the affects and emotions of commuting (Jirón, Carrasco, and Rebolledo 2020). Carruthers, Dick, and Saurkar (2005) note that understanding the availability, accessibility, acceptability, and affordability of public transport from user perspectives is critical for an inclusive approach to public transport. Availability indicates routes, timings, and frequency, which, if unreliable, makes it difficult for women to balance their productive and reproductive responsibilities as this study observes how unreliable services disproportionately impact women due to their triple 'burdens'. Accessibility implies the ease with which one can use public transport, and acceptability implies that the transport is acceptable to the user, both challenging in overcrowded and unsafe travel conditions. Affordability denotes the ability of the user to undertake transport activities without significantly inhibiting other important activities.

Affects and emotions, on the other hand, are less tangible. Affective atmospheres are associated with places, though they cannot always be strictly situated or fixed; they are constantly formed and reformed by things, people, and activities (Anderson 2009; Gandy 2017; Shaw 2014), and affects are embodied experiences constructed by encounters and emerge out of the

complex interplay of bodies, in 'being with' others and not necessarily out of conversational practices (Bissell 2010; Gandy 2017). Affective atmospheres and affects are felt and form the background where emotions get constructed (Anderson 2009; Gandy 2017; Shaw 2014). Emotions are expressed as feelings that emerge as responses to one's contact with the people and things around (Anderson and Smith 2001; Bissell 2010; Massey 2005; Sharp 2009). Knowing these responses is crucial for understanding the environment (Anderson and Smith 2001; Davidson and Bondi 2004; Sharp 2009). Rushton et al. (2021) elaborate on how emotional geographies help understand the subjective construction of experiences. Though private by nature, emotions aid in connecting with the public sphere and are greatly influenced by the context. Affective atmospheres, emotions, and reactions are as much a part of transport geography as are the accessibility, acceptability, and affordability of public transport. These concepts are related and integral to mobility, as visualized in the conceptual diagram in Figure 1; our study takes a comprehensive approach to explore the interdependence of these concepts.

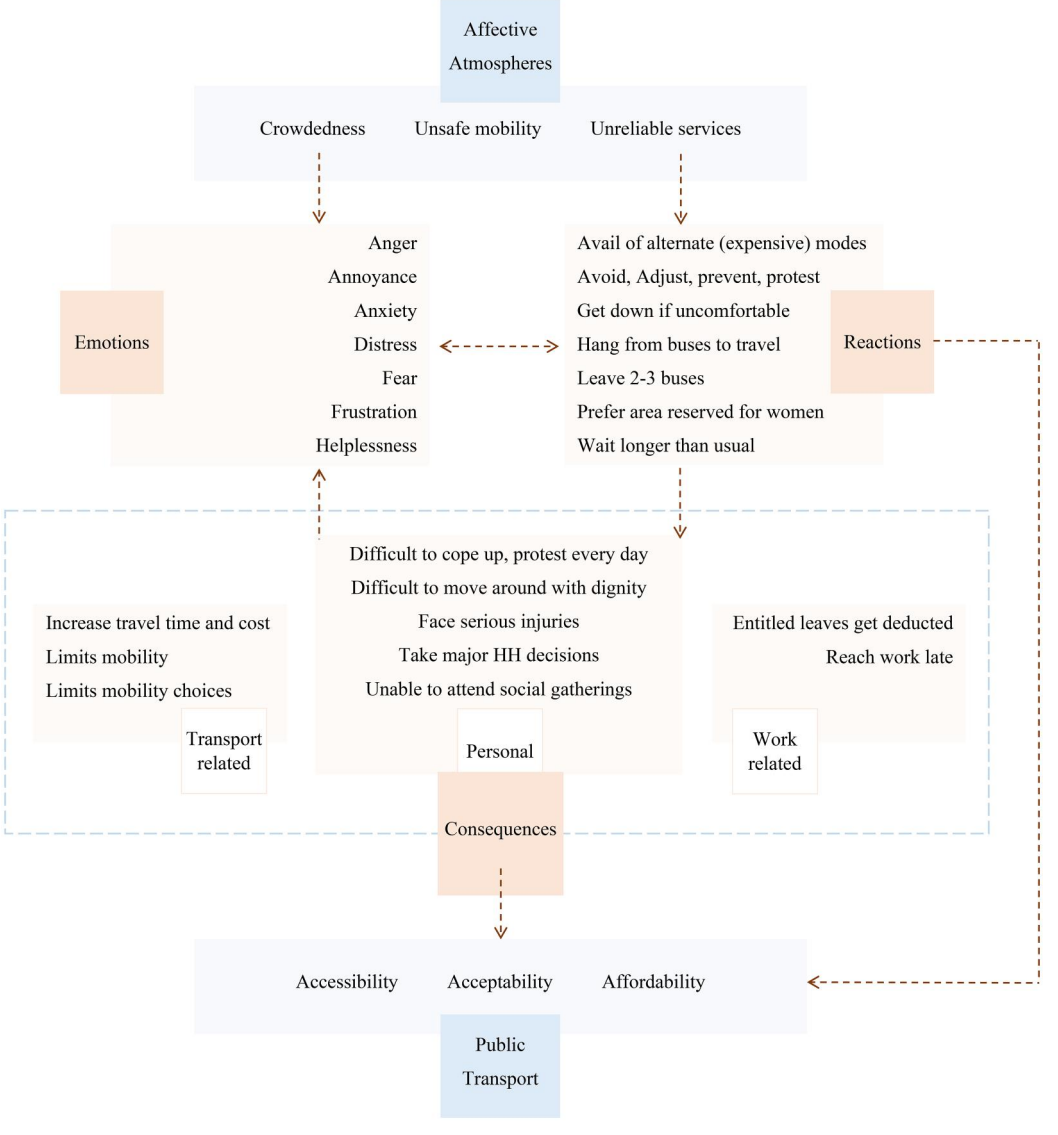

Figure 1. Conceptual diagram showing the linkages between the affective atmospheres, emotions, reactions, and consequences as derived from the women's lived experiences of public transport in Kolkata. *Source:* Authors.

Affects and emotions have increasingly found their way into geographical inquiry and have been applied to diverse topics. For instance, emotions about people, places, and things play an important role in comprehending the possibilities and difficulties associated with the decision to move, a study on migration in Greece notes (Glaveanu and Womersley 2021). A study on disability spaces in New Zealand notes that the affects and emotions of the everyday lives of people with disabilities shaped by spatial lived and felt elements can produce a sense of (not)belonging within disability spaces (Morrison et al. 2020). Experiencing and embodying emotions is felt differently by all as they depend on a range of intrinsic and extrinsic elements, as a study on anxiety in academia and social geographical research finds (Todd 2021). Research on energy transitions has also increasingly included the role of emotions (Martiskainen and Sovacool 2021; Rohse, Day, and Llewellyn 2020). Yet, there seldom are studies that explore how affects and emotions get constructed in overcrowded, unsafe, and unreliable conditions – the most prevalent mobility conditions in Indian metropolises – and shape women's mobility. What happens 'in between' the gendered barriers to public transport, travel decisions, and consequences, i.e., the affective atmospheres, emotions, and reactions that shape them, is often still a black box.

Kolkata

Kolkata is a dense and compact city with nearly 4.5 million people and a meager 6% road space (Registrar General of India 2011; Chakrabartty and Gupta 2015). It struggles with spatial poverty and traffic congestion (Haque, Mehta, and Kumar 2019). It has an elaborate public transport system. While the metro, the buses, and the auto-rickshaws form the backbone of public transport in Kolkata, accessing them is not without concerns. The metro and the buses are overcrowded and unsafe, particularly during peak hours, and the buses have unreliable service, which are major concerns (Bose and Pandit 2020). Studies note that overcrowded and unsafe conditions have a higher impact on women than men and that women face discomfort while negotiating the overcrowded streets and public transport of Kolkata (Basu 2021; Bhatt, Menon, and Khan 2015; Sen, Chakraborty, and Banerjee 2021). The fear of harassment due to the invasion of personal space is high among women in overcrowded spaces as, most often, it takes place in overcrowded conditions. Women wait to access less crowded public transport to avoid harassment, even if it means traveling less frequently (Roy and Bailey 2021; Shah et al. 2017). Though most streets of Kolkata house activities throughout the day, they are highly contested. Men are more present in public spaces throughout the day, moving, sitting, chatting, and waiting. In contrast, women are perceived to be only moving, restricted by purpose and time of the day, as visual surveys conducted as part of this study also note (Bhattacharyya 2016). North Kolkata, the older part of the city, is characterized mainly by narrow and irregular lanes where walking is the most viable option, and south Kolkata, which developed primarily post-independence, has larger extents of planned streets and blocks (Mukherjee 2012; Shaw 2012). Kolkata, which once housed mostly joint families, is now characterized by nuclear families, comprising parents, children, and often grandparents, as observed in the case of some participants (Chakraborty, Sharma, and Kumar Abhay 2022; Roy, Pramanick, and Adhikari 2022)

Most mobility studies in Kolkata are quantitative and focus on the efficiency of public transport and walkability (Bose and Pandit 2020; Dandapat and Maitra 2020), and seldom on the lived experiences and qualitative approaches to understanding barriers, affects, and emotions. The need for contextual studies to capture the heterogeneity of lived experiences is recognized. As Bissell (2014) remarks, contextual studies that note the barriers that prevent gender from being embodied in urban transport are important. Given the context of Kolkata, we look at the barriers to women's mobility in overcrowded, unsafe, and unreliable atmospheres and the affects and emotions that erupt therein. These affective atmospheres form the background where emotions and experiences of everyday commutes are constructed and deconstructed. In this study, women

are mostly from lower middle- and middle-income households who rely on public transport. Women from high-income households mostly use ride-hailing services and private motorized vehicles (Ghosh and Schot 2019). Unlike the *bhadramahilas* (the middle-class and upper-caste women of Kolkata as per the regional construct of Bengali femininity), whose femininity is linked to domesticity, the participants of this study venture out though not necessarily because of the 'failure of masculinity' (Chowdhury 2020a, 12). The participants may not ascribe to the identity of *bhadramahilas* directly, but like the *bhadramahilas* witness the exhibition of patriarchal power in public spaces, a reflection of masculinity at home that restricts their access to public spaces (Chowdhury 2020a).

The approach

In line with the knowledge gap and the research objective, this study used qualitative research methods, as affects and emotions are difficult to capture with quantitative methods (Cascajo et al. 2019). The affects and emotions depend on how an individual is affected (Ahmed 2012). Such experiences cannot be generalized and certainly not homogenized. Qualitative studies are therefore indispensable to capture the diverse lived experiences of commuting to understand the barriers faced and the affects and emotions they bring forth. In-depth interviews were conducted to best capture participants' lived experiences and perceptions of barriers, affects and emotions. Visual surveys were also conducted to understand the affective atmospheres and contextualize the narratives of the participants. The data was collected from December 2021 to March 2022 following necessary ethical approval and pertaining to lived experiences throughout the day.

Thirty-eight in-depth interviews were conducted. During the interviews, the participants narrated their personal experiences on barriers, affects, and emotions and how negotiating the same shaped their accessibility, acceptability, and affordability of public transport. The interviews were conducted until data saturation was reached. Following Hennink, Kaiser, and Marconi (2017), data saturation was influenced by the purpose of the study and the need for thick descriptions. Semi-structured interview guides based on the research objectives were used. The topics covered transport mobility barriers, how the barriers shaped the affective atmospheres, and how the participants coped with such situations. The reactions, consequences, and emotions that emerged therein were also noted. The objective was to note the experiential uniqueness of the participants (Cascajo et al. 2019). The interviews were conducted in the participants' native language for about 60–90 min, primarily online, using MS Teams, Zoom, or Google Meet due to the ongoing COVID-19 epidemic in India. Studies note online interviews as an acceptable alternative to face-to-face interviews (Lobe, Morgan, and Hoffman 2022; Opara, Spangsdorf, and Ryan 2023). The online platform enabled reaching out to the participants throughout the city and was the preferred mode of the participants due to the ongoing pandemic. Participation in the study was voluntary. All participants provided their informed consent.

Participants for this study were selected based on their gender, age, residential location, and use of public transport within the city of Kolkata. The study was limited to women 18 years and above. The participants were between 18 and 61 years of age. They included students, teachers, engineers, social workers, nurses, saleswomen, advocates, homemakers, and others who used public transport regularly to traverse various parts of the city for mostly essential work such as going to workplaces, educational institutions, and household chores, using various modes of transport at different times of the day, making their lived experiences and narrations exhaustive. The participants were selected from residential locations across the city, both near and far from the metro line, as we see in Figure 2. Being brought up in Kolkata and having traversed most streets and used all modes of transport in Kolkata helped the interviewer (first author) connect with the participants across age groups, comprehend their views, and contextualize their narratives. Purposive sampling was used for this study where the participants were selected based on

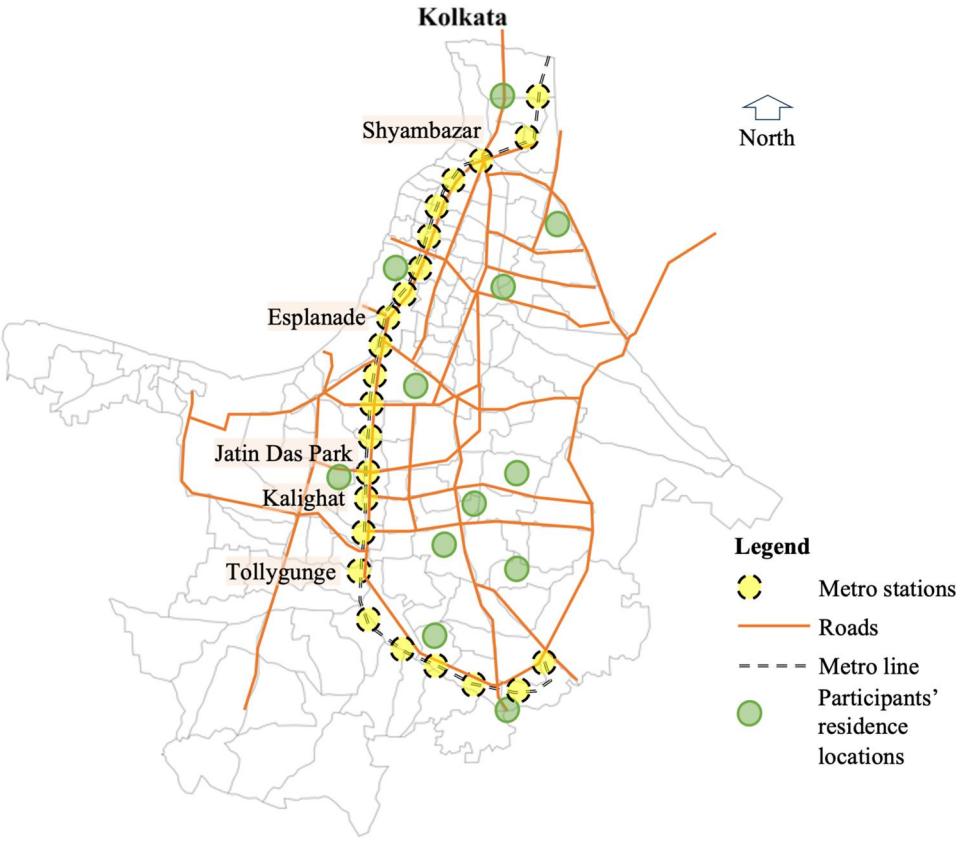

Figure 2. Map of Kolkata showing the residential location of the participants. *Source*: Authors.

the study purpose (Saunders and Townsend 2018). Initially, a few participants were recruited through direct acquaintances, and the remaining participants through snowball technique. The interviews were transcribed and identifying features were taken out. After the transcriptions were complete, data analysis was done following Saldaña (2015) in two cycles. In the first cycle, we looked at the text data closely to understand the identifying patterns – similarities, dissimilarities, causations, etc. We coded the data based on the patterns using Atlas.ti. As part of the descriptive analysis, we remained close to the text data while identifying these patterns. In the second cycle, we categorized the codes into families based on the research questions (Moser and Korstjens 2018).

Affective atmospheres are associated with places (Anderson 2009; Gandy 2017). Visual surveys were conducted around five major metro stations in Kolkata: *Tollygunge, Kalighat, Jatin Das Park, Esplanade, and Shyambazar,* to understand the spatial context and the affective atmospheres. Visual surveys help us understand the relevance of the physical context (Barbour 2014; Sanoff 1991). In line with the research objective, the visual surveys captured the spatial context at the metro stations, bus stops, paratransit stops, and the mobility behavior of women therein through observation and field notes. The data collected through visual surveys were used to contextualize participants' narratives while developing the thick descriptions.

The affects and emotions of everyday commute

What emerges from the empirical data in Kolkata is that overcrowded and unsafe public transport environments and unreliable services are the predominant barriers to women's mobility that

generate a range of affects and emotions, prompting women to react in specific ways and to endure the short- and long-term consequences. In this paper, the term overcrowded is used to imply too many people to allow movement or stand without touching another person, unreliable to imply not dependable, and unsafe to imply can cause harm or danger. As depicted in Figure 1, in the backdrop of the ordeals of women's everyday commutes in Kolkata, in the following subsections, we look at the affects and emotions that emerge, the reactions they choose, and the consequences they face that shape their accessibility, acceptability, and consequently affordability of public transport. Emotions are strongly tied to affects and play out at an individual level and are felt differently by all, as Ahmed (2012) and Todd (2021) note. We move beyond the static view of barriers and delve into the affects and emotions of commutes that studies note there is a need for (Shaker 2021; Tironi and Palacios 2016). The narratives and understanding are constructed upon the lived experiences of women accessing and using public transport in Kolkata. The narratives mostly portray the complex, arduous, and frustrating commutes that women go through every day. As Bissell (2010) notes, the fatiguing effects of everyday commutes disable the ability to experience more positive effects. The gendered nature of overcrowded, unsafe, and unreliable public transport makes it important to understand the affects, emotions, reactions, and consequences to formulate meaningful planning policies and design interventions.

Overcrowdedness – the perennial fear

Most participants if not all narrate that affective atmospheres in overcrowded streets and public transport trigger apprehension, particularly with respect to sexual harassment due to the presence of unknown men and the absence of personal space. The experiences of bodily contact while being with others in overcrowded spaces, pushing way through the crowd at the gates to board or alight, and standing in a moving bus or metro hoping for a seat to become empty, generate barging, pushing, and fighting while accessing public transport in Kolkata. The emotions that emerge from these 'small acts of violence' as Bissell terms them (2010, 278) are primarily frustration, dissatisfaction, and anger. On average, most participants leave 2–3 overcrowded buses during peak hours as they are unable to board as narratives and visual surveys note. They wait for relatively less crowded ones, which often take longer or sometimes board them with great difficulty, only to regret their decision later. This results in reaching workplaces late, deduction of entitled leaves, and absolute annoyance. Some participants use alternate modes such as the metro or taxis in case they are unable to board a bus or decide not to wait longer. Either way, it increases their travel time and travel costs. The reactions and resulting consequences to avoid undesirable affects and emotions that erupt while being with others in overcrowded spaces either become a habit or they learn to negotiate over time, participants note. A homemaker who travels to nearby places to take tuition and further to her parent's home narrates her frustration while waiting for a less crowded bus.

> There was so much crowd that I was not able to get on the bus, so I had to wait for an empty bus, but when it did not come after a long time, I took a taxi; it got delayed even more. (Homemaker, 48 years)

She feels scared even to think of getting into an overcrowded mode. Her emotional response to overcrowded conditions is fear as she recalls previous incidents when she was unable to push her way through overcrowded buses and had to stand on the footboard. The fear of falling from the footboard is real until she is able to weave, push through, and go inside where she feels safe momentarily before the fear of harassment because of bodily contact with unknown men seeps in. The continual construction and deconstruction of affects and emotions are an everyday ordeal for women while accessing public transport. In Kolkata, boarding an overcrowded metro is equally frightening though in a metro once they reach the area reserved for women, the disruptive affects and emotions subside. Participants feel safer there in the absence of bodily

contact with unknown men and can stand without fear of harassment despite the crowd. Participants recall how overcrowded conditions force them to hang from buses and travel if they cannot afford to reach their workplaces late or use more expensive modes like taxis. The physical structure and strength of women being different from that of men, to hang and travel puts them at a greater risk of accidents besides emotionally wrecking them from fear of falling. A young participant from a low-income household, a key earning member in her family, who travels a long distance every day despite the immeasurable difficulties in overcrowded conditions, recalls her frustration and agony,

> Every day going to the office if you have to hang from the bus and go, it creates a lot of mental pressure. It is frustrating that we have to hang from the buses, and forget we can sit; even at 7 pm, we had to hang from the buses and come back … .Even if I do not want to, I have to take the bus and travel for two hours. (Servicewoman, 25 years)

Some participants prefer to call in late rather than travel in conditions where they cannot even stand. This anxiety also prevents participants, particularly from low-income households, from undertaking non-work trips under overcrowded conditions. It prevents them from attending social and family gatherings, which they find distressing and frustrating. The mere recollection of the affects of overcrowded conditions and the emotions that erupt make participants reluctant to or even avoid going out of their homes unless absolutely required. A participant recalls her mother postponing visiting relatives' places,

> Unless extremely essential, my mom says 'Who will again catch the bus'. Relatives' places are mostly ignored, and postponed as long as they can be postponed. (Servicewoman, 30 years)

Those who are able to afford higher fares and hope to travel in comfortable and less crowded conditions huddle for government buses introduced under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) that offer comfort and better reliability at a premium fare (Basu 2019; Ghosh and Schot 2019) wherever and whenever available. One participant recalls the affective atmospheres being calmer when accessing and traveling in those government buses as most commuters therein are engaged in white-collar jobs and feel the obligation to be professional. As noted by Bissell (2010), a disciplined affective atmosphere activates commuters to behave in ways that comply with a certain range of performances.

One participant who resides further from the metro corridor and for whom buses are more accessible narrates the temporary bubble of comfort she and other daily commuters used to create through mutual adjustment of seats that outdid the negative affects of overcrowded conditions thus reconstructing their affective atmospheres. As only a few seats are reserved for women in buses, whenever possible, they used to sit on the four-seater next to the driver as that space remains less crowded. To the participant, that space seemed like a refuge amidst all the commotions in the rest of the bus, making her feel that the 'hassle of commuting was not anything beyond the bus journey' (Servicewoman, 52 years).

Unsafe mobility – a flurry of emotions

Sexual harassment is encountered by women in all modes. Though most women are aware it is difficult to maintain personal space in overcrowded buses and metro in Kolkata, the sense of discomfort still prevails, and when incidents occur, they feel ashamed, embarrassed, disgusted, angry, and afraid. This flurry of emotions causes them distress. The affects of men in close proximity, the dire efforts of women to move away from bodily contact with men, struggling to maintain balance amidst the rash driving of buses, vocal and silent communications with the harasser to refrain from unacceptable behavior, the loud words of the conductor sometimes to the harasser 'stand away, why are you standing near the ladies seat', and sometimes to the women passengers 'these things happen, accept it' are some of the microelements of travel in

public transport of Kolkata that cause the emergence of fear and restlessness, participants note. As Fisher (2002, 15) notes, 'we are overwhelmed by something outside ourselves or by something that we believe may damage or destroy us'. It causes participants to coil and stand, avoid walking alone at night, and walk on well-lit busy roads as otherwise they feel unsafe, as visual surveys also note. They learn to protect themselves by negotiating such conditions over time, and also raise their voices if need be, most participants assert.

The reactions to sexual harassment vary. While some find it difficult to bear, some are able to cope with it. While some protest, some are quiet by nature and do not speak up despite recognizing the need to do so. Some feel they have to adjust as they cannot afford to take a taxi to avoid overcrowded and unsafe conditions. Irrespective of the way participants choose to react, the affective atmosphere drastically changes for women when harassed. Besides, the annoyance of protesting every day, and the annoyance of getting into arguments further disrupts the already unpleasant affective atmospheres and compels them to adjust. Most if not all participants try to make their travel duration as brief as possible as travel is deemed as an undesirable activity for them. They feel angry and helpless as they struggle to continue with their journey. 'It affects me mentally when you are molested', notes a 25-year-old Ph.D. scholar. For some, the negative emotions associated with being in affective atmospheres that are unsafe persist long after they have alighted from the public transport, while for some, emotions are more regulated and are able to carry on with the remaining day. Another participant narrates she becomes defensive in the presence of many unknown men due to prior experiences. As Highmore notes negative emotions 'poke holes in the smooth surface of the present; they do so by insistently invoking' (Highmore 2004, 325). The participant further explains it is the discomfort that makes her feel stiff and react strongly. She confronts. She directly asks the person what he is looking at. She feels acting defensively is a woman's way of exhibiting strength and avoiding harassment.

Auto-rickshaws, the most widely used four-seater paratransit in Kolkata, are not safe either. Most participants narrate in disgust the harassment faced while traveling in auto-rickshaws from co-commuters, even from drivers. The affective atmospheres in auto-rickshaws is so contained that women are unable to move away unlike in buses and the metro. Also, they find it difficult to protest as they feel no one will believe them as such atrocities are usually not visible to others. Consequently, they find it easier to disown and step away from such environments. They get out of the auto-rickshaws whenever they feel unsafe and take another one, at the expense of time and cost. A young participant from a middle-income household of five who started working at the age of 22 to support her family, and travels in unsafe conditions in overcrowded buses every day, narrates that she too desires to travel comfortably but cannot due to the lack of affordability and hence is forced to endure the discomfort and unsafe conditions in public transport.

> We are middle class, we have to adjust a bit. Otherwise, I have to avoid public transport and use private transport. (Servicewoman and e-commerce agent, 28 years)

The other dimension of unsafe mobility that women encounter is the heavy, mixed, and unruly traffic especially while boarding or alighting from buses often in the middle of the roads while already negotiating overcrowded conditions. The affective atmosphere therein is that of chaos. A young participant who depends heavily on auto-rickshaws for travel to work narrates,

> After getting down from one auto in *Ultadanga*, in that busy area, immediately have to get on a running auto to go to the metro station. Getting onto a running auto amidst bikes, autos, cycles, and people, I get puzzled, I feel scared, nobody spares anybody (Teacher, 25 years).

Women dread boarding and alighting from buses as the buses halt neither completely nor at the bus stops. In other South Asian countries as well, it is observed that women are expected to alight from buses even before they come to a complete halt (Iqbal, Woodcock, and Osmond 2020; Tennakoon et al. 2020). These affects aggravate with continuous reminders from the bus conductors to alight when buses are still moving, erupting emotions, making them feel even

more unsafe and disarrayed. Even getting on buses trying to slow down, not halting completely, is almost impossible for women due to the panic of falling. Participants faced serious injuries while boarding and alighting, particularly with saree, a local attire that middle-aged to older women frequently wear in Kolkata. These ordeals greatly worry their families too.

Unreliable services – the everyday chaos

Dual responsibility for women in general is undisputed in many countries including in the Global South (Le et al. 2020; Shah et al. 2017). Kolkata is no exception. Participants irrespective of their age and marital status can have considerable responsibility at home besides at work. One participant, 25 years old who recently lost her mother and has two younger brothers, has taken up the grave responsibility of her brothers' education for which she has to toil. Another participant, 38 years old, whose mother-in-law is chronically ill, whose husband has non-standard working hours and most times is out of Kolkata, has a 10-year-old daughter, and works at a large private sector company, has her day scheduled by the minute on weekdays. Another participant, 49 years old, runs a business for which she has to travel to different locations in the city while orchestrating her time with that of her daughter for more than a decade. It is in these contexts, when being on time and orchestrating activities with others are critical, that unreliable services particularly of the buses pose major barriers to these and other participants facing their challenges pertaining to dual responsibilities. The lack of a gendered approach to equitable mobility can and does have far-reaching consequences for women. Buses do not follow schedule or ply on time, especially during off-peak hours and at night. As a participant points out,

> If it has a certainty, it is okay, if it is uncertain then it is a problem, I do not know when it will come (Student, 30 years).

There is no guarantee when the next bus will come. When buses do not arrive even after a long wait, participants are forced to either take a taxi or break their journey using auto-rickshaws thus increasing the transport cost. If they cannot afford higher transport costs, they continue to wait for close to an hour as visual surveys note. The affects of unreliable services cause a sense of chaos in the minds of women who constantly weigh between waiting for a bus for an uncertain period to save money and using a taxi to attend to productive and reproductive commitments. As participants note, taxi fares being much higher than buses or the metro, it is impossible to use taxis regularly. A 50-rupee trip by bus can easily cost at least 500 Rupees in a taxi.

One participant narrates that the unreliable service of auto-rickshaws during peak evening hours is such that she rarely reaches home on time. The affects that emerge when she is unable to get into an auto-rickshaw to reach home before the caregiver of her daughter leaves after duty hours is nothing but immense anxiety and a sense of helplessness. The pressure of reaching home before the caregiver leaves is so high that she decided to move closer to her mother's place so that she knows her daughter will be safe even if she arrives late. This very thought calms her emotions. The affects of everyday uncertainty that gets constructed for working mothers due to the lack of reliable public transport and the emotions and guilt that run through their minds for not being able to reach home on time or do enough for their families are strong. One participant, whose office is about 10 kilometers from home, recalls how she was unable to render duties towards her parents-in-law. It is worth noting here that in Kolkata, a 10-kilometre distance can easily take up to one to two hours or more depending on the availability, accessibility, acceptability, and affordability of public transport.

> Could not even reach home on time, household work was affected, and my in-laws were there, I surely had a duty towards them, but I couldn't do much. The more time I spend outside, the less I spend at home. They wanted me but I couldn't give them time. (Servicewomen, 59 years)

Participants also narrate tales of their anger when buses ply either very slowly or very fast which yet again disrupts their travel and productive or reproductive commitments. The affective atmosphere that emerges is that of anxiety, annoyance, and frustration, more so when it is about reaching destinations on time for commitments that cannot be postponed. The environment turns chaotic with commuters' commotion. This erratic plying of buses implies reaching destinations late on some days. As one participant recounts that a bus that takes her to school in 40 minutes on one day, the same bus takes an hour the next day. For her, keeping an extra 20 minutes at hand in the mornings is difficult, so it is for other participants, particularly those with greater household responsibilities. Such uncertainties yet again cause women to opt for the metro or government buses more often.

The interwoven layers of commute

In this paper, our contribution lies in bringing forth the gendered nature of commuting using public transport in Kolkata, where we discuss not only the barriers to mobility for women but also the affects that emerge and the emotions that transpire. We realize affects and emotions cannot be read in isolation to reactions and consequences as we see in Figure 1. The nexus is such that the affects and emotions directly shape the accessibility, acceptability, and affordability of public transport and vice-versa. There is limited literature on women's mobility barriers in the Global South that explores this nexus. Our study contributes to this knowledge gap by exploring the affects and emotions that are integral to women's travel experiences and how the same shapes accessibility, acceptability, and affordability of public transport. It calls for the attention of urban planners and policymakers to plan and implement transport interventions meaningfully with respect to integrated intermodal inclusive and safe transport, active transport, route coverage and frequency, and level of service. Women being important actors in achieving sustainable development goals, policies that encourage stakeholder participation, societal awareness, engagement, and empowerment can be explored.

The tangibles

In Kolkata, the gendered nature of overcrowded, unsafe, and unreliable public transport poses serious concerns for women's mobility, as is observed in other cities in the Global South as well (Dominguez Gonzalez et al. 2020; Iqbal, Woodcock, and Osmond 2020). What surfaces repeatedly from the narratives of the lived experiences of women in Kolkata is primarily the fear and anxiety associated with accessing public transport due to overcrowded and unsafe conditions. What also appears gendered in the context of Kolkata is the unreliable public transport that poses challenges for women as they strive to balance their productive and reproductive responsibilities.

Women avoid overcrowded and unsafe conditions even if it means leaving 2-3 buses or metro and waiting longer or availing of alternative expensive modes, avoid going out, avoid standing in areas not reserved for women, and avoid continuing to travel in uncomfortable situations in auto-rickshaws. Avoidance is one of the most common responses to women's daily negotiations around commuting in Kolkata due to a sense of helplessness as Jirón, Carrasco, and Rebolledo (2020) also note in their study in Chile. Women also face hazardous situations and injuries during boarding and alighting overcrowded transport with older adults suffering more. As a consequence, women, as the narratives elaborate, often compromise on social gatherings, and some even change their residential locations to balance their productive and reproductive commitments. Furthermore, particularly older and low-income women cannot access acceptable and affordable public transport of their choice to undertake day-to-day activities. The affective atmospheres of everyday commutes are of significance as they shape women's mobility and their right to the city (Beebeejaun 2017).

The intangibles

The findings, mostly negative in the case of Kolkata as it emerges, align with the current literature, which states that commuters rarely encounter joy in daily commuting as the exhausting nature of the commute prevents people from registering experiences positively (Bissell 2010; Shaker 2021). We add to this literature a more in-depth gendered analysis, which shows that, particularly for women, public transport mobility is often an emotionally draining, frustrating, and exhausting experience due to the gender inequalities evident in Kolkata.

The affects of overcrowded, unsafe, and unreliable public transport largely bring about emotions of fear, anxiety, annoyance, and frustration amongst women during their daily commutes in Kolkata. We have shown how uncertainty and a profound sense of chaos affect women as they regularly face double or triple 'burdens' or responsibilities. Adding to the important work done on emotions and affective atmospheres in public transport (Bissell 2010; Shaker 2021; Tironi and Palacios 2016) and the gender inequalities therein (Hoor-Ul-Ain 2020; Infante-Vargas and Boyer 2021; Jirón, Carrasco, and Rebolledo 2020), our research suggests a need to take into account the nuanced temporal variations and changes in affects and emotions, and distinguishing between short-term behavioural responses and long-term consequences. Emotions are so ingrained in everyday commutes that they cannot be disregarded.

Being with others in Kolkata's overcrowded public transport is uncomfortable at the very minimum; yet over time, such affects and emotions – the discomfort, the frustration, the fear – get internalized and normalized along with the gender inequalities they arise from (Lubitow, Abelson, and Carpenter 2020). Most times, women tend to adjust and accept the disruptive affects of daily commutes as they feel speaking up will not help, and protesting every day can be annoying and disrupt the affects further. It is their sense of despair and belief that the affects of daily commutes are unlikely to improve that pushes women to adjust and accept such situations. Women's voices and experiences are seldom heard, thus causing a disparity between what women experience and urban planners envision. Current literature also notes that the gendered dimension is seldom the focus of urban planning (Beebeejaun 2017; Peake 2020).

… and the nexus

Affects, emotions, and sensorial experiences add deeper layers of understanding to women's everyday public transport commuting experiences and negotiations beyond analyzing barriers and decision-making in strictly rational ways (Jensen 2012; Shaker 2021; 2021; Tironi and Palacios 2016). They are key to better understanding women's barriers, daily decisions, and the broader consequences of these daily negotiations for gender inequality (Hoor-Ul-Ain 2020; Infante-Vargas and Boyer 2021; Jirón, Carrasco, and Rebolledo 2020). This study notes that women find it difficult to cope with overcrowded, unsafe, and unreliable conditions as they hinder mobility by choice and result in anger, anxiety, disappointment, distress, frustration, and a sense of helplessness. While on the one hand, the barriers and their affective atmospheres trigger emotions, on the other hand, the way women (are compelled to) react to such emotions leads to transport- personal- and work-related consequences, which in turn shape women's accessibility, acceptability, and affordability of public transport. As we see in Figure 1, women's reactions to their affects and emotions either increase their travel time and costs as they are unable to avail themselves of overcrowded and unsafe public transport or increase the risk of travel by hanging out of crowded buses or negotiating the unsafe spaces in buses and the metro the hard way just to reach their workplace or undertake important commitments on time to avoid the anxiety and embarrassment of being late now and then. Our research shows the nuanced temporal variations and changes in affects and emotions and how they trigger short-term behavioural responses and shape long-term consequences in terms of gender inequality; this adds important layers to the literature on gendered transport inequalities and barriers (Iqbal, Woodcock, and Osmond 2020; Uteng 2021).

Focusing on the affective aspects of travel is also important in and by itself, as it adds a corporeal sense of physical discomfort and emotional response that should be taken into account in transport geography. The plethora of emotions associated with barriers and their affects is constructed, negotiated, and deconstructed every day. Even when they know what to expect as they step out of their homes, even when they have learned to negotiate the barriers, the affects and emotions that arise are not discounted; they must live them all over again. As lives are constructed through emotions, we must pay attention to the affects and emotions that drive one's reactions and the consequences of the same to one's accessibility, acceptability, and affordability of public transport.

A focus on emotion and affective atmospheres also allows us to observe better the micro level of commuting behavior, e.g., micro actions of mutual collective support such as women together creating 'refuges/bubbles of comfort' (see also Bissell 2010), but also the micro-aggressions that evidence everyday inequalities and othering (Shaker 2021).

Keynotes and the way forward

The *fear* of falling from overcrowded buses compels women to avoid buses, the *agony* of sexual harassment compels women to get out of autos midway through their trip, and the *frustration* of an uncertain schedule compels women to miss social engagements. These are only some emotional ordeals women in Kolkata encounter that influence their travel family- and work-related decisions. This study narrates how affects and emotions integral to women's mobility are situated 'in between' barriers and reactions and how they emerge and influence decisions, including the accessibility, acceptability, and affordability of public transport. We have shown how a profound sense of daily chaos and uncertainty particularly affects women, as they regularly face double or triple 'burdens' that influence decisions, such as modes to choose, routes to take, whether or not to break a journey, or whether to prioritize travel time or travel costs. They not only trigger short-term responses but also shape long-term consequences. A trip involves not only moving from one place to another but also constructing and deconstructing emotions in 'being with others', which are integral to a trip.

Adding to the important work done on affective atmospheres and emotions in public transport (Bissell 2010; Shaker 2021) and gender inequalities (Infante-Vargas and Boyer 2021; Jirón, Carrasco, and Rebolledo 2020), we find that affects, emotions, reactions and consequences are entangled processes that shape the accessibility, acceptability, and affordability of women's transport mobility. The significance of this study is that we add layers to the literature on gendered transport inequalities (Iqbal, Woodcock, and Osmond 2020; Uteng 2021), apart from providing contextual nuances in a field with relatively little research from global South contexts. We further feminist inquiries on gendered mobility by moving beyond analyzing barriers and decision-making in strictly rational ways and capturing the crucial layers of affects and emotions through women's lived experiences of everyday commutes. We argue that mobility studies need to pay more attention to feminist inquiries into gendered mobility inequalities, the role of affects and emotions, the nuanced temporal variations and changes in affects and emotions, and how they trigger short-term responses and shape long-term consequences. For women in Kolkata, the disruptive affects of overcrowded, unsafe, and unreliable conditions, and consequently the emotional ordeals, are heavy. Yet over time, the affects and emotions get internalized and normalized, though women do not become accustomed to them. They go through and relive them every day.

Affects and emotions lie 'in between' barriers and consequences and are crucial for formulating comprehensive transport policies. However, policies alone cannot bring about a sea change. It would also require awareness and co-creation of design interventions to bring a paradigm shift in how we approach urban planning. The increasing acknowledgment that qualitative aspects

such as affects and emotions are decisive elements is a positive sign in an otherwise quantity-heavy domain. Further studies on intersectional analysis concerning social class, age, religion, and geographical location including peri-urban areas may add to the nuances of women's lived experiences in Kolkata. Also, a more explicit exploration of the positive affects and emotions of daily commuting, however limited they might be, may result in a more in-depth understanding.

Note

1. We recognize that overcrowded spaces are not necessarily always barriers and that sparsely occupied urban spaces can also threaten women (Chowdhury, 2023). However, our focus emerged inductively from Kolkata's women's experiences. Similarly, it is important to recognize the conversations, connections, and sociability that erupt in public transport and that have the potential to nurture positive affects and emotions (Chowdhury 2021; Sträuli 2023). Nevertheless, our case and findings lean more towards the problematic side of overcrowded, unsafe, and unreliable public transport in Kolkata.

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Author contributions

Sanghamitra Roy: Conceptualization; data curation; formal analysis; funding acquisition; investigation; methodology; project administration; resources; software; supervision; roles/writing – original draft; writing – review and editing. Ajay Bailey: Conceptualization; data curation; formal analysis; funding acquisition; methodology; resources; software; supervision; writing – review and editing. Femke van Noorloos: Conceptualization; data curation; formal analysis; methodology; resources; software; supervision; writing – review and editing.

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