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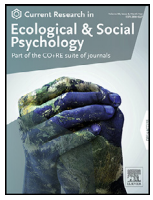

Bleeding cultures a cross-cultural exploration into the behavioral outcomes of tight and loose cultural contact zones

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ABSTRACT

In the era of increasing global interconnectedness and decreasing cultural insularity, investigating how individuals navigate conflicting cultural norms and behavioral choices is increasingly important. This paper focuses on the impact of the contact between religiously tight cultures and industrialized, liberalized loose cultures on menstruation-related practices and traditions. In-depth interviews conducted in Jerusalem and Mumbai revealed that the nature of contact between these two conflicting ecologies impacted which traditions are adopted and how they are molded. Diffused contact, as was witnessed in Jerusalem, leads to more hybridized behaviors, and religious and non-religious practices are performed simultaneously. Whereas a more concentrated contact, as was seen in Mumbai, leads to the performance of religious norms only in situations where figures of authority can issue sanctions. Moreover, it was also found that individuals used considerable self-reflection to decide how and which practices to adopt. These findings imply that individuals are agentic operators, and that they exert considerable influence on their environment and how they adopt the cultural norms that surround them. This paper leaves scope for further research on the nature of cultural contact zones and the role of self-reflection in the collaborative co-construction of cultural norms. This paper also hopes to provide insight towards helping resolve intra-group conflict.

1. Introduction

Uz (2015) argues that there are a few morally debated cultural domains that see a strong polarization between liberal and religious conservative ideologies. Namely, "prostitution, abortion, divorce, euthanasia, and suicide" (p. 326). This is because religion creates strong social norms and codes of conduct, especially for these areas of morality that find opposition within many liberal societies. How and which norms do people learn when they are exposed to both sides of the moral conundrum?

These opposing cultural spaces can also be analysed using the cultural tightness and looseness (CTL) framework, which was put forth by Pelto (1968). According to Pelto, cultures can be characterized by their degree of tightness (Uz, 2015). Tight cultures are homogenous and norm-abiding in nature, whereas loose cultures are heterogenous and permissive of norm-deviance (Triandis, 1989). Religion is often a precursor to cultural tightness, whereas cultural looseness finds its roots in urbanization and industrialization.

Despite the tendency to describe whole countries or societies as tight or loose, cultures are not uniform. Different domains of society, as described by Uz (2015) above, will display different levels of tightness or looseness. With the growing influence of global economic and cultural forces, there is a rise in cultural diversity and interpersonal differences, along with a marked demise in uniform socio-cultural normative systems (Bandura, 1999; Ladegaard, 2018). Different or 'opposing' cultures now exist in close relations with each other (Hermans and Kempen, 1998).

Referring to the framework of tight and loose cultures, religious norms are increasingly coming into close contact with conflicting practices in urban loose cultures. Given this, there is a growing need to investigate the psychological implications of cultural 'contact zones' (Hermans and Kempen, 1998), specifically how people learn from and adapt to competing normative systems and how this might contribute to cultural change.

One such cultural domain of conflict is menstruation, which many religions consider to be a state of impurity. As such, there are strict religious dictates for menstruators to prevent this spread of impurity by socially distancing or isolating themselves (Bhartiya, 2013). This stigma around menstruation is often actively shunned in urban loose societies that often actively propagate the normalization of various behaviours

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during menstruation. What then happens to these religious practices about menstruation, when individuals in religious-tight cultures come into contact with the diverse norms present in loose cultures?

This study aimed to understand how religious traditions around menstruation are understood and how people navigate or change these normative systems when the two opposing ecologies of religious tightness and urban looseness interact with one another. For this purpose, interviews were conducted in Mumbai and Jerusalem, where this type of interaction was identified. Overall, we found that the nature of contact has a huge impact on how rituals adapt to the context of contact. Moreover, we also found that individuals in these given contexts are not passive recipients of information, but actively co-construct the new norms of behavior in response to the changing setting.

2. Theory

2.1. Cultural tightness and looseness

According to Carpenter (2000) in tight cultures, norms are laid down explicitly and stringently enforced. Severe sanctions may be imposed upon those who deviate (Triandis, 1989). Individuals then feel compelled to conform to group values to avoid punishment. As a result, tight cultures tend to be homogenous in their behaviors and cognitions (Carpenter, 2000).

On the other hand, in loose societies, there are various groups, with dissimilar norms (Triandis, 1989). By virtue of their heterogeneity, loose societies do not have a singular code of behavior or any pervasive norms and values. In these societies, there are no clear definitions of what deviations are. Thus, there is an inherent lack of punishment, basis the principle what cannot be identified cannot be sanctioned (Uz, 2015).

According to Gelfand et al. (2011), religion and threats to survival underlie cultural tightness. This is aligned to the religious-buffering hypothesis (Hoverd and Sibley, 2013) which suggests that existential threats, both at the individual and societal level, propagate religiosity. Religious laws help in providing a sense of order, dealing with adversity, and maximizing the sense of predictability (Kay et al., 2010; Storm, 2017).

Uz's (2015) uses Durkheim's (1985) continuum of mechanical versus organic societies to further explain why certain cultures are more likely to be tight or loose. Durkheim (1985) claimed mechanical societies are religious societies. Members within these societies often hold a collective and structured set of moral beliefs that are shaped by religion. According to Uz (2015), mechanical societies are reflective of tight cultures.

Conversely, organic societies are more akin to industrialised societies because they make way for individuality and a breakdown of common morality (Durkheim 1985). High population density and economic heterogeneity result in division of labor. This division of labor creates specific niches for each person to fill, allowing for a wider range of personalities and individuality (Smaldino et al., 2019). Hence, organic societies are believed to be representative of loose societies. Triandis (1989) supports this by arguing that urbanization promotes dissimilarity and thus cultural looseness.

This idea of urbanised loose societies being less religiously dictated is also aligned with the existential security hypothesis (Norris and Inglehart, 2011,), which claims that the prominence of religion declines in a society with high levels of secular comfort and security. Poor, unequal, and more politically turbulent countries are more likely to rely on religion for comfort (Sibley and Bulbulia, 2012), resources (Storm 2017), and communal support (Lim and Putnam, 2010). However, in urbanised rich countries, the state and/or technology meets the healthcare and welfare needs of the society. Thus, these cultures see a low-demand for religiosity and the strict moral norms that come with it (Norris and Ronald, 2004).

Together, this research thus suggests that religion and urbanization can create two opposing cultural systems that have different psychological outcomes. However, cultural divisions such as these do not exist cleanly, with stricter religious cultures increasingly existing within looser urban settings. This is owing to the increased information transmission caused by globalization. These various pockets of society where these two cultures encounter each other are known as cultural contact zones. What then happens to religious norms and traditions when these two cultural ecologies meet? How are they practiced in cultural contact zones? Do they remain the same or do they evolve in response to the changing cultural context?

To examine this, we focus on menstruation norms as one morally-debated cultural domain where religious and urban norms may differ. The current paper aims to investigate how menstruation-related religious practices adapt to these two ecologies colliding.

2.2. Impact on menstruation traditions

Across almost all religions, there are several strict behavioural rules and practices to be followed by both partners during menstruation. Transgression of these rules is heavily sanctioned. In Judaism, partners must not touch during menstruation and for one week after. The menstruator is considered impure and anything they touch thereby becomes unclean (Bobel et al., 2020).This period of separation is known as the Niddah, where the menstruator is dictated to not sexually entice their partner through their clothing, use of scented perfume, or singing (Dunnavant and Roberts, 2012). Partners are directed to sleep on separate beds, and any transgression comes with the threat of being "cut off from among their people" (Leviticus 20:18).

In Hinduism, it is believed that the menstruator is polluted and thus is forbidden from sharing spaces of any form with others (Sutherland and Leslie, 2006). Along with social isolation, menstruators are expected to maintain separation from religious idols and spaces of religious worship (Pintchman, 2007). Similar practices are observed in Jainism where menstrual blood is believed to make the menstruator impure (Bhartiya, 2013). In Islam, menstruators are not themselves considered to be polluted, but menstrual blood is. Intercourse, daily prayers and entrance into the mosque while menstruating are all prohibited (Maghen, 1999).

Opposing these religious teachings is menstruation activism that contests the cultural narrative of menstruation as a nuisance. The movement broke ground in the 1990s along with the third wave of feminism and was supported by technological development. These technological advancements included the development of many single use products such as sanitary pads, tampons, etc. (Bobel and Fahs, 2020. These products prevented leakage, and thus in the literal sense prevented the menstruator's perceived impurity from spreading in the spaces they occupied. industrialization during that time also led to the employment of many menstruators (Tilly, 1994), requiring them to share often close space with others, and thus loosening the stigma of contamination in shared spaces. More recently, menstrual activists started to reshape the narrative around menstruation as a source of power through the literary arts of music, film, and poetry (Bobel and Fahs, 2020).

Resultantly, behaviours that would be considered religiously deviant by most religious groups have become increasingly popular within a plethora of American shows and other popular media that normalize the display and experience of periods (Maple, 2018). It can then be assumed that due to the rise of globalization, and the emergence of the internet (Kellner, 2004), people living in highly religious societies are either already aware or are becoming aware of the conflicting discourses around menstruation-related behaviours. How then do people living in cultural contact zones of religiosity and urbanization resolve the cultural dilemma of menstruation-related practices when these disjunct ecologies contact?

2.3. Rationale for selected research sites

Two cultural contact zones were identified for this study: Jerusalem in Israel and Mumbai in India.

Israel and India were chosen based on their relative tightness scores calculated by Gelfand et al. (2011). In their published paper, Israel was the loosest culture on the list, with a tightness score of 3.1. Whereas India had a tightness score of 11.0, placing third on tightness after Pakistan and Malaysia. These two countries are particularly interesting because the tightness score for each of the two countries was not representative of everyone living in that country. As well as it's less religious citizens, Israel has a population of ultra-orthodox and other strongly religious groups. because of this, there are pockets of religious tightness within this generally loose country. Similarly, India has spaces where liberal ideas and lifestyles flourish, notably in urban centres. Hence, India too experiences pockets of looseness in the overall tight nation. Based on this we identified Jerusalem and Mumbai as being cultural contact zones, where tight and loose cultures come into contact with one another.

Jerusalem is one of the religious capitals of the world. It is a Holy City for Jews, Muslims, and Christians alike. As a result, it is often referred to by theologians as the Kingdom of Heaven or 'celestial Jerusalem'. Its religious significance has inspired many conflicts between people and sovereigns who wish to gain control over the land (Ferrari, 1995). The religiously significant city of Jerusalem in a country noted for its diversity and looseness, presents a space where religious tightness and social liberalization interact.

India is currently dealing with what many believe is the rise of government-sanctioned Hindu-nationalism, a form of fascism (Palshikar, 2015). Although there is some debate around this label (Bhatt and Mukta, 2000), this position is justified by the rising violence towards minority communities in India (Kaul, 2017), and India's drop in the World Press Freedom index from 142 to 150, out of 180 nations (Sampath, 2022). Amidst this highly religious country, there is the city of Mumbai. Mumbai is the financial capital of India (Kumar et al., 2008). It is the most populated city in the country, with 2% of Mumbai's diverse population accounting for 6.3% of the national GDP (Zhang, 2016). Consequently, Mumbai, similar to Jerusalem, is a zone of cultural contact but in the opposite direction from Jerusalem. In Mumbai, increased social liberalism through urbanization interacts with the religious tightness of the country as a whole.

This study investigated how menstruation-related rituals and practices evolve and adapt to the ecologies of religiosity and urbanization coming into contact in Jerusalem and Mumbai.

3. Methodology

All materials used in this study, along with deidentified participant information and thematic analyses can be found on Open Science Framework (OSF) platform. The project on the OSF platform can be found here: https://osf.io/va8yr/?view_only=9657b08f70f4480abd6cc7780d099b7f.

3.1. Research design

This study took a cross-cultural, qualitative approach to data collection and conducted in-depth, face-to-face interviews. A qualitative methodology was chosen because there is a gap in the theory about the processes involved in how individuals integrate opposing norms when confronted with two opposing social ecologies around the same belief or behavior. These decision-making strategies in a given social context, along with the thoughts, feelings, and belief systems they invoke within individuals are often overlooked by quantitative data (Berkwits and Inui, 1998). A part of the reason for this is that instruments used in quantitative data are often developed by Western researchers, using a skewed demographic of Westernised, Educated, Industrialised, Rich, and Democratic (WEIRD) participants, who are mostly students (Henrich et al., 2010). These instruments fail to pick up on the unique cultural nuances that inform decision-making in a different cultural context, perpetuating the existing gap in the scholarship. Before quantitative research can address these gaps, we need to know what the gaps are, and which qualitative research is uniquely suited to do.

Qualitative research helps capture participant responses in complex cultural contexts in a more complete and nuanced way and thus plays a key role in newly developing areas of research where more theory is needed (DiCicco-Bloom and Crabtree, 2006). The new ideas generated in this type of qualitative research can later be tested and substantiated with quantitative methods. Beginning to identify some of the gaps in our exising knowledge of cultural contact zones is the primary aim of this paper. One-on-one interviews seemed well-suited for this study given the research question's focus on understanding how individuals personalize their interpretation and consequent navigation of their surroundings (Randall, 2013). Semi-structured interviews were conducted because of their flexible nature which allows for further exploration of interesting topics as they come up (Qu and Dumay 2011).

3.1.1. Participants

This study's sample is comprised of twenty-four participants - twelve from Jerusalem and twelve from Mumbai. In Jerusalem, seven men and five women were interviewed, all of whom had a Jewish upbringing. In Mumbai, six men and six women were interviewed. Four of them came from a Hindu household, six were raised in a Jain family and the remaining two were raised with Islamic teachings. Participants in Jerusalem were initially recruited through two members of the Israeli community at London School of Economics and subsequently through snowball sampling. Participants in Mumbai were recruited using convenience sampling, through the first author's existing networks. The recruitment criteria for this study included participants' age and their ability to speak in English. Only millennials between the age of 22 and 32 were recruited on the rationale that they would have more exposure to cultural contact zones, based on their greater use of technology (Hermans and Kempen, 1998; Anderson and Jiang, 2018). Gender was not a criterion for exclusion as religious rules about behavior on menstruation apply to non-menstruators as well, especially in their conduct towards menstruators. Lastly, the type of religious upbringing of the subjects was also not an exclusion criterion, since most religions share similar behavioral codes that are imposed on menstruators.

3.2. Materials

3.2.1. Topic guide

As is convention in semi-structured interviews, four broad topics were developed to direct the conversation (Qu and Dumay 2011). The first three topics attempted to understand participant tolerance for deviation from traditionality and religiosity for increasingly specific behaviours. The fourth topic attempted to understand how participants made alterations to menstruation-related practices. The same topic guide was used in both Mumbai and Jerusalem. Briefly, the four topics were:

1. General behavioural restrictions in the city (specific to where the participants resided).
2. Behavioural restrictions for women in the city.
3. Behavioural restrictions on menstruating women in the city – investigation of this theme made use of two sanitary-napkin advertisements as prompts and is discussed further in the next sub-section.
4. Construction of personal sanitary-napkin advertisement that is best suited to sensibilities of the self.

The topic guide also specified some probes that could be used to guide the conversation towards the issues of interest, however their use was tailored based on individual responses. Both the topic guide and a more detailed justification for the topic guide can be found in Appendix A.

3.2.2. Advertisements

Two advertisements were chosen as prompts to identify individual tolerance for deviation from cultural norms about menstruation. According to Li et al. (2017), advertising themes are reflective of cultural tightness and looseness. They hypothesize that in traditionally strict or tight cultures, advertisements promote norm-abidance. These adverts focus on prevention and fitting in. They have "more restricted content, fewer non-traditional roles and stigmatized identities" (p. 381).

In contrast, loose and more urbanised culture advertisements illustrate norm-deviance by promoting unique, risky, and diverse themes. These advertisements also showcase many "non-traditional roles and stigmatized identities" (p. 381).

Based on this framework, two sanitary napkin/menstrual pad advertisements were chosen. The first is representative of a more religious ecology and the second is reflective of an industrialised, loose ecology. The main themes of each advert are discussed below. Visual aids for advert one and two can be found in Figs. 2 and 3, respectively. The videos for the same can be found on YouTube, as well as on our OSF platform.

Advert one,[1] begins with a woman performing sports and a voice-over saying, "Just because I'm a woman, do you think I'll crack under pressure, or conquer the field?" (ALWAYS UK, 2016) and makes no mention of menstruation. The second scene demonstrates the absorbent capacity of the pad using blue liquid, with a voice-over stating that the pad has "liquid-locking gel and the gel can't leak" while making no references to blood.

While this advertisement does not represent the tightest cultural norms present in either Jerusalem or Mumbai (e.g., it represents women in the male-dominated sport of soccer and urges them to leave the house instead of staying in), ads like this one represent a more commonly supported normative tightness around menstrual norms. To support these normative structures, adverts today resort to what is now coined as 'sneaky sexism', where women are implored to do things like be stronger and bolder (Cunningham and Roberts, 2021). Topically, while this may look progressive and supportive of women, it subtly implies that women are not good enough, and constantly need to prove themselves to be considered equal. In a similar vein, while the on-the-surface messages in this ad are this type of empowerment, not mentioning menstruation and hiding the result of menstruation with a blue liquid subtly conveys the message that this is a taboo topic not to be discussed out loud.

With this, we suggest that advert one is representative of religiously shaped tight cultures because of its prevention-focused theme, and its propagation of the societal shame in openly talking about menstruation by omitting overt references (Park, 1996). This societal shame is directly linked to the religious teachings of menstruation as an impure, uncomfortable dirty condition that must be kept a secret to prevent bringing embarrassment upon the menstruator and their family (Barak-Brandes, 2011). Moreover, advert one pushes the protagonist to 'train harder' even when they are menstruating, showcasing that there is societal standard one must abide by to be considered equal. This would not be the case in loose cultures where heterogeneity prevents the existence of a set bar.

Overall, two themes reflect the religious cultural norms:

1. Menstruation, the associated pain, blood, or sanitary napkins used during the time should not be spoken about loudly.
2. Menstruators must transcend their bodies and menstruation-related discomfort, to be as successful as men (Verma, 2015).

Advertisement two[2] has the slogan "Periods are normal. Showing them should be too" (Libresse Sverige, 2017). To portray this idea, the ad shows several scenes, each of which relates to a 'loose' cultural norm:

- A teenage girl walking to the bathroom with a pad openly held in her hand.
- A man buying a pad.
- A woman asking for a pad openly, across a dinner table.
- A menstruating woman having sex.
- An email, wherein a woman requests to work from home due to heavy-flow.
- Diverse women experiencing menstruation-related pain and mood-swings.
- Women swimming and dancing whilst on their period.
- Absorption capacity of a pad being displayed using red blood-like liquid.

Relating to Li et al., framework, this advert uses a variety of women and their menstruation-related experiences to defy the religious and societal dictates of cultural silence around menstruation. This advert very evidently reflects liberal and loose cultures.

3.3. Procedure

Ethical approval for the study was acquired in April 2019 from the LSE's Department of Psychological and Behavioural Science. Data collection took place in Jerusalem between the 6th and the 12th of May, and in Mumbai between the 13th and 18th of May 2019. All interviews were conducted in English, using an etic perspective (Morris et al., 1999). While this was a relatively easy position to assume in Jerusalem, given the researcher's lack of familiarity with the context, it was harder to achieve in Mumbai. However, it was attempted by probing every culturally specific term mentioned by the interviewees. To maximize participant comfort, all interviews were conducted either at the interviewee's home or in quiet public spaces, chosen by the participants. Participant anonymity was codified by replacing names with codes such as r1_Jeruselem or r1_Mumbai. The r stands for respondent, the 1 signifies the number randomly assigned to the participant, which varies by participant between the range of 1 and 12, and Jerusalem and Mumbai refer to the cities participants were interviewed in. The same codes were used to save the interview recordings and their corresponding transcripts.

4. Results

4.1. Data-analysis

Data was analyzed thematically to identify recurring patterns in the data (Maguire and Delahunt, 2017). The interviews conducted in Mumbai and Jerusalem were separately analyzed, using a bottom-up approach as specified by Braun & Clarke (2006). The transcripts were coded line-by-line in Nvivo 12 to form descriptive semantic-level codes. Continuing this data-driven approach, the semantic-level codes were then organized by meaning to form what Braun & Clarke (2006) call 'latent-level themes' (Appendix F). The latent-level themes from each site of research were then compared to create a singular thematic map.

Using Attride-Stirling (2001) as a guide, a thematic map consisting of one global theme, three organizing themes and eight basic codes was developed, as displayed in Fig. 1.

4.1.1. Findings

Our data revealed that tight and loose ecologies could contact in one of two manners: diffused or concentrated manner. The way the two differing ecologies interact has a big impact on how menstruation-related norms are followed and practiced in our data. As such, the influence of contact zones became the first organizing theme.

Interestingly, not all menstruation-related practices were adopted in the same way. The same person could adopt different norms for different behaviors related to the cultural domain of menstruation, suggesting that cultural contact zones lead to non-uniform beliefs and behaviors. The larger social context of how the tight and loose cultures interact, along with individual religious orientation played a big role in how norms around menstruation were followed. People on either side of the

[1] See full advert- https://www.youtube.com/watch?v=svgZg2eIDNI.
[2] See full advert- https://www.youtube.com/watch?v=lm8vCCBaeQw.

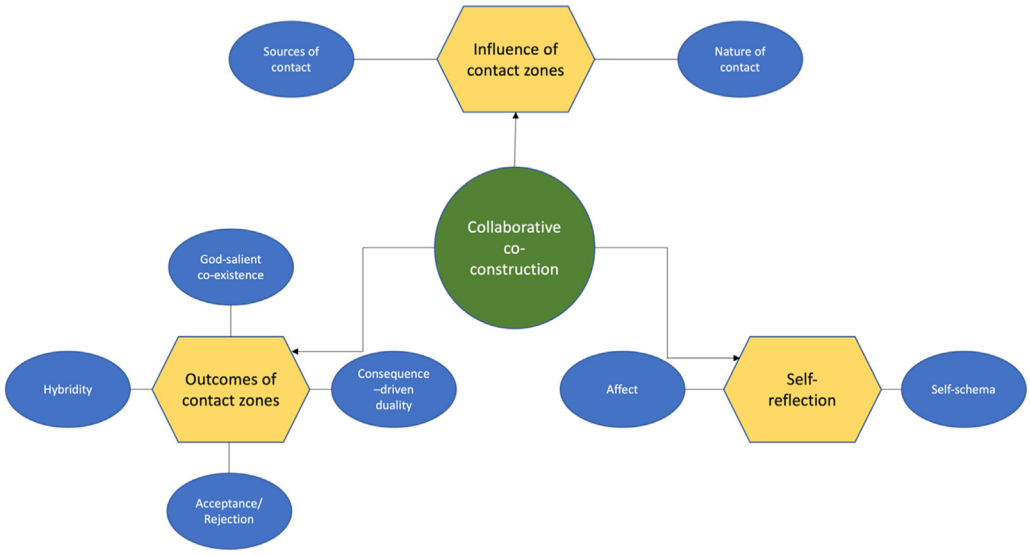

Fig. 1. Thematic Map.

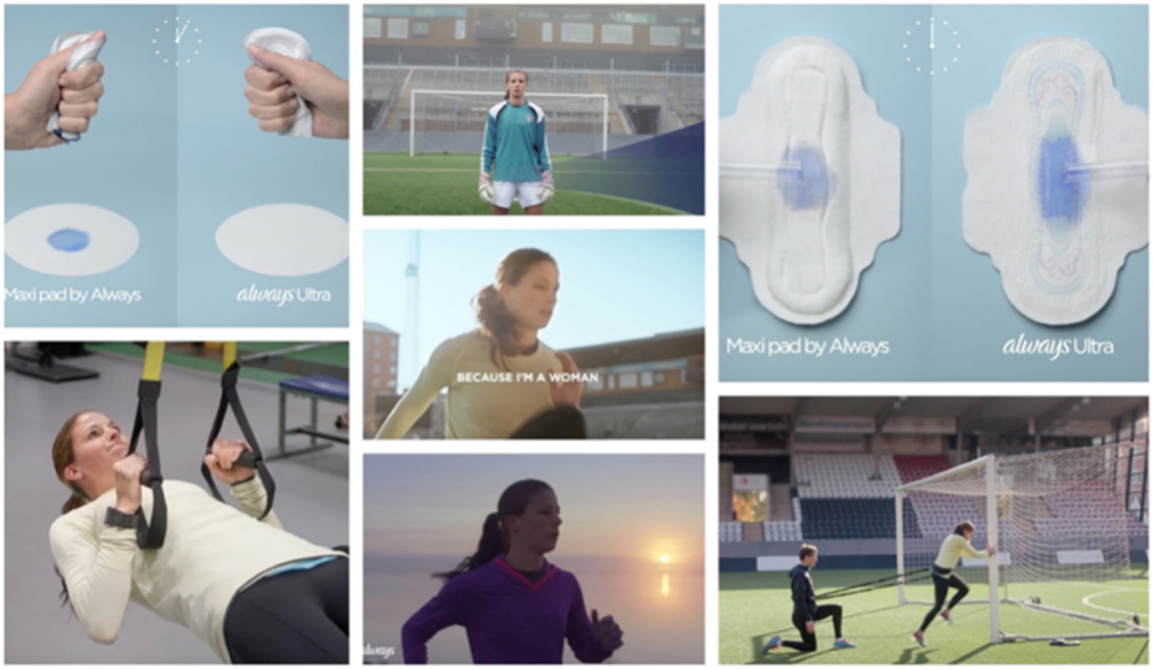

Fig. 2. A collage of scenes in Advertisement 1 (ALWAYS UK, 2016).

religiosity spectrum (i.e., either extremely religious or a complete non-believers), chose to outrightly accept or reject the religious mandates about menstruation based on what aligned with their beliefs. Others who did not have a strong religious orientation in either direction chose to follow the religious mandates about menstruation in various ways, that incorporated ideologies from both the tight and loose ecologies. Those in spaces of a diffused cultural contact combined or hybridized to form a method of ritual that was unique to the participants. However, those in spaces of concentrated cultural contact, followed the religious norms about menstruation only when there were negative consequences for non-performance. In both spaces, regardless of the nature of the contact, somewhat religious participants showed an interesting form of adaptation to some menstruation-related rules, by following them only in situations where God was salient. Hence, behavioral outcomes of contact zones became the second organizing theme.

As is evident, behavioral outcomes were not entirely based on sociogenic factors. Participants' religious orientation and how it shaped their self-concept played an important role in the manner in which they conformed to each behavioral norm. All participants assessed how each behavioral option, i.e., following the religious mandate or not made them feel and how it impacted their self-concept. Based on how these practices affected their mood or self-concept, certain practices were adopted or molded. Thus, self-reflection was decided as the third organizing theme.

Overall, collaborative co-construction emerged as the global theme. Our findings reveal that participants were not passively absorbing information, rather, they were agentic and created new ways of behaving by interacting with existing norms, alternative perspectives, and individual feelings. They were actively adapting these norms to fit with their individual preferences, religious beliefs, and social expectations. These themes are further elaborated below (see Fig. 1).

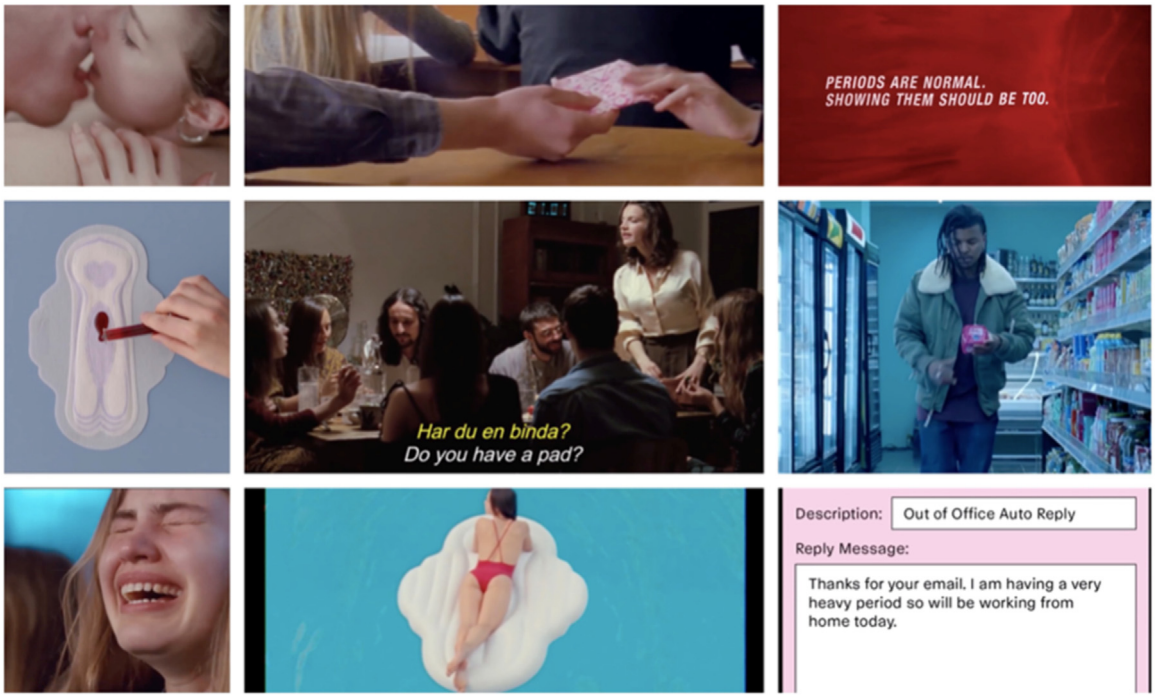

Fig. 3. A collage of scenes in Advertisement 2 (Libresse Sverige, 2017).

4.2. Influence of contact zones

Both the sources of contact (outgroup vs. ingroup) and the nature of contact (concentrated vs. diffused), between the religious (tight) and liberal (loose) ecologies, impacted the subsequent behavioural decisions.

4.2.1. Sources of contact

In Mumbai, the older generation was seen as propagating religious cultural norms. The difference in age (all participants were under the age of 35) has allowed the older generation to be othered by the younger generation (those in the same age range as the participants). Thus, the older generation is perceived as an outgroup imposing their norms on the younger generation, who have their own set of liberal norms that are more reflective of loose cultures and are deeply influenced by the 'West'. Regardless of their actual religious beliefs, people belonging to an older generation are automatically othered based on the shared stereotype that they are conservative and religious.

> *"It's the previous generation that is still alive that is influencing their orthodox thing […], and like they put things in our head. They make us like them. That's…yeah, they try to make us like them, but then we have our own ideas and our things and we try to westernize ourselves… That is the balance."*
>
> -r11_Mumbai

In Jerusalem, similar aged people expressed different levels of tightness or religiosity and came in contact with each other in the army and at university. As a result, no such othering was seen in Jerusalem.

> *"I guess all the schools that I went to, elementary school, middle school, high school were all* orthodox*, um religious. After I finished high school I enrolled in the army program with both religious and secular people, and then since then I wasn't in any religious schools or communities."*
>
> -r12_Jerusalem

> *"When I came to my art school, and a lot of things, like they change the perspective about a lot of things … it was the first time that I met a lot of gays and lesbians and I didn't have any problem with them. But it was the first time that I really became friends of them. Like I was in touch between me and the different worlds there in, in the art school."*
>
> -r7_Jerusalem

4.2.2. Nature of contact

The sources of contact then determined the manner or the nature in which tight and loose cultures contacted in the two cities. In Mumbai, the process of othering led to a concentrated clash between the older 'tight' generation and the western 'loose' influences that the younger generation identified with.

> *"I think they've been grown up with a certain perspective about the society, compared to us. We have been raised in a very, very different society compared to them [parents]. They were in a very orthodox and in a very patriarchal society. Now, all of these things are changing. So, because of that our thinking is more forward or different."*
>
> -r10_Mumbai

> *"I think the generation in which I am in right now, has understood that you can't even fight with your parents,* that *generation and you can't even you know overlook the facts."*
>
> -r1_Mumbai

In Jerusalem, the two ecologies are in contact in a very diffused manner due to a continuum of religiosity on which people of the same age group and social group could vary.

> *"I mean you know it's there is like a spectrum of religious people in Jerusalem. In Judaism it's like that as well. There are people who are very orthodox in their opinion […] but there are religious people who* are *less strict about the rules"*
>
> -r8_Jerusalem

> *"I think in Jerusalem especially, there's a lot of ability to be able to move between…to mix and match* religiously *[…] there's a spectrum here, which can be used and moved upon."*
>
> -r6_Jerusalem

4.3. Behavioral outcomes of contact-zones

Our findings suggest that cultural contact zones prompt non-uniformity in beliefs and produce a plethora of behavioral outcomes within a single individual. The religious and cultural domain of menstruation has several behaviors associated with it, such as openly passing about menstrual products, talking about menstruation, being sexually active during menstruation, sharing spaces with others while menstruating, etc. Both ecologies of cultural tightness and looseness have certain norms associated with each of the behaviors in the domain of menstruation. We observed when faced with cultural conflict, people did not perform all norms associated with one ecology. We saw that some behaviors relating to the menstruation cultural domain abided to the norms in tight cultures, while others aligned to those in more urban and liberal cultures. Sometimes compliance to certain norms was context dependent, with participants abiding to the tighter set of norms in the presence of consequences or God, while reverting to performing the looser set of norms in all other contexts. Other behavioral norms about menstruation that did not match with an individual's sense of self or religiosity in either tight or loose cultures were altered.

We also found that the types of behavioral outcomes that were displayed by a single person was strongly influenced by the nature of contact between religious rules and urbanised, diverse thinking in Mumbai and Jerusalem,

4.3.1. Acceptance/Rejection

In both Mumbai and Jerusalem, there were certain norms associated to either one of the two ecologies that were accepted completely, regardless of the context or consequences. Acceptance or rejection of norms from either ecology was not passive and, instead, involved active rationalization and interpretation of how the behaviors matched their religious beliefs

Since the younger generation in Mumbai represents 'loose cultures' and creates the opportunity of cultural contact in a relatively tight nation, religiously dictated tasks were often rejected to give precedent to behaviors associated with urbanized, diverse, western-liberal cultures.

> *"No because some things you have to think by yourself, you cannot go everything with the religion, because anyway, you are staying, in like a normal you're not being a saint or something. If you are going in that way, then you have to think that much. There are many people who think that way that you have to stay away, you cannot touch, you have to don't come with us, we cannot come in the same vehicle or in the same car. You have to come in a different car, something, but I don't believe it."*
>
> -r3_Mumbai

> *"I mean they're… I only don't believe in it because there is no concrete reason as to why. Nobody says this is why you should do it. People have said don't do it. And like anything that says don't do it in general, it's just subject to opposition."*
>
> -r5_Mumbai

In Jerusalem, no one particular group represented 'tight culture', in a reportedly loose nation. Tightness was created through the abidance of different religious norms by various people of the same age. However, since the contact between these two opposing cultures was diffused, there was not one religious norm that was consistently accepted or rejected across all participants. Different participants accepted different religious norms, while rejecting others depending on how they fit with their religious orientation. This suggests that when two opposing ecologies come together in a diffused manner, not everyone evenly accepts or rejects all the mandates or domains associated to that ecology, leaving much more room for interpersonal differences.

> *"So very religious people they don't touch each other before the wedding. But we do touch. But Niddah is another thing. I don't know yet, but we hope to keep it, because we believe in this tradition. Like when there is two weeks. There are two weeks where I can't touch the woman and there are a lot of reasons why. And I believe this reason, because sometimes you need some distance between the man and the women, then you feel another feelings."*
>
> -r7_Jerusalem

> *"Yes, I religious, I'm orthodox religious, I follow everything. I think that when you are from inside you see that doesn't look like from the outside. So outside it looks like it's rules and your strict to the… but from inside that you see the rules are a lot of more jelly, like you can, not trick with them, but you can play with them. It's a playful, it's a playful place."*
>
> -r4_Jerusalem

4.3.2. Consequence-driven duality

Mumbai, a relatively loose pocket of society, still exists in a broader nation that is tight. This means that are still punishments for deviation from norms. Hence, particularly in Mumbai a lot of people displayed consequence-driven duality. Herein, a religiously dictated menstruation-task was performed in front of others who were perceived to be upholding the religious norms in society, due to the fear of the consequences. This religious dictate was transgressed when amongst people who belonged to their ingroup.

> *"When I'm in the Jainism society, I try to be a Jain and I don't try to hurt the sentiments of the people. But when I am around my friends and the common people's side, I don't pretend to be. It's like a normal thing that it is happening"*
>
> -r1_Mumbai

> *"R: At home. I can't go like into the temple are, not near not this thing. If someone is going to be in the ritual, I can't touch them. I need to sit pretty separately. But, yeah that's about it.*
>
> *I: Do you agree with these?*
>
> *R: No, but I have to do them in order to stay in my house."*
>
> -r5_Mumbai

Such consequence-driven duality is believed to be present in Mumbai because of how harshly the tight and loose ecologies collide in the city, allowing only one way of behaving to be right. A similar trend is seen among those who identify as non-religious and secular in Jerusalem, when they are surrounded by people who are religious.

> *"I mean even if you think that in a moral sense your actions are okay, and they are legit. But when you consider other people, they may react in certain ways, then you wouldn't do stuff that you normally would. So yeah, I would think about who is present before I do that [pass a pad around in public]."*
>
> -r8_Jerusalem

4.3.3. Hybridity

Unique to Jerusalem was the formation of hybrid practices in relation to the religious dictate of the Niddah, in participants who identified as religious. Participants often showed a desire to follow the Niddah in their own way, and not exactly as per the religious scriptures.

> *"So many religious homes or either have an extra bed or maybe a bed that separates and then during the two weeks probably or a week they will separate the beds. And, like all this is going to be like a very difficult process for women and it depends on like what framework like the social framework they're in. They can feel like very alienating and when also the lack of physical touch could be very difficult for women and if they respond to touch…So, I am definitely like don't separate beds. I'd be happy to touch them or whatever. In terms of sex, generally not."*
>
> -r10_Jerusalem

It is believed that such a combined representation formation is prevalent in Jerusalem due to the presence of a more fluid contact zone between tight and loose cultures where people are allowed to vary. The lack of strong identification to a certain tight or loose group also allows

people to mix and match aspects from both ecologies to create their own ritual. A drive to hybridize was also prevalent when participants were asked to construct their own sanitary-napkin advertisement. Most expressed a desire to construct a more modest advert than the more explicit second advert that was shown during the interview.

"There is girls for them it's hard. They can't do things, and you can't tell them that you can do everything on your period. Like see this woman. You can do it! No, it's, it's a tough moment if you need to sit sometimes. So, I'm not feel comfortable with this first ad. In the other side, the second ad, It's you know it's in your face, instead of say to you, you can buy this things."

-r3_Jerusalem

"I think it was more [personal ad], close to the second ad. But I don't think it should be sexual. That maybe the main point. Because I think that period is something like not all of our nature is sexual and I don't think it has to be associated to sex, it has to be associated to our body, like I don't know, like shampoo."

-r9_Jerusalem

The opposite phenomenon was observed in Mumbai. As our participants were young, they mostly subscribed to the more liberal and loose behavioral mandate, even if they displayed belief in God. They showed this behavioral inclination through their ad preference. Participants believed that the second and more socially deviant advert was ideal and required no alterations. Such strong positionality is believed to have been displayed because of the dichotomized nature of the contact between the two ecologies in Mumbai, where tight or loose behavioral mandates could only exist as a binary and not on a continuum.

"I feel like this advert is how people ideally want it to be displayed. It's like the ideal scenario."

-r4_Mumbai

"No, I don't think anything made me uneasy throughout the ad at all. Like I mean when we watch sex movies people roll down their underpants all the time. Why should this be any different. I mean we do all of these things on a daily basis, why not do it when we are on our period. I feel like the message was out really clear and really well. And that's why I really liked the ad. Plus as I said its empowering, its good."

-r12_Mumbai

4.3.4. God-salient co-existence

In both Mumbai and Jerusalem, salience of God led to religious norm-abidance amongst people who believed in God. In Mumbai, this was true for the religious dictate that prevented women from touching their partners or other people while menstruating. In Jerusalem, co-existence was seen in relation to the act of passing the pad in public. In both cultures, contexts where God was salient triggered abidance to the tight, religious norms. However, the same norms were transgressed, as is characteristic of loose cultures, in contexts where God-related primes were absent.

In Mumbai, proximity to religious temples, idols and artefacts made the presence of God salient. Surprisingly, such context-dependant duality was only observed in women but not in men.

"Not completely religiously, and not… it's in the middle. When they [people in general] want to go out, they go out, when they are home, they are behaving as per pure Jainism and they don't touch anything."

r1_Mumabi

"R: I don't at home [touch her husband], but if we're out…

I: What's your criteria? I don't want you to justify, just tell me how you pick and choose?

R: Yeah because I have my religious stuff at home and that's the reason, and I have my stuff that I wear for my Puja [prayer] or that I carry to my mandir [temple] at home."

-r6_Mumbai

In Jerusalem, the Shabbat dinner table prompted compliance to the tight cultural norms among both genders. Shabbat is a weekly Jewish holiday, lasting from Friday evening to Saturday evening. It is customary for Shabbat to be honoured by hosting a feast on Friday evenings, and reciting prayers on the same dinner table (Epstein, 1969).

"I: What about passing the pad in public, would you be comfortable if that happened?

R: Yes.

I: What if it happened during Shabbat. Would you find it…?

R: Maybe I would feel uncomfortable.

I: Why?

R: I don't know, maybe because Shabbat in my mind is something more, like, traditional. It's like, it seems traditional. It's like, it seems in my mind something that is very structured, and very traditional. It's like, I don't know, formal maybe. Something that is very formal. So maybe because of that I will feel uncomfortable. I don't think it's bad to do it. But I think that if someone on Shabbat table will pass pad, maybe it would make me feel uncomfortable."

4.4. Self-reflection

The wide variety of behavioral outcomes listed above suggests that people play an active role in navigating spaces of cultural contact and are not passive followers of cultural norms. We found that people were constantly evaluating how performing certain tasks made them feel, or how aligned they were with their self-schema. People's religious identity was a part of their self-schema. Behavioral norms that led to a positive affect or were congruent to the self-schema were performed, while the others were rejected. On the other hand, if norms from both ecologies failed to match self-standards, a new representation was intentionally formed to match this self-standard.

4.4.1. Affect

A common criterion for how someone performed certain menstruation-related practices in both Mumbai and Jerusalem was how such performativity made them feel. Participants gave preference to those cultural tasks that make them feel positively and chose not to perform the cultural task if it negatively affected their mental health. Personal affect also determined whether the norms from contrasting ecologies were selectively performed in a context-dependent manner or were hybridized, and how so.

"We don't touch, but yeah, if we're out we do. So not very strictly we follow. Before it used to be, but now things have changed and I choose it, I choose to do that. Not that my family is forcing me to do, they are in fact telling me, why are you following it? But in a way, I feel good that I am at a rest for those 3 days. I don't have to do any work. My body is at a complete rest."

-r6_Mumbai

"When I stopped putting it [phylacteries for prayer] on, I stopped praying officially, I always was still praying to God. But I stopped doing the mandated prayers. I felt a lot of darkness, which I felt that I have to overcome. And since then, it's interesting that you should ask me now because I'm really in that period of like today I did put it on. I found it very calming and very wonderful. You know. So, the general way is that if it induces anxiety if a ritual induces anxiety, for whatever reason then I put to the side, because my mental health has to come first."

-r6_Jerusalem

4.4.2. Self-schema

A self-schema is a knowledge structure about the self and reflects how a person perceives their personality traits, social roles, values they hold and physical characteristics (Markus, 1977). Participants seemed to be consciously aware of these self-concepts and used it as a measure to evaluate whether and how certain behavioral norms should be followed.

> *"You can always give your children the right kind of values and the virtues […] at the end of the day it's their choice to decide who they want to be as a person. And I keep following what I think is right by me."*
>
> -r12_Mumbai

> *"It's always been there in me. It's always been there since my childhood that I never restrict myself."*
>
> -r8_Mumbai

> *I don't think that I feel more free than religious people. It's not the thing. Maybe it's the way you feel… maybe we have to go back to the conscious thing again, maybe my conscious is more logic, and the things I do fit more to my conscious. And I don't need to find answers in other places. I can truly… I can truly rely on my beliefs and not on other people's beliefs.*
>
> -r2_Jerusalem

> *It's part of my identity. I don't know if something more complicated than just like I don't eat pork because I'm Jewish. I don't have sex on Niddah because I'm Jew. And it's just, I believe we have certain things in our life because we decide we are a part of something, and that's my identity and my tradition. As long as it doesn't make things and it doesn't offend anyone, or doesn't like make my life somewhat like, unless it has like bad results, I don't see a reason not keeping tradition.*
>
> -r9_Jerusalem

Together, the three organizing themes and the codes that make up each of the three themes show that both socio-cultural factors (4.2: representing the nature and sources of contact) and individual factors (4.4: such as personal affect, schema, and individual religious belief) interact with one another to formulate a variety of behavioral outcomes (4.3: codes in response to two opposing ecologies coming together). This suggests that sociogenic forces and interpersonal factors in collaboration with each other help actively design the cultural fabric in which people exist. It reiterates that there is a reciprocal relationship between individuals and their environment, and that influence on behavior is not unidirectional. This idea is further elaborated upon in the discussion section.

5. Discussion

5.1. Discussion of findings & scope for future research

This study examined how menstruation-related practices are altered when a tight religious culture encounters a looser diverse urban culture. Through interviews in Mumbai and Jerusalem, we observed that the way in which these two opposing ecologies came into contact had a big impact on whether the religiously dictated menstruation-related practices were accepted/rejected or were altered and hybridized. However, not all practices related to religious menstrual norms were adopted in the same way. Participants showed variety in how they practiced these norms, often choosing a different strategy for each menstruation-related norm. These strategies were often guided by self-reflection and those practices that led to positive affect and a consistent self-schema were either adopted or molded to create this result.

This study hence responds to Hermans and Kempen (1998) call for an increased research focus on cultural contact zones over cultural dichotomies. Hermans and Kempen (1998)claim that cross-cultural research often focuses on the core aspects of a culture to present distinct cultural comparisons, rather than attending to the cultural processes that occur in contact zones. Thus, cross-cultural studies often fail to capture cultural movements and exchanges that have been exacerbated by the rise of globalization and the consequent increase in interconnectivity.

The same has been the case with studies relating to tight and loose cultures. There has been little focus on the impact of such cultural interactions. Rather tight and loose have been used as uniform descriptors of an entire culture. This study and its findings give some insight on cultural contact zones, how they may differ with one another and the subsequent psychological impacts they have on people living within these zones. This interconnectivity, and the combining of diverse ideas that comes with it, maybe one of the main drivers of cultural innovation (Powell et al., 2009; Lewis and Laland, 2012). Understanding these processes is essential to understanding cultural change.

The findings from this research relate to a large body of literature, which are discussed below alongside how they guide future research.

5.1.1. Socio-structural influences on behavioral outcomes

A notable finding was that not all contact zones lead to the same kind of interaction between opposing ecologies, and the manner in which these ecologies contact impacts the subsequent behaviours and practices people adopt.

In Mumbai, the schism between the religious, orthodox, older generation and the liberal, Western, younger generation led to a concentrated clash of the two ecologies. Participants in Mumbai felt a strong sense of identification with the latter group and found it easier to reject the religious norms. Participants only followed the religious dictates when faced with the threat of consequences or were cued by proximity to God. Therefore, the performance of most menstruation-related cultural tasks resulted in conformity to looser cultural norms.

In Jerusalem, contact of the two ecologies was much more diffused and represented through a continuum of religiosity on which individuals could vary. Consequently, individuals did not have a strong group identity and did not have clear normative ways of rejecting or accepting an ecology. This led to the creation of new methods of performing religious norms that also ascribed to certain loose sensibilities.

These findings are supported by Jovchelovitch (2007, 2008), who made the observations that cultures or knowledge systems can contact in a continuous or discontinuous manner. Continuous interactions are more dialogical in nature, wherein both cultures are likely to engage and interact with one another, just like a dialog or a conversation does. They do so by acknowledging that there are various correct ways of behaving and exchanging knowledge with one another.

Discontinuous interactions between cultures are more non-dialogical in nature, where both cultures fail to see such diversity and hence may not see a similar transmission of information between the two cultural groups. The type of interaction between the two systems of knowing is contingent upon how likely members of each culture are to recognize the diversity of knowledge that exists.

Cultures with continuous, dialogical interactions are more likely to acknowledge that there are various correct ways of behaving and thus are likely to exchange knowledge with one another. On the other hand, cultures with discontinuous, non-dialogical interactions are going to fail to see such diversity and hence may not see a similar transmission of information between the two cultural groups.

When extended to the present study, Mumbai can be seen as an example of discontinuous, non-dialogical contact between the two ecologies of interest, while Jerusalem exemplifies continuous and dialogical knowledge encounters. Overall, these findings show that not all contact zones see the same processes, and each may vary from the other.

This can then be extrapolated to study inter-group cohesion in each culture, by observing how two or more opposing ideas interact with one another. Moreover, strategies can be developed to promote a diffused, continuous interaction between the varying ideas and groups to reduce inter-group conflict and promote harmony. This presents an exciting avenue for future research regarding social identity theory, group dynamics and conflict studies.

5.1.2. Behavioral outcomes of contact zones

Jovchelovitch (2007, 2008) further expands on her theory of knowledge encounters to explain how each form of interaction may lead to different psychological outcomes. She claims that continuous and dialogical interactions allow for hybridization and other states of cognitive polyphasia. Cognitive polyphasia refers to a state of knowledge representation, where individuals can hold different almost opposing rationalities together, which are then contextually activated (Jovchelovitch, 2007). Whereas non-dialogical interactions promote segregation and 'monological' cognition.

Jovchelovitch and Priego (2015) suggested that cognitive polyphasia can be expressed in various ways. In elaboration, she put forth the concepts of dynamic co-existence and hybridity. In dynamic coexistence, there is retained tension between opposing knowledge systems, and each are expressed separately, based on context. In hybridity, a new knowledge-system is produced by mixing the initial knowledge-systems together in a unique way. This is also relevant to the above-mentioned processes of innovation and cultural change and how people within a population adapt a recombine cultural traits (Lewis and Laland, 2012).

Our findings fit with the theory of cognitive polyphasia. Dynamic coexistence was evidenced in both sites of research when God was salient. In Mumbai, participants were reluctant to touch their partners in the presence of their temple at home, and other objects relating to prayer. In Jerusalem, participants were perfectly okay with passing a menstrual pad across the dinner table, unless it was the Sabbath dinner table.

Interestingly however, hybridity was only witnessed in Jerusalem. We suggest this is owing to the more fluid and continuous nature of the interaction between the two cultural groups. In Mumbai, on the other hand, we saw an active rejection of religious traditions mimicking Jovchelovitch's theory of monological cognition that occurs due to non-dialogical interactions.

These findings shed light on the psychological processes that occur within each type of cultural contact zones. Research in the future could focus on the other how morally debated cultural domains of divorce, abortion, suicide, etc. adapt and evolve in response to religious systems colliding with urban processes. This would give us greater insight into the process of liberalization within societies, and how different levels of willingness to punish religious and non-religious moral transgressions across a liberalizing population might drive this change (Verma, 2015). For example, it would be interesting to see how people in traditionally tight societies where divorce is shunned respond to a conflicting culture, where divorce rates are fairly high and is not socially sanctioned by much of the population. Does it lead to the acceptance and normalization of divorce as a whole, or do people form hybridized practices, where they may practice physical separation, but not legal separation?

5.1.3. Understanding collaborative co-construction

The global theme, and hence the overall theme that emerged was that individuals engage in collaborative co-construction to actively adapt to their changing context. Participants in our study engaged with this issue to make decisions about what is acceptable behavior and how to confront conflicting norms, which in turn changes the cultural landscape in which they live.

Understanding how people learn normative beliefs and behaviors socially and collaboratively is central to understanding how cultural change happens. Humans, unlike other species accumulate cultural innovations over time, with each new generation innovating on the beliefs and norms of the last. Though this process has been widely discussed and modeled (e.g. Dean et al., 2012), little work has looked at how people navigate this change.

Out concept of co-constructions relates to Tomasello's (2016) claims about collaborative learning. Children do not just engage in passive transmission of information when learning. Rather, they learn through co-construction. This process has two stages: two parties create a shared representation of the problem, and they have conflicting views on how to solve it. In this, the two parties not only exchange information, but learn to take on each other's point of view to sometimes create a new way of behaving. This behavior then alters the social fabric in which they both exist.

Tomasello (2016) further claims that children of the same age are more motivated to solve problems together. This similar age learning preference (see Henrich and Henrich, 2007) may help to explain why more hybridized representations were mostly formed in Jerusalem – both groups representing opposing cultures were closer in age. Conversely, the two parties in Mumbai had a huge generational gap between them. As such while participants in Mumbai were considering the other's perspective to create new ways of behaving, it often lacked innovation. Nonetheless, in both sites of research, at least one group was considering the norms of the other, while forming their behavioral outcomes. And thus overall, the process was collaborative.

It goes to confirm that individuals are not just absorbing influences from their cultural environment, they make active decisions to act on their surroundings. This finding is supported by Rottschaefer (1984), who claims that people are not just bystanders to influences of the environment, but rather are agentic operators playing an active role in their life course. This active role of the self is confirmed by a meta-analysis done by Yates & Oliveira (2016) who reviewed multiple studies to explain why people from different cultures made different behavioral decisions. They found that "impact of self" (p.112) was a major theme in determining how individuals from different cultures made decisions.

Nonetheless, there is still very limited research on the role of self-reflection, specifically in terms of mood and schema that guide decisions when faced with a cultural conflict, especially one between tight and loose cultures. This presents an exciting avenue for future research to build on.

5.2. Limitations & reflections for future research

Scope for future research can further be identified when the present paper's methodological limitations are considered. The main limitations of this study are: language barrier, researcher positionality, stimuli alienation and sample constitution.

5.2.1. Language barrier

All interviews were conducted in English, however, not all participants were native English speakers. As a result, there was often a communication barrier where participants found it hard to explain certain culturally-laced terms in English. In Mumbai, such cultural terms were understood because of the researcher's shared background, yet were probed for explanation to ensure similar understanding. In Jerusalem, participants often consulted Google translate to communicate what they intended to say. Alvesson (2003) argues that "language constructs rather than mirrors phenomena" (p. 13). It is thus possible that despite the online translating tool, the participants' intended meaning was not accurately communicated.

Furthermore, the mere fact that participants are English speakers indicates how language itself may have given them more access to the loose Western discourses, to which non-English speakers would not have ready access. It is possible that non-English speakers in the two cities do not feel the contact between tight and loose cultures as strongly as English speakers do. This is especially true given that English speakers are a minority in both India and Israel (Census Organization of India, n.d.; Shohamy, 2014). Consequently, the findings of this study may only be representative of English speakers and may not be applicable to other linguistic groups in the cities. This calls for research to be conducted in the native languages of both cities to ensure accurate meaning communication and so that results are more inclusive of other city residents.

5.2.2. Researcher positionality

The researcher's position as both and Indian and a woman could have biased the data collected. Primarily, both the researcher's nationality and gender prevented access to the ultra-orthodox

community in Jerusalem. This is because ultra-orthodox men are not allowed to interact with women outside the family, and it is severely frowned upon for ultra-orthodox women to talk about anything sexual at all (Tsuria, 2016). Because the sample in Jerusalem was not representative of the whole religious spectrum, the data may lack important insights that could be gained from this community. This reinforces the need for the same research to be conducted by a native 'insider' so that more representative data is gathered.

The researcher's position as a woman could have biased the way in which men responded. It is possible that men felt the need to agree with the loose liberal ideas to avoid being perceived as anti-feminist, as can be seen in the following quote by a male respondent

> *"Okay, this sounds a little bit. Okay, again, there's no judgments here. This sounds a little bit like primitive, would be the word for it."*
>
> -r6_Jerusalem

It is possible that many other male respondents may have felt similarly which could have hindered honest responses about how they believed menstruation-related cultural-tasks should be performed. This could explain the lack of dynamic co-existence observed among male respondents in Mumbai. Future research should attempt to increase the similarities between the participants and the researcher in gender and nationality to gather more honest data.

Moreover, the researcher herself was born and raised in Mumbai. This might have impacted the sample collected in Mumbai. In Mumbai, research was conducted using snowball sampling, initially using the researcher's primary contacts. It is likely that this may have biased the sample, such that the participants were closer to the researcher in terms of thought and political outlook. Future research can actively measure people's religiosity before conducting the interviews to ensure that the sample consists of a wide range religious perspectives.

5.2.3. Stimuli alienation

The interview stimuli or advertisements were developed in English-speaking western countries, showing predominantly showed only western-white actors. This possibly created cultural distance between the participants and the stimuli, since none of the participants belonged to a western country. Furthermore, while all the participants from Israel were white themselves, none of the participants from India were. As such, one can assume that the two advertisements were more culturally distant for the Indian participants than the Israeli participants. While, advertisement two (Libresse Ad, representing loose cultures) at least showed a few people of color, this was not the case in advert one (Always Ad, representing tight cultures). It is also possible that such a strong rejection towards the first advertisement had some of its roots in its lack of relatability for the Indian population.

Future research can first perform a preliminary survey to assess how culturally relevant and familiar the stimuli is after the interviews, as a measure of this confounding variable. Or they can change the stimuli to use more locally produced advertisements to generate responses.

5.2.4. Sample constitution

Data collection is believed to be complete when saturation occurs i.e. no new themes emerge from the data (DiCicco-Bloom and Crabtree, 2006). However, given the constraints of time and funds, the researcher was only able to spend a week conducting the interviews in each city. In Mumbai, due the dichotomised nature of the contact between tight and loose cultural spaces, the interviews towards the end seemed to get more repetitive and shorter, indicating that the saturation point was close. However, the same assurance cannot be given for Jerusalem where there is such a large continuum of Judaism and several permutations of religiosity. Consequently, many more interviews are required in Jerusalem to explore the religious scale in depth and to be able to confidently draw conclusions from the present study.

Furthermore, we did not measure individual tight and loose mentalities of the participants (Gelfand, 2018). This means that we did not have an accurate measure of how homogenous or heterogenous our sample was. While implementing this quantitative scale was beyond the scope of our qualitative study, a measure like this could have helped confirm if people in dichotomised settings do have more of an inclination towards looseness than those in diffused spaces. We believe that future research, especially quantitative ones should implement this measure to add robustness to the data collected.

This study also interviewed only cis-gendered people. As such, it does not capture the impact these clashing normative systems may have had on trans, and non-binary people. Future research can be inclusive of these populations, to capture their unique practices and increase the generalizability of these findings.

5.2.5. Generalizability of findings

Qualitative research is often critiqued for its lack of generalizability due to limited sample size. The same would be true of our research, where only 12 participants from each site were interviewed. It is undeniable that 12 people cannot represent a whole culture, since there are many interpersonal difference within a culture. Generalizing to a population is not the goal of qualitative research. Qualitative studies are necessary for an in-depth and nuanced exploration of under-theorised phenomena and focus on understanding how individuals makes sense of stimuli in a given context rather than producing generalisable data. This allows us to identify new or overlooked areas of research. These gaps are more easily overlooked with qualitative measures where the amount of data collected from any one individual is restricted by the pre-selected measures of the researchers. This is particularly problematic when those measured were not designed with a specific cultural context in mind.

In this work, we identified a paradigm of concentrated and diffused cultures producing a variety of non-uniform beliefs and behaviours. Future research should address this in a larger scale and more generalisable way in Mumbai and Jerusalem and beyond. Other forms of contact that could be unique to other culture or sets of norms should additionally be investigated to build a more complete understanding of this phenomenon.

6. Conclusion

This paper examined how menstruation-related rituals and practices evolve when two contrasting ecologies contact. Namely, the focus was on the impact of religious cultures encountering urbanized, diverse, and liberal thinking. The most interesting finding was that contact between conflicting cultures leads to non-uniform beliefs where a multitude of beliefs and cognitions are displayed by one individual. Moreover, the type of contact has a big influence on the behavioral outcomes that are displayed. A concentrated clash between two clearly divided groups often leads to the acceptance of one ecology and its related norms over the other, as was seen in Mumbai. On the other hand, a diffused form of contact from people belonging to the same group often led to people being more motivated to accept norms from each ecology. This led more experimentation with the rituals to form a unique version, specific to themselves, as was witnessed in Jerusalem. Interestingly, this paper also showed that people are, in fact, agentic operators and collaborate with others possessing a different knowledge-system, to guide their own thought and behavior. Overall, this research suggests that current religious practices, especially in relation to menstruation are an adaption to the cultural environment. This suggests that people are not passive recipients of cultural information but are constantly engaging with others in their environment to adapt and bring changes to the cultural environment in which they exist.

Ethics statement

Ethical approval for the study was acquired in April 2019 from the London School of Economic and Political Science's Department of Psychological and Behavioural Science (reference number: 1275). All

participants were presented with a written informed consent sheet and were verbally taken through their rights before the interview began. Written consent, along with verbal consent was acquired from every participant prior to the interview.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: The co-author of this article, Dr. Rita McNamara is a co-editor of the "Ecologies of Belief and Practice: Environmental influences on religion across cultural contexts" special issue and is an Associate Editor for Current Research in Ecological and Social Psychology. Given their role they had no access to information regarding its peer-review. All other authors have declared no conflict of interest.

Data availability

The data that has been used is confidential.

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