

Making 'Shiny' or Avoiding 'Sticky': A Cross-Cultural Comparison of Household Bathroom Cleaning Practices

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Agradecimento à orgão de fomento:

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brazil (CAPES) - Finance Code 001.

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ABSTRACT

This paper examines how bathroom cleaning practices are undertaken in different national contexts, unpacking what counts as "normal" and how this comes about. It is based on twelve oral histories, both from Brazilian residents (three Brazilian locals and two English migrants) and English residents (two Brazilian migrants, one English local, and two cross-national couples). We use this data to examine different social conventions of how cleanliness in bathrooms is achieved, its procedures, the interplay between partners, their ideas of cleanliness as a couple, and the various procedures associated with these practices. We draw on the specificity of both locals and migrants' experiences to cast light on social conventions in the performance of bathroom cleaning, allowing us also to think about potential interventions to promote environmentally sustainable water use. Overall, the analysis provides an original account of cleaning routines in two cultural contexts, which offers interesting insights for those addressing sustainability, consumer behaviour and water governance. **Keywords**: Practices; Bathroom; Cleaning; Sustainability; Cross-cultural, Cleanliness.

1. INTRODUCTION

The household environment is the setting for many practices. From cooking, cleaning, washing (yourself or something), organising and disposing, these practices are part of everyday life. Practices are performed for different reasons, with different ends in mind, and vary according to the space in which they are performed, adding a cultural layer to the analysis (Richter, 2011, Pullinger et al., 2013, Barbosa and Veloso, 2014, Jack, 2017).

We can see that people consume many resources in performing daily household practices (Shove, 2003, Richter, 2011, Jack, 2017), indeed increasing amounts of resources are needed to achieve socially shared standards (Pullinger et al., 2013, Jack, 2017, Hansen, 2018), and to live "normal" lives. But what does "normal" mean? Different societies have their own traditions, customs and trajectories of practice (Barbosa and Veloso, 2014, Darmon and Warde, 2019), which impacts on what is widely considered to be "normal".

In this study, through the comparison of bathroom cleaning practices in England and Brazil, we discuss the use of water to achieve cleanliness in household practices, in order to contribute to the discussion of how practices are undertaken in different national contexts, what needs to be done to achieve such standard of cleanliness, and to unpack what counts as "normal" consumption and how this comes about. People have different social conventions of how cleanliness is achieved (Barbosa and Veloso, 2014), which is also influenced by the infrastructures they have access to (e.g. the presence of different flooring materials, like carpet, linoleum or tiles) (Shove, 2003).

As bathroom cleaning procedures differ due to social conventions, and the infrastructure of place, the use of cleaning products will also vary. We can see from research such as, Bray et al. (2011), Joshi and Rahman (2015) and Ritter et al. (2015) that green products are not widely adopted by the market (worldwide, they represent less than 4% of market share). In addition, while in some places people rinse away cleaning products after cleaning, in others the cleaning is done through spraying and scrubbing (without rinsing), which impacts on the volume of water that is both used, and requires treatment.

In this paper we report on our empirical work with Brazilian and English residents using an oral history method to discuss a household water-consuming practice: bathroom cleaning. We compared Brazilian and English residents in this research because both countries have similar conditions of water availability and quality (Rebouças, 2015). However, as we discuss in the following pages, Brazilians usually pursue a high standard of cleanliness in the home (Neves, 2004, Barbosa and Veloso, 2014), while the English are more permissive with more superficial cleaning practices (Shove, 2003, Berkholz et al., 2010, Knamiller, 2011). As already discussed by Jack (2013) and Kruschwitz, et al. (2014), social conventions influence cleaning practices, which reinforces the importance of this discussion.

Although we cannot objectively affirm that Brazilians consume more water per capita than English people (because unlike in Brazil, in England the majority of household water consumption is not metered), English residents seem to be consuming less water in recent years (Browne et al., 2013), while in Brazil the projections from the "Agência Nacional das Águas" (National Water Agency) point to continuous increase in its per capita consumption (ANA, 2019). Rather than focusing on how much is consumed, we are interested in answering question such as: What do Brazilian and English residents consider as necessary practices to achieve cleanliness in the bathroom? Does this understanding affect the way that cleaning practices are performed? How does the use of resources (water, cleaning products) differ in different cultures? When Brazilians move to England, do they clean their bathrooms like Brazilians or like English people?

With these questions in mind, and through the detailed study of one practice (cleaning the bathroom), we explore social conventions in its performance, allowing us a deeper understanding of how these practices operate, and insights into how water saving might be acheived. Also, by focusing on cross-cultural performances of a practice, this paper gives further insights into the discussion of the trajectories and adoption of practices. The analysis provides an original account of cleaning routines, which offers insights for those addressing sustainability, consumer practices, and governance strategy.

2. PRACTICES, WATER CONSUMPTION AND SUSTAINABILITY

Water consuming practices have been a matter of academic interest for more than 20 years (Spaargaren, 1997, Shove, 2003, Browne et al., 2013, Kruschwitz et al., 2014, Evans et al., 2018). While these works focused on: the background roles that practical consciousness and discursive consciousness have on the performance of water-using practices (Spaargaren, 1997), demand management of water consumption in everyday practices (Browne et al., 2013, Kruschwitz et al., 2014), appropriation of technologies and their interaction with "local needs, structures, and patterns" in order to achieve a better quality of life (Evans et al., 2018, p. 12) and trajectory of water consumption patterns (Shove, 2003), there is still a gap in discussion of how water consuming practices differ in different places.

Social practice theories can help us understand both historical antecedents and infrastructures that mould practices (Neves, 2004, Barr, 2015) as well as how specific performances of practice become "normal" (Evans et al., 2018). Three influences on our thinking here were: first, Shove et al. (2012) who describe practices being established, changed or extinguished as a result of the relationship between materials, competencies and meanings of a practice (Shove, 2003, Shove et al., 2012). Second, Darmon and Warde (2019) who discuss food practices performed by English-French cross-national couples observing how these change as they move to new environments. Third, Barbosa and Veloso (2014), who discuss the cultural influences in household practices that relate to sustainability, focusing on Brazilian consumption practices (namely washing, cleaning and eating practices).

Many household practices have common material elements in virtually any modern society: cookers for cooking, water for washing the dishes, showers/baths for personal cleaning and toilets for disposing of human waste, for example. There is some variation, however, and material elements are used in different ways in different places. Further, objects and infrastructures (materials), skills and learning processes (competencies) and socially shared understandings (meanings) are also important in performing practices (Shove et al., 2012). The way in which a practice is performed can vary greatly in different societies, depending on the trajectories that these practices have had (Shove, 2003, Brahic, 2013, Darmon and Warde, 2019).

The same (or similar) practices may have different trajectories when performed in different places (Shove, 2003, Barbosa and Veloso, 2014), highlighting the importance of cultural aspects of performance. Cross-cultural studies indicate that cross-national couples face conflicts in the performance of some practices, as the way that practices were learned in childhood taught them how these activities should be performed and the meanings attributed to them (Darmon and Warde, 2019).

Many household practices, such as washing (e.g. clothes, dishes), personal hygiene, cleaning, cooking and gardening require higher or lower amounts of water depending on how they are performed (Knamiller, 2011; Pullinger et al. 2013). Although similar practices are performed around the world, the elements of practice are organised differently, as are the use of cleaning products (Joshi and Rahman, 2015), infrastructures (Shove, 2003), and expectations of how cleanliness is achieved (Barbosa and Veloso, 2014). This impacts, among other things, on the sustainability of water consumption. Consuming more water, and creating more polluted effluent, creates more need for resource intensive water treatment.

Treating water waste has long been a concern (Otterpohl et al., 1997, Sharp, 2017). Given that water is a fundamental need, and that many practices in the household use water, water consumption deserves closer examination. Globally, it is estimated that 81% of all our freshwater resources are used in the households (Ivanova, 2015), which shows the household to be an important locus when studying the consumption of this resource.

A cross-cultural comparison is beneficial to mediate a discussion of practice. Howes (1996) notes that what one culture produces can be consumed by another culture, but nothing guarantees that the meanings will be the same, for example. Understanding why a practice should be done in a specific way indicates a particular organisation of the elements of practices. Material objects acquire value in the performance of specific practices and projects because of their roles in their performances, which means that material objects contribute to the way ordinary consumption is shaped (Shove and Araujo, 2010). Given that practices have culturally-specific histories, they reveal meanings and value in different contexts. As we discuss the use of water in a household practice and the relationship of this resource to the process of achieving cleanliness, both for locals and migrants, the contrasting performances of a practice give insights into the practice itself (Cross and Gilly, 2014, Darmon and Warde, 2019), giving opportunities for people to question what they had internalised as normal.

Our discussion is culturally relevant because it digs deeper into what constitutes "normality" in two countries (Evans et al., 2018). We have evidence that, even though "what it is expected from a bathroom" and "what cleanliness is" are do not seem to be greatly different between the two countries we investigated here, we do have evidence that the process of achieving cleanliness differs. While in Brazil, evidence show us that locals engage in cleaning processes that try to make things spotless and immaculate as clean as pure water (which requires high amounts of water and cleaning product resources in virtually every household cleaning practice) (Barbosa and Veloso, 2014, Ritter et al., 2015), in England this does not seem to be the case, as people tend to rely on procedures that do not require such high standards (Shove, 2003, Knamiller, 2011, Sharp, 2017).

Through a discussion of bathroom cleaning practices, our research offers the following contributions to the literature: 1) a comparison of a (water consuming) practice across two cultures, from the perspective of locals and migrants: by focusing on the nature of the practices that British and Brazilian residents engage in when cleaning their bathrooms, we help to uncover how the elements of the practice relate to each other; 2) we discuss a water

consuming practice from a sustainable development perspective, by asking people about the environmental impacts of their bathroom cleaning practices, the procedures involved to achieve such cleanliness and the use of resources in the practice. This offers insights for companies and governments to better target products and interventions in the two nations.

3. METHOD

In this paper we report on our qualitative interviews with two groups of people: Brazilian residents and English residents. As we were interested in understanding how a household water consuming practice (bathroom cleaning) was performed in different countries, we needed to explore both the way that the practice was currently performed and how the individuals learned to perform it. We chose to use the Oral History method (Janesick, 2010), which can be used both for data construction and analysis (Chaitin, 2008) and is also a method compatible with the theory of practice (Hards, 2011, Browne et al., 2014). As each person has their own history, the interview scripts were minimally structured. We undertook three interviews with each person, recorded on different days (usually, once a week), each focusing on a different aspect of the elements of practice described by Shove et al. (2012).

All the interviews were carried by the lead author and discussed among all the authors, an inter-cultural team writing on this topic. Interviewees were urban residents, in cities where there are no regular water shortages. The scripts went from general to specific questions (Ritchie, 2015), using follow-on questions (Janesick, 2010), on multiple days (Gaffuri, 2016, Thompson and Bornat, 2017), and the data was analysed in a way that has social value (Thompson and Bornat, 2017), following a narrative analysis approach (Janesick, 2010, Thompson and Bornat, 2017) that evidences the individuals' realities (Barros and Lopes, 2014).

The first interview was oriented towards the material elements, aiming to find out what people do and the way that they do it. Here we asked people to detail the practice, namely the activity of cleaning their bathrooms. We then went further into the details and procedures (e.g. What do you use to clean the floor? What is the layout of your bathroom? Are shower and bath separated from each other or built-in?).

Follow-up questions were different for each interviewee (these were asked according to the information given by each interviewee to the interviewer), but designed to glean more detail about how the practices were performed. The second interview was oriented towards competencies, exploring how interviewees learned to clean bathrooms. Here, people were asked for details about the trajectory this practice had in their lives, exploring how the practice had evolved. The last interview explored the elements of meanings. The interviewees were asked to divulge their perceptions about the way they performed the practices and how these relate to the meanings of sustainability, cleanliness, necessity and waste.

Interviewees came from a range of backgrounds, all of them were adults, and only one (Brazilian, local) was still living with his parents. We searched mainly for adults who do not live with their parents, to ensure that they perform most cleaning practices in their households.

The interviewees were reached through the social network of the lead researchers: all of them either an acquaintance of this researcher (known but not close) or were referred by someone known by this researcher, which made the acceptance for multiple interviews easier. Every interview was carried out in a time and a place chosen by the interviewees, most of them at the person's home. Also, every interviewee signed a consent form and gave oral consent recorded at the beginning of the first interview. We assured the confidentiality of every interview choosing to refer to them with a code I (from "interviewee) plus a number

(e.g. I2, I7, I11) in this text. The number refers to the order people were reached in their groups (i.e. Brazilian local, Brazilian migrant, English local, English migrant).

In total, twelve sets of interviews were analysed: five from Brazilian residents (three Brazilian locals and two English migrants) and seven from English residents (one English, two Brazilians, one English-Brazilian couple, and one Irish-Brazilian couple), generating twelve stories of approximately four hours each (representing over 40 hours of data).

Even though in practice research some consider that "there is too much emphasis on the individual" (Browne et al., 2013, p. 1015), and that the focus of the analysis should be on practices (Shove et al., 2012), we follow Evans et al. (2018) in that we think it is important to understand what people think about their practices in order to understand consumption. Although we worked with narratives and memories (which focus on the individuals) (Maller and Strengers, 2013, Darmon and Warde, 2019), this is compatible with the general practice approach as we accessed a rich understanding of practices through the individuals' narratives.

4. CULTURAL DIFFERENCES IN WATER CONSUMING PRACTICES

We have evidence that Brazilian and English residents consume water differently, with Brazilians also being linked to higher per capita use of water (Rebouças, 2015). This may be related to discussions present in works as Neves (2004) and Barbosa and Veloso (2014) about the Brazilian cultural conventions of achieving cleanliness. Our data revealed that these conventions are different from the English ones, which offered an additional light to the discussions of how the different elements of practice (Shove et al., 2012) are organised and reorganised in different cultures. Here we characterise the Brazilian and English approaches to bathroom cleaning in turn.

4.1. "making shiny", the Brazilian way

Brazilian and English bathrooms are built differently. In Brazil, they are waterproof, with tiled walls and floor. The floor (outside the shower area) also has a plughole in it that allows cleaning water to be easily drained away. There is a bin to throw toilet paper in, as Brazilian water companies do not recommend that people flush anything down the toilet. There is frequently a hygienic douche next to the toilet (explained below). People usually use showers and do not have a bath. When houses do have baths, they are in the main bedroom of the house (en suite) and separate from the shower. Bathrooms in Brazil generally also have a window, and extraction fans are not common. A sink and a mirror complete the room, with shelves or cabinets to store toiletries.

This bathroom configuration impacts on the way in which bathroom cleaning is performed. In Brazil, it is common to use clean water mixed with chemical products to scrub or mop the surfaces of the bathroom, followed by rinsing them with clean water. The following excerpt is from one of the Brazilian locals, but all of them reported similar procedures.

Q: How much time do you take to clean the bathroom?

A: Man... I think the bathroom... half an hour? Until I rub everything... I mean, look... first I sweep the floor, because of the hairs that are there, and I don't like to get them wet, I think it is disgusting. Then I take out the hair, the dust, I don't know, these things that are in the room... I sweep the floor and I take them out. Then I throw water over the floor, I splash washing up liquid around, I throw a cleaning product over it, and I scrub it. Then I clean the sink and I rub the sink with a specific sponge, right? It is a sponge that I use just to clean the sink. Then I scrub the toilet with another sponge... I mean, I clean the toilet, I scrub it and everything. Then I scrub the walls of the shower cubicle, also with a specific sponge, a mop. Then I rinse

everything [shower cubicle and the outside tiled floor/walls areas], I use the squeegee, I wash inside the [shower] cubicle, I scrub the walls inside the cubicle as well... I take out the excess water [pushing it with the floor squeegee to the drain] and I leave the bathroom drying naturally. I don't dry it with a cloth... I just leave it. Then, when it is dried, I go there and I put two bath mats, one to get out the shower and one to get out the bathroom. Then I put back the toilet roll and I take out the litter. I think half an hour. In half an hour I do everything. (I1, Brazilian, local, male, 24 years old).

This procedure reinforces the discussion of Neves (2004) and Barbosa and Veloso (2014) that for Brazilians cleaning goes beyond "cleaning", but turns into "deep cleaning", as it is performed deeply on a regular basis (in Brazil, the interviewees said they do this weekly). Brazilian standards of achieving cleanliness link the use of water closely to this practice, as the activity has the objective of making the bathroom shine, making it look as clear as pure water (Barbosa and Veloso, 2014).

However, I12 said she does not throw water in her bathrooms, she only mops them: "for the actual floor, outside the cubicle, I would use a mop the same way I would use for the normal floors. MAYBE, sometimes I would use a special bathroom product for the floor" (I12, English, migrant living in Brazil, female, 25 years old, capitals indicate emphasis). Even though I11 (English, migrant living in Brazil, male, 49 years old) does not clean his bathrooms himself (his family hires a twice-a-week cleaner), his answer indicated he would do the same as I12. Both of their answers converge to the argument that Brazilians rely much on water use for cleaning (general).

The presence of water, and its availability in particular technologies, also impacts on conventions of personal cleaning. Many Brazilian bathrooms have a piece of equipment known as "hygienic douche", which has become more common since the beginning of the 2000s, when household layouts became more focused on convenience and things became more compact (products and facilities), so people could save space in their homes (Cypriano and Pépece, 2016). This item is located near the toilet, being a modern/compact version of a bidet (a facility used to clean oneself after using the toilet), reinforcing the discussion of reconfigurations of practices (Shove et al., 2012), where the material element changed (from bidets to hygienic douches), but the competencies (how to use a water jet to clean yourself) and the meanings (cleanliness and convenience, for example) remained almost the same. This equipment is also used to help in bathroom cleaning, as it can be used as a hose.

Questioning the interviewees about the way they learned how to clean their bathrooms, we can group their answers in two groups: (1) if in Brazil, the person mimics the way the practice was done in their parents' house; or (2) if in England, the person is forced to adjust the way of doing the cleaning, because in England the bathrooms do not allow for deep cleaning as in Brazil (mainly due to the absence of plugholes outside the shower area).

The cleaning procedure previously described occurred in every interview where the Brazilians were living in Brazil. On the other hand, when Brazilians migrated to England, they started cleaning the bathrooms differently. A detailed description of the English bathrooms is presented in the following section (4.2.), but we can summarise the differences as the absence of waterproof walls/floor and absence of a plughole in the floor (outside the shower/bath area). In this new environment, Brazilian migrants could not "wash" their bathrooms, so how do they do their cleaning?

A: I use the shower... I spray everything with these good products, and then I just go inside, as if I am going to shower, and I rinse with the shower. And that is the cubicle. And then I clean the glass with the same kind of products, to get rid of the limescale. Because, you know, it marks a lot. So, yeah, when I clean, I use quite a bit of water... but I also rinse all these cloths that I use in the toilet. And I think that is very clean at the time I just cleaned it, so I just flush the toilet

and I rinse. So it is not like I'm using extra, extra amounts of water, but I do when I clean. And I like to think that I only do that once a month-ish. I don't do that every week. So... do it properly when I do, but no.

Q: And, in the bathroom... the walls... the floor. Do you also clean with the products? You throw water? How is it? Because... I don't know if you have a plughole in the floor to THROW water and clean the bathroom. How is it?

A: No, no, we don't do that. I, literally... hoover and wipe. Yeah, this thing of throwing water is a very Brazilian thing. This floor here [kitchen, tiled], hoover it very well. And get it a wet cloth... and just mop. We are the mopping generation. Let's be honest, this is for outside as well, you won't see me throwing water. No, no, no, no, no. It is very much INSIDE the cubicle we will rinse. Then we will clean the tap and clean the sink, and use the tap... I don't even use a bucket, to be honest, when I clean the bathrooms. And it is always the case, if you really hoover well the house, every surface, then all you have to do is to wipe. You don't HAVE to throw water. (I6, Brazilian, migrant living in England, female, 51 years old, capitals indicate emphasis).

Although this different cleaning procedure is directly related to a difference in the material elements (Shove et al., 2012), this is also linked to meanings, as infrastructure reflects what the society considers important (Shove, 2003, Neves, 2004, Cypriano and Pépece, 2016). For example, in the last 40 years, in Brazilian cities new–build apartments are changing, as inhabitants' preferences for many rooms shifted to a design focused on fewer and shared rooms, related to changes in culture and family structure (Cypriano and Pépece, 2016).

Usually, Brazilians perform a weekly deep clean in their houses (Barbosa and Veloso, 2014), combining vacuuming and/or the use of a wet cloth/mop. We found the presence of water in every Brazilian interview, which means that, in Brazil, water is related to the process of achieving cleanliness. Asking them how did they come up with this way of cleaning, the interviewees tend to replicate the way the cleaning was done in their parents, whether they were responsible for it in their childhood or not.

Q: Cleaning the bathroom... do you remember how did you learn this? If someone taught you, if you learned by your own... how was it?

A: I think... I think I learned with my parents, I don't know. Cleaning the toilet when you miss the target when peeing, you know? I learned to use that Veja [cleaning product], you know, the orange one. It is good. I think I learned by seeing, learned by someone showing how to, I don't know (I3, Brazilian, local, male, 22 years old).

This was the case with all the Brazilians residents. Even when people had never cleaned bathrooms at their parents' homes, they tended to replicate the procedure when they moved out seeing it as some kind of 'proper' way (Evans, 2018). When Brazilians migrated to England, they could not perform the practice as they wanted to. The infrastructure required these people to challenge their competencies, but they tended to not recognise this procedure as "clean" as in the way they used to do it (or see it done) in Brazil.

Q: The bathroom here [England]... you do not clean it throwing water, you just vacuum it. Do you...[interrupted].

A: [interrupts] It is not ideal. It is a cleaning you do with what you have. It is adapted. I think one day, if I could choose, I would choose to have a bathroom with a plughole (I4, Brazilian, migrant living in England, female, 28 years old).

In this way, we can see that – besides the chemical products – the presence of water, for Brazilians, is a material element for cleaning the bathroom. Lots of water needs to be used

(in washing and rinsing) in order for the bathroom to be considered properly cleaned (Barbosa and Veloso, 2014). Water, in this way, ends up playing a role as a material element that also holds the meaning of "cleanliness".

However, the use of other material elements is virtually the same as in England, as the next section will indicate. Brazilian migrants were asked about their perceptions about the effectiveness of cleaning products in Brazil and in England and all of them indicated that the performance was similar. Even the brands were the same.

Thus, the difference relies on the presence of water in this process of achieving cleanliness, which requires additional steps in the performance of this practice (e.g. rinsing and drying everything). As I6's excerpt indicates, this is a Brazilian cultural trait, which could even have influence on household designs, affecting the way a "proper" bathroom should be built (Cypriano and Pépece, 2016).

Therefore, for Brazilians, the use of water is strongly related to achieving cleanliness (Neves, 2004, Barbosa and Veloso, 2014). Even when migrating from Brazil, they tend to relate the ideal clean as the one described by I1, which shows a cultural influence in the performance of the practice (Shove et al., 2012). The English, on the other hand, clean their bathrooms differently.

4.2. "avoiding sticky", the English way

English bathrooms are different from those found in Brazil. They are not waterproof, and the way they are built does not allow people to throw water on the surfaces to clean them. The floor (usually) is made of linoleum-based materials and tiles may be found only on the wall in the bath and sink areas (although sometimes tiled floors may be found, they do not have plugholes). There is also frequently a shower system above the bath with a shower curtain or glass screen. People usually flush toilet paper down the toilet, although the water companies do not recommend this procedure for the disposal of some items (e.g. baby wipes, sanitary protection). For items like these (and other toiletries, like blades and packaging) people keep a bin in the room, even though some might flush things water companies do not recommend. Also, it is relatively common to find bathrooms without windows, equipped only with an extractor fan to take the odours and the humidity out of the room.

As in Brazil, the way the bathroom is built impacts on the way the cleaning is done. In England, people do not rely on water so much. They sweep and/or vacuum the floor, then use a cleaning product (spray or diluted on water) over the tiles and scrub them to remove the mould. The sink and toilet are also scrubbed. The floor is usually cleaned with a wet cloth or a mop, drying all the bathroom after to avoid the formation of mould. The excerpt below describes how an English person cleaned her bathroom:

A: You spray a cleaner. And get your cloth. Stand in the bath, because mine is a big bath.

Q: But you spray in the walls? On the floor?

A: No, no. All the bathroom first. All the walls. And do all that, rinse it all off, and then you do the window edges. Then you do the sink and the vanity unit.

Q: So you have windows in your bathroom?

A: Yes, two.

Q: Hmm. So... your cleaning.

A: And then just the toilet and then the floor. Spray everything and then wash it down and then dry it. And close the door.

Q: You spray everything, but how do you rinse it? A wet cloth or you throw water?

A: No. In the shower I use the shower hose. And the sink I use the jug with water in it. And the floor I use a bucket.

Q: You throw water? How is it?

A: Throw water? [laughs] THROW WATER? [laughs] No, no "throw water". Just empty the jug around the sink and then get a cloth and just take all the soap off. And then dry it with another cloth (I8, English, local, female, 67 years old, capitals indicate emphasis).

Unlike in Brazil, in England people do not usually have a specific day for cleaning. Asking them how they decide when it is time to clean, their answers relied on "we do the basics" (I10, English, local, male, 48 years old) without a defined periodicity. "So… it is… having space in a kind of orderly state is something that, I would say, is something that is desirable. (I10).

This "kind of orderly state" is a situation that appeared when asking the interviewees more broadly about their standards of cleanliness and how they achieve them. Although some might have a routine on this (I8, who hosts short-term students in her home, cleans her bathroom weekly), the remaining interviewees' answers (English locals) reaffirmed I10's quote. The following quote, from one of the cross-national couples (the first interview, where we questioned the couples about their way of performing the practice, was done with both partners; the following interviews were done individually) shows how having things "shining" is not particularly desired in England.

Q: In the house routine... the cleanings. Is there any specific day that you do the cleaning of the house?

I9: No [laughs loudly]. When it gets too dirty to not be able to live in it. I mean... [interrupted] I7: [interrupts] Well, we have different levels of what dirt we should live with.

I9: It is not a specific day. If the cooker is particularly dirty, we wash the top of the cooker. And... sweep the kitchen floor. There is no washing the windows or something like that. It doesn't happen.

I7: No... sometimes we decide that we need to clean the house.

19: Some before we go on holidays. So, we are going to holidays in two weeks. The LAST day before we go on holidays, we would spend about FOUR hours cleaning the house... completely. And then, when we come back, it is like "aaaaaah" [with a pleasant expression] [laughs]. It is nice how it is clean, you know? I mean, clean everything. Wash the cooker, wash the stove... wash the bathroom, the tiled walls. Pretty much everything. We just do it... maybe twice a year? Sometimes three times a year?

I7: Well, I do some days that I just go "well, this is a disgrace", and I start sweeping [laughs]. Usually when I am working from home. I am already working, and I look around, and I think "well... I gotta to do something about it"... usually, sweep the floor... what else do I do? In the bathroom as well, sometimes, I think "this is a disgrace" [laughs] (I7, Brazilian, migrant living in England, female, 45 years old; I9, Irish, local, male, 44 years old).

None of the interviewees reported buying eco-labelled products to clean their bathrooms. As this room was highly associated with hygiene, people tended to use strong products such as bleach. This occurred both in Brazil (weekly cleaning) and in England (eventual cleaning).

Q: Yeah, my follow-up question would be exactly like this... if you think about the impact on the water or the effort that would be required to treat the water after using the products.

A: Yeah, I understand about treating the water and my sister was telling me. I think the only solution, [interviewer's name], is... don't clean very often [laughs]. Just don't use it all the time. Just be very economical how you use it. Having said that, I don't use bleach all the time, even that stuff you put on the toilet, I just don't use that much of it at all. So, yeah, I would say quantity, but I understand the treatment of water is the biggest problem, my sister was explaining to me that "the problem is not the water itself, is treating it" (I6, Brazilian, migrant living in England, female, 51 years old).

Further, when questioning I7 about how did she develop her standards of cleanliness, her answer shows that besides the fact she still keeps some practices as she first learned in Brazil, she adjusted some of her ways of achieving cleanliness. Things do not shine and there is some tolerance about this.

Q: Did you use to clean the bathroom when you were a child? How was it?

17: Yes. Ahm... you washed the floor, here you [laughs] don't do it. Cleaning my bedroom... I didn't have vacuum in my house, so I would just use a broom to take the dust off. Well... nowadays, if it is a quick clean, I still use a broom [laughs], so it must be something from my childhood. It is quicker to take the dust off. Ahm... what else? Cleaning... same thing. Cleaning the kitchen, in Brazil, you deep clean the floor, right? Here you don't. Here, I just vacuum it and, when the floor is dirty, it is greasy, sticky, then I deep clean, brushing it (I7, Brazilian, migrant living in England, female, 45 years old).

However, when talking with Brazilians who are currently living alone in England, they consider that the cleaning they do in England does not allow them to maintain the standards they keep in their bathrooms in Brazil. They were forced to lower their standards of cleanliness due to the material elements they face in the design of the English bathrooms. The different design was the main driver for changing the procedure, and the Brazilians adapted their cleaning on their own (without discussing it with others).

Q: Ok. I don't know... did you notice anything different from your activities after our last conversation? If you were going to do something and this made you think...?

A: I remembered, sometimes, about the bathroom. About cleaning the bathroom, right? I looked at it and I said: "wow, I wish I could throw A BUCKET of water here", and then I remembered it. Throwing a bucket, sweep, cleaning everything. I only do this vacuuming and a wet cloth, right? It is not as hygienic as in Brazil. I thought about it. (I4, Brazilian, migrant living in England, female, 28 years old, capitals indicate emphasis).

As discussed earlier, and in Cypriano and Pépece (2016), the household infrastructure reflects what is considered important in society. While in Brazil hygienic douches are widespread and people are used to these, in the UK they are barely known. The opposite applies to baths: in Brazil people do not use baths regularly (they are almost decorative), while in England baths are used frequently, they are mandatory in the room. In Shove (2003), we see that English locals used to only have baths once or twice a week, whereas in Browne et al. (2014) we see that, nowadays, the majority of people (locals and migrants) have daily showers with occasional baths. Also, England is colder than Brazil as a whole (which could make uncomfortable the use of hard floors), so probably the bathroom design and construction reflects these differences, and ends up impacting on the way they are cleaned.

These differences in design might also be related to cultural conventions on cleanliness, however (Berkholz et al., 2010). Questioning the interviewees about how they decide when the cleaning should be done, the answers did not vary so much in terms of the periodicity of different rooms (bathrooms, bedrooms, kitchen and other rooms were cleaned with similar periodicity), but the depth of the cleaning was very different between English and Brazilians households.

The differences (compared to Brazil), thus, rely more on the elements of meaning. Besides the similarities involving chemical products (even the brands were similar) and tools used to clean the bathroom (mainly sponges, cloths and mops), we also identify differences in the design of English and Brazilians bathrooms. This, as we discussed earlier, can be tracked back to elements of meanings in fact. Bathrooms are built in a particular way and they both reflect and require a specific practice of cleaning, according to what is considered important in that social context (Shove, 2003, Cypriano and Pépece, 2016). In contrast to Brazil, where people do clean routinely and using extra lots of water, in England the reality points to a scenario where people prefer to save effort by doing maintenance cleaning (instead of deep cleaning).

Water does not have such a strong meaning attached to it in English practice as it occurs in the Brazilian culture. In England, the elements of the practice of cleaning the bathroom seem to orbit meanings of convenience, whereas in Brazil these elements seem to be attached to the meaning of cleanliness (Shove, 2003).

Therefore, the different shared conventions about achieving cleanliness we see in English and Brazilian households seem to shape how bathrooms are designed, which in turn impacts directly on the way that bathroom cleaning practices are performed. As the excerpt from I4 reveals, she would like to perform the practice in the way that she learned in Brazil, but the material elements required her to adjust her competencies to do the cleaning of the room. Also, as she could not do it in the way she originally learned in Brazil, this situation also reflects the influence of the elements of meanings in this practice.

5. DISCUSSION AND CONCLUSIONS

Before we present our conclusions, we would like to make a disclaimer here. As we are an inter-cultural team, we did not intend to claim that one of the two countries perform the practice in a "better" way, we instead intended to offer some reflections that could be useful for consideration in both contexts, with a view to a less environmentally impactful use of resources.

Our analysis of bathroom cleaning has explored cultural patterns and differences in performing this practice both for locals and migrants. Taking the insights together, some arguments about the use of water to achieve cleanliness in the practice of bathroom cleaning, cultural conventions and the adjustments made by migrants emerge which we elaborate further here. First, there appears to be a window of opportunity to rethink a practice when people face a situation in which they could not perform a practice in the way they would like or had previously learned. Second, the environmental impact of the products and water used for cleaning the bathroom is something that was missing from both Brazilian and English responses. People do not take environmental impacts into account when cleaning bathrooms in either nation. Third, the procedures to achieve cleanliness of a cross-national couple tends to meet somewhere in the middle of the procedures of each individual. These three arguments are discussed below. Table 1 summarises our findings.

Bathroom cleaning	Location	Perspective	Main characteristic(s)
Periodicity	Brazil	Brazilian local	Weekly (everyone).
		English migrant	Weekly (everyone).
	England	English local	Mainly without
			established periodicity.
		Brazilian migrant	Mainly without
			established periodicity.
Materials involved	Brazil	Brazilian local	Sponges, cloth and/or mop, (non-eco) chemical
		English migrant	
	England	Brazilian migrant	products, water.
		English local	products, water.
How is water used?	Brazil	Brazilian local	Plays an active role in the
			process of achieving
			cleanliness, rinsing the

			bathroom in the end of the cleaning process.
		English migrant	Only used if the chemical products require dilution.
	England	English local	Only used if the chemical products require dilution.
		Brazilian migrant	Less apparent from the cleaning process due to limitation imposed by the design of the room.
Cultural expectations to achieve cleanliness	Brazil	Brazilian local	Making shiny.
		Brazilian migrant	Making shiny.
	England	English local	Avoiding sticky.
		English migrant	Avoiding sticky.

Table 1. Main results.

Source: Field research (2019).

The window of opportunity, our first argument, is based on the interviews with Brazilian migrants. These people were used to deep cleaning their bathrooms or, at least, they had in their minds the "proper way" of doing this based on how the bathrooms were cleaned in their parents' homes. Brazilians tend to rely on a high use of water (Neves, 2004, Barbosa and Veloso, 2014, Ritter et al., 2015) and they do not usually rethink this cleaning procedure. But, once they migrated to England, where the bathrooms have a design that does not allow the cleaning to be done as in Brazil, this creates a "window of opportunity". As the person cannot reproduce the practice in the Brazilian way, he/she actively thinks a different way of cleaning, although some may not recognise this other way as a "proper" way of achieving cleanliness.

Practices are frequently reproduced without active deliberation, which supports the literature (Neves, 2004, Berkholz et al., 2010, Shove et al., 2012, Barbosa and Veloso, 2014). This situation suggests that moving to a new environment represents a possible moment of intervention that could be explored by different players of the market, as locals from one place may not be aware of some singularities from another (as the surprise expressed by I10 when told that Brazilians deep clean their bathrooms throwing water). Real estate companies could offer training considering environmentally friendly procedures, and green products brands could offer free samples and explanations to new tenants, for example.

Also, we would suggest that future research investigates if campaigns targeting people moving out their parents' homes to a new place in the same country would be more receptive to change their cleaning practices to more environmentally friendly ones. Considering that people tend to reproduce a practice in the way they learned at home (thinking of it as the proper way) (Shove, 2003, Shove et al., 2012, Evans et al., 2018), we think that moving in to a new place, and taking new responsibilities, is a time when people might be more receptive to change. We also anticipate that new relationships (in this case inter-cultural ones) will have an impact on how practices are performed. This suggests that there is potential to explore transformation of practice through social relations, whether in existing or new household settings.

Besides the suggestions mentioned above, a more radical one in the Brazilian context would be to build bathrooms which people could not deep clean by throwing water around as they currently do, in order to save water. As people expect to find plugholes in their bathrooms, this would involve marketing efforts to gradually change such perception, which could involve multiple players (e.g. government, real estate companies, NGOs, cleaning products companies). Also, perhaps, as we saw limited evidence of use of eco-labelled products – considering none of the interviews reported using such products to clean their bathrooms – (Joshi and Rahman, 2015), government could play a role in advocating that people should use less of regular products in the first instance. We suggest the government makes the first move here because this would go against companies' interests, as it involves people buying less products. Later, the communications (now both from the government and from the companies) could focus on making people aware that the outcomes provided by eco-labelled are similar (Bray et al., 2011, Joshi and Rahman, 2015).

Last, we have shown here that people's different cultural backgrounds influence the way that they perform a practice: this is particularly evident with the cross-national couples, as also noted by Darmon and Warde (2019). We found that the way a cross-national couple achieves cleanliness tend to be somewhere in the middle of the way each partner does the cleaning. However, this is something that goes beyond bathroom cleaning only, it is also apparent in other cleaning in the household environment.

The socially shared standard of achieving cleanliness in the bathroom tends to bypass any concerns with the environment, as people use strong products to disinfect the room, a high amount of resources (water), especially in Brazil, and do not usually think about the disposal of these products. It would be interesting to find out if cleaning other parts of the household are associated with different levels of environmental awareness. Further, we need to check if other water related practices performed both in the bathroom (e.g. showering/bathing) and in different rooms (e.g. washing the dishes) are so strongly influenced by the material environment as is bathroom cleaning (see Maller and Strengers, 2013). The study of practices in different households is something that these authors defend as important to understand the trajectories of the practices. Here, we analysed the trajectories of the same practice in different cultures and this provides another path for future research.

Additionally, we believe that both nations have unique characteristics that should be addressed when discussing sustainability issues. Besides the managerial suggestions presented earlier, our discussions could also be used in advertisements and for political ends, for example. While in Brazil green products should communicate environmentally friendly aspects of the product along with "shining" outcomes (considering the strong relationship water has with the process of achieving cleanliness in the bathrooms), in England the communications should combine these aspects with "convenience" (as water use here is kept in a minimum level, mainly used to dilute chemical products when required in their instructions). Also, we imagine that such meanings could be used in governmental campaigns to raise consumers' environmental awareness, and in turn impact the use of natural resources (water) as well as the market share of some cleaning products (green products) (Shove, 2003, Spaargaren and Oosterveer, 2010).

It is clear from our work that people's upbringing, expectations of how cleanliness is achieved and their social and material context shape how they perform the practice of bathroom cleaning, all elements that are familiar to those studying practices. However, when people's contexts change (for instance in our study when they migrate to another cultural context) we can see that they are particularly influenced by the material elements, as they come from a different background that may consider important different infrastructures to properly perform some practice. Future discussions need to explore how other common household practices (e.g. washing the dishes) are influenced by the material infrastructure, or if meanings and competencies play a greater role.

Lastly, a further research agenda could explore deeper psychological and historical cultural influences, such as religious beliefs and historical backgrounds influencing people's perceptions about cleanliness, purity, privacy, nudity and so on, considering that the bathroom is a place where people remove their clothes to get themselves cleaned. As we are so exposed

in this room, this may have a bearing on the necessity some cultures have to achieve cleanliness at such deep levels.

FUNDING

This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brazil (CAPES) - Finance Code 001.

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