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GABRIEL HENRIQUE PIMENTA ISBOLI

HOUSEHOLD WATER CONSUMING PRACTICES: A cross-cultural discussion for Brazilian and English residents

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Doctoral thesis submitted to Business School Postgraduate Program at Universidade Estadual de Maringá, as partial requirement for the degree of Doctor in Business.

Supervisor:
Prof Dr Olga Maria Coutinho Pépece

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"Therefore, the problem is not so much to see what nobody has yet seen, but rather to think concerning that which everybody sees, what nobody has yet thought". (Arthur Schöpenhauer)

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a cross-cultural discussion for Brazilian and English residents

Tese apresentada ao Programa de Pós-Graduação em Administração da Universidade Estadual de Maringá, como requisito parcial para obtenção do título de doutor em Administração, sob apreciação da seguinte banca examinadora:
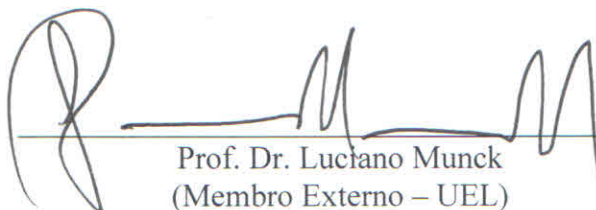
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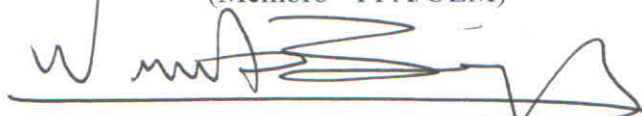(Membro Externo – UFPB)

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Prof. Dr. Luciano Munck
(Membro Externo – UEL)

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Prof. Dr. Francisco Giovanni David Vieira
(Membro - PPA/UEM)

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Prof. Dr. William Antonio Borges
(Membro - PPA/UEM)

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ABSTRACT

This thesis intends to study how cultural environments (original and current) embody singularities in household water consuming practices in Brazil and England. In order to do this, the research combines the use of Elizabeth Shove's practice theory along with Daniel Miller's discussions on consumption to cross-culturally explore this objective. I assume that consumption practices have contradictions (the environmental consciousness of one practice does not guarantee the environmental awareness of every practice) and that discussions involving practices should consider subjectivities. This research followed a qualitative approach, being the data constructed through interviews with five Brazilian residents (three Brazilians and two English), all of them living in Maringá (Paraná), and seven English residents (two Brazilian, one English, one Brazilian-English couple, and one Brazilian-Irish couple). The utilised methodology was oral history, which guided both field data construction and analysis. The search for the main objective of understanding how the concept of sustainability is performed through Brazilian and English household water consuming practices, the analyses focused on three practices common to both countries (washing clothes, cleaning bathrooms, and washing dishes), and the results indicate that Brazilians look for feeling more comfortable in the household environment, even if this would require higher use of resources to achieve more pleasant results related to deep cleanings; on the other hand, English look for higher convenience through using less time and relying less on water (higher preference for specific products), which makes them accept more of superficial cleanings standards. The study presents theoretical contributions (1) by focusing on the practitioners (instead of focusing on the practices) as a way to discuss social practices, (2) by demonstrating that the performance of a practice in a specific way can be something forced by the structure, and the practitioner would desire to perform this practice differently, (3) by describing that Brazilians and English guide themselves differently to perform household practices, which impacts in saying that sustainable consumption is something culturally built. It also contributes methodologically by providing a research protocol to the use of practice theory along with oral history in cross-cultural studies.

Keywords: Consumption. Water. Sustainability. Cross-cultural. Oral History.

RESUMO

Esta tese se dedica a estudar como ambientes culturais (de origem e atual) incorporam particularidades em práticas de consumo de água nas residências brasileiras e inglesas. Para isso, o trabalho combina o uso da teoria da prática de Elizabeth Shove juntamente com as discussões de consumo de Daniel Miller para explorar esse objetivo de maneira *cross-cultural*. Assumo que as práticas de consumo possuem contradições (a preocupação ambiental em uma prática não garante a preocupação ambiental em todas as práticas) e que discussões envolvendo práticas devem considerar subjetividades. A pesquisa aqui desenvolvida seguiu um direcionamento qualitativo, sendo os dados construídos por meio de entrevistas com cinco residentes no Brasil (três brasileiros e dois ingleses), todos na cidade de Maringá (Paraná) e sete residentes na Inglaterra (dois brasileiros, uma inglesa, um casal brasileira-inglês e um casal brasileira-irlandês), residentes nas cidades de Leeds e York (ambas Yorkshire). A metodologia utilizada foi a história oral, a qual guiou tanto a construção como a análise dos dados na etapa de campo. Na busca do objetivo principal de entender como o conceito de sustentabilidade é realizado por meio de práticas de consumo de água em residências brasileiras e inglesas, as análises se concentraram em três práticas comuns a ambos os países (lavar roupas, limpar banheiros e lavar louças) e os resultados indicam que brasileiros buscam se sentir confortáveis no ambiente do lar, mesmo que isso envolva maior uso de recursos para atingir resultados mais satisfatórios em termos de uma limpeza mais profunda; ao passo que os ingleses buscam maior conveniência por meio de menor uso de tempo e menor dependência do uso de água (maior preferência por produtos específicos para cada caso), o que os faz aceitar padrões de limpeza mais superficiais. A pesquisa apresenta contribuições teóricas (1) ao direcionar o foco aos praticantes (em vez do foco estar nas práticas) como forma de discutir práticas sociais, (2) ao demonstrar que a realização da prática de uma forma específica pode ser uma imposição da estrutura, com a pessoa desejando realizar a prática de maneira diferente, (3) ao descrever que brasileiros e ingleses se orientam de maneira diferente para a realização de práticas no ambiente residencial, o que impacta no consumo sustentável como sendo algo culturalmente construído. Também contribui metodologicamente ao fornecer um protocolo de pesquisa para o uso da teoria da prática juntamente com a história oral em estudos *cross-cultural*.

Palavras-chave: Consumo. Água. Sustentabilidade. Cross-cultural. História Oral.

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SUMMARY

1. INTRODUCTION

Water is vital to life. Not human life only, but several other species need water to survive. In fact, we can say humans only exist (and evolved into what we see today) because of this resource, as almost everything we do involve its use in some way.

Water may be one of the most valuable resources in the world. It is a notorious fact that 70% of the Earth is water. All this amount of water (approximately 1,360 quadrillion tons) can be used for different purposes, and Lanna and Braga (2015) present some functions:

a) Production and consumption: here, water is characterised as being a good of both final consumption (as for human consumption) and, also, a good of intermediate consumption (e.g. in industrial and agricultural production processes);

b) Dilution: its use refers to the cleaning or purification of undesirable substances. The water is clean, filtered and neutralised (in treatments for sanitary control, for example);

c) Support: water serves as both shelter for life (being the natural habitat of species) and also as a facilitator of activities (transport);

d) Information: it is possible to use water as an indicator, and this allows us to know the particularities of environments such as contaminations and chemical properties.

The vision of Lanna and Braga (2015), even if comprehensive, is limited in discussions regarding water consumption, as we can think this consumption beyond hydro-economy. Brei's thesis (2007) supports this thought: bottled water, when identified as a product (instead of a natural resource), can be worked in such a way as to have value recognised for those who consume it, thus possessing different meanings. This difference happens to bottled water, where Brei shows that the discourses employed in the communications of bottled water companies to the market can work positioning themselves considering various criteria, such as gender, functional or even hedonic appeals, with the water consumed being seen even as status.

Therefore, due to the multiplicity of uses, we can study water in different directions (e.g. importance of water as a natural resource, its relevance to human and general life, its influence to different chains of production and its particularities as a product). To delimit the research, I chose to delve into the consumption of water by the final consumer, specifically the water provided by the local hydro structure in the urban residential environment, here

called as "tap water"[1]. This choice begins to have its importance highlighted by noticing the percentage of water conducive to human consumption: of all the water existing on the planet, only 2.5% is fresh water, as reported by Fachin and Silva (2012). Of this total freshwater, we can find only 0.3% in rivers and lakes, with the 100% remaining (2.2% freshwater) distributed in glaciers (69%), groundwater (30%) and atmospheric humidity (1%, approximately) (Fachin & Silva, 2012).

With this study I hope to contribute to the understanding of the household tap water consumption with a practical perspective, that is, focusing on the consumption of tap water as a practice and then "determine how systemic moves in this direction [sustainable practices] might be detected" (Shove, Pantzar & Watson, 2012, p. 163).

Several authors work with practice theories, such as Bourdieu (1977), Giddens (1984), Reckwitz (2002), Schatzki (2002), Shove (Shove & Warde, 2002) and others. By my option, in this thesis, I worked with Elizabeth Shove's (and related authors) practice theory. In this approach, there is the understanding that practices result from the link between the available resources (material elements), the knowledge that presupposes the condition (elements of competencies) and the shared meanings (elements of meanings), at a timespace. Thus, it combines the social world into the material world looking for understand the practices and its changes not in a linear way, but as a result of a context that involves the integration of multiple practices (Middlemiss, 2018). Also, I should say this option does not demerit theorists with different approaches, it only serves to delimit and define my theoretical background.

As Shove and Araujo (2010) defend, we can think of mundane as being inseparable from the engagement between practitioners and practices. We are embedded in a context where the material aspects we have access to, the knowledge we possess and the meanings shared are responsible for the way we perform various behaviours (Shove et al., 2012). It allows us to question why some practitioners from one context consider some practice as environmentally acceptable and practitioners from a different context consider the same practice as environmentally non-acceptable, for example.

There is a correlation that economically more developed countries tend to present lower water consumption levels (per capita) when compared to economically developing countries (Rebouças, 2015) and that the context in which the person is inserted plays a vital role in the way the elements of practice are organised (Shove et al., 2012). While in England

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[1]The term "tap water" considers the need for classification discussed by Brei (2007), who differentiated "tap water" from "bottled water".

there seems to be a decrease in the per capita water consumption (Browne, Medd & Anderson, 2013), in Brazil the projections from "Agência Nacional das Águas" (National Water Agency) point to continuous increase in its per capita consumption (ANA, 2019). However, it is still unclear how certain water consuming practices are internalised as being acceptable or not by inhabitants of countries such as those.

Access to drinking water is a global concern, one of the World Health Organization's agendas in the Millennium Development Goals (World Health Organization, 2016). According to this report, in 2010, we reached the target of 88% of the world's population with access to improved sources of drinking water (including items such as plumbing water in buildings, public hydrants, wells and protected springs) and in 2015 that number reached 91%. Still, it is the global average. Europe is the continent in the best situation with the provision of improved drinking water sources (99%), while Africa presents the worst-case scenario (68%). The Americas present the second-best reality (96%), and Table 1 helps to visualise the discrepancy between the average of a region and the reality of each country.

Table 1
Data on the percentage of residences, in the urban area, with potable water and with improved sanitation conditions, separated by countries of the Americas.

Continent	Country	% of residences, in the urban area, with running water	% of residences, in the urban area, with improved sanitation conditions
South America	Argentina	98	96
	Bolivia	96	61
	Brazil	98	88
	Chile	100	100
	Colombia	94	85
	Ecuador	93	87
	Guyana	76	88
	French Guyana	89	95
	Falkland Islands	N/A	N/A
	South Georgia and the South Sandwich Islands	N/A	N/A
	Paraguay	93	95
	Peru	86	82
	Suriname	77	88
	Uruguay	100	97
	Venezuela	90	97
Central America	Antigua e Barbuda	N/A	N/A
	Bahamas	N/A	N/A
	Barbados	N/A	N/A
	Belize	89	93
	Costa Rica	100	95
	Cuba	83	94
	Dominica	78	80

	El Salvador	88	82
	Granada	95	98
	Guatemala	97	78
	Haiti	13	34
	Honduras	97	87
	Jamaica	90	80
	Nicaragua	91	76
	Panama	97	84
	Dominican Republic	76	86
	Saint Lucia	91	85
	Saint Kitts and Nevis	N/A	N/A
	Saint Vincent and the Grenadines	N/A	N/A
	Trinidad and Tobago	N/A	N/A
North America	Canada	100	100
	United States	99	100
	Greenland	100	100
	Mexico	96	88

Note. N/A: non-available. Source: Prepared from reports from each country, released by the World Health Organization and the United Nations Children's Fund (World Health Organization & United Nations Children's Fund, 2017).

Although much of the world's population has proper living conditions in terms of access to drinking water and sanitation (WHO & UNICEF, 2015), this does not imply that people are aware of the use of water. The resource has limited renewal capacity, and its improper consumption may compromise the quality of life of the next generations. I am not saying that people do not care, but there seems to be a contradiction here. In our everyday life, it is not difficult to visualise attitudes that go against a sustainable behaviour of water consumption, such as "sweep" leaves of the pavement using water (drinkable), washing dishes with a high flow from the faucet, bathing with the shower running all the time, among other examples. Such situations are not hypothetical and, while writing this thesis, I noticed all the examples mentioned several times. In fact, once (in 2017) I saw the janitor of a building in Maringá/PR (Brazil) "sweeping" the pavement using water through a hose. After politely asking for it not to be done, I walked away, looked in the direction of that same janitor and I noticed that my request was not well received (she continued to use water to sweep the pavement).

This situation even supports the thought that efforts to raise people's awareness should extrapolate legal aspects, as it is unlikely that people will readily modify some practice only because some law was implemented, as already defended by Hargreaves (2011). Proof of this is found in Maringá itself, where law number 9,881 (Lei Ordinária n. 9.881, 2014) prohibits the use of treated water, provided by the public supply system, for sweeping

pavements and public walkways, either using hoses or also jet-washing machines. These actions may incur in a R$500,00 fine (corrected annually by a national index – IPCA) to the person, with the possibility of doubling the value in cases of recurrence. However, even if the legal device exists, we see a situation where the legislature appears to work for itself. I consider the law mentioned above extremely important and I believe that probably a massive majority of people who may be questioned about it will agree with me, but, like several other laws, the lack of supervision and awareness undermines its effectiveness.

My observation of the janitor, although informal and unplanned methodologically, is aligned with Beck's (2010) dissertation. In this dissertation, the author reveals a paradox regarding responsible consumption. Although respondents declare concern for the environment, actions show passivity and selfishness about this issue, as if responsible consumption was taken in consideration only when it comes to maintaining the very quality of life and personal satisfaction, while these people are negligent in performing activities for the sake of the environment.

In my report, I am not saying the janitor does not care about the environment, but her behaviour at least reinforces Beck's (2010) findings. We also cannot say she is negligent regarding water issues, as it does not reflect the janitor's behaviour in all areas of her life (e.g. work, home, friends' houses), but there is some influence (Hargreaves, 2011). Maybe she is aware in these other domains, but as a way to deal with the duality pleasure/suffering present in every work (Isboli, Silva, Tavares & Silva, 2017), the waste or misuse of water is seen as acceptable if it makes the job someway more comfortable. The achieved comfort may make she forgets any episode when she had to deal with lack of water or even impedes her to make the connection of non-sustainable practices and lack of water.

Also concerned about sustainable consumption, Sargant (2014) states that this is an issue that goes beyond the concern for environmentally friendly production and consumption, but it is also something that involves the relationship we have with food (in her case), with water (here) and between us.

Barbosa and Veloso (2014) also show concern about the study of this subject and reinforces that we should debate Brazilian consumption behaviours about responsible consumption. To do so, they based their discussions in domestic life. The authors question whether consumers adopt attitudes that favour responsible consumption and evidence indicate that the answer is "no". They cite the waste of food by non-reusing leftovers for new meals and the widespread use of water in cleaning where "it is always fresh, clean, treated water

(never recycled from some other use) that is used, even to wash sideways" (p. 4). Brazilians see cleanliness as a purification ritual, where everything needs to be "shining" as pure water. These behaviours result in what Rebouças (2015) calls as "culture of waste" (p. 27).

As stated above, consumption practices involving natural resources in the household Brazilian environment might frequently occur not in an environmentally responsible way, which leads us to look to this problem with a cultural approach. As Barbosa and Veloso (2014) describe, Brazilian standards of cleanliness, for example, require the use of massive amounts of water. In the literature, we also have data that relates the level of economic development countries and per capita consumption of water (inverse correlation), as shown by Rebouças (2015). Therefore, comparing how practices are structured by the Brazilian population and the population of a country such as England (considered economically developed) can help in understanding how household tap water consuming practices end up being considered acceptable or non-acceptable for each of its populations. Halkier, Katz-Gerro and Martens (2011) emphasise that studying the context where practices occur contributes to understanding related to "the performative processes of social life, which by necessity involve consumption activities, while not diminishing the importance of either the cultural conditioning of consumption, or the consumption of practitioners" (p. 10).

Practices occur in various areas of people's lives, such as work and home, involving routines that are particular to these areas. Related to the studies of Barbosa and Veloso (2014) and Beck (2010) on water consumption, Shove's book (2003a) discusses practices related to water consumption in the residential environment and its changes over time in terms of comfort, cleanliness and convenience, with emphasis on the sustainability of these practices (such as bathing and washing clothes, to name a few). The book focuses on understanding practices as routines in people's lives and discusses the performance of practices as an inconspicuous relationship of consumption, not exploring a cultural differentiation.

This lack of cultural differentiation represents, therefore, the possibility of a study about the existence or not of differences of household tap water consuming practices between people from different cultures. In such a way, when studying the same tap water consuming practices by consumers in different countries (Brazil and England), I believe that it enabled me to evidence that different practices can be considered acceptable or non-acceptable for the residents in these different locations, and the cultural element has a key role in this.

In addition to the incongruity described by Beck (2010) (discrepancy between people declaring concern for the environment and presenting actions consistent with this only when

these actions benefit themselves), another contradiction can be pointed out in sustainable consumption, this one described by Sargant (2014). Although people are increasingly seeking to consume sustainable food goods and services when they consume something related to other areas the environmental concern does not receive the same attention. Therefore, even if England consumes less water (per capita) compared to Brazil, it is important to investigate which household tap water consuming practices are considered as environmentally acceptable or non-acceptable and how they are organised in such a way.

By considering the context, it is possible to verify possibilities and opportunities that would otherwise not be accessible and, to have access to the same context of each person who participated in this research, I chose the household environment. Within the home, although people consume tap water in different practices, such as in food, consumption per se, hygiene, home maintenance, among others (Harlan, Yabiku, Larsen & Brazel, 2009, Lanna & Braga, 2015), I assumed in this thesis that the practices are mainly the same, but the way that people perform these practices may vary in different degrees. While Harlan et al. (2009) focus on describing the water consumption pattern of a city in the United States quantitatively, Lanna and Braga (2015) complement with national levels considerations of water consumption in Brazil (discussions involve agriculture, livestock and water shortage issues, for example) with an economical focused approach. However, literature can still be developed, especially regarding understanding how household tap water consumption practices are organised.

Initially, it was possible to highlight the following understandings:

- There is a contradiction evidenced by Beck (2010) that the alleged concern for the environment by some people is negligent and it is performed only when reflecting in some benefit to the very quality of life;

- Sargant (2014) also describes another contradiction regarding sustainable consumption: although there is a concern to consume something sustainably (such as food), this concern can be selective, with other consumptions occurring without the same environmental awareness;

- The practice theory, here understood through Elizabeth Shove and related authors, present that practices are the result of the organisation of three elements (materials, competencies, and meanings) at a timespace (Shove et al., 2012).

- Shove's practice theory approach considers that the structure where people are drives the way their practices are performed (Shove et al., 2012, Shove, 2003a, 2003b), but her discussions do not take into account different cultural

backgrounds and if they may have influences that surpass the structure in the desired performance of practices.

Such understandings enable me to establish the following thesis: **the original cultural background may surpass the current cultural background in the performance of household water consuming practices, built on the contextual organisation of available resources that people have access to (material elements), prior expertise (elements of competencies) and socially shared meanings (elements of meanings), which results in practices that can be considered as acceptable for some people and as non-acceptable for others.**

Earlier, I mentioned that economically more developed countries tend to present lower per capita consumption of water (Rebouças, 2015). Shove (2003a) makes the narrative of consumer practices in the residential environment addressing the construction of concepts such as comfort and cleanliness (where water is present in certain practices). Let's consider Brazil, admittedly a country that tends to present non-environmentally friendly tap water consuming practices (Barbosa & Veloso, 2014, Rebouças, 2015): how, then, are the elements in this country organised in a culture of waste?

Having the previously presented considerations as a starting point, I formulate as my research question: **how do Brazilians and English household water consuming practices, in these different environments, reflect singularities of their cultural backgrounds?**

1.1. OBJECTIVES

After the considerations regarding the importance of the study of the subject in question, it remains to define the objectives that I will seek to respond with the research.

1.1.1. General objective

Understand how cultural environments (original and current) embody singularities in household water consuming practices in Brazil and England.

1.1.2. Specific objectives

To assist with the conclusion of the general objective of the thesis, the following specific objectives were determined:

- Describe water consuming practices that are performed differently in the Brazilian and English household environments;
- Identify if contextual characteristics affect acceptable/non-acceptable water consuming practices in Brazilian and English households;
- Define what can be perceived about the way Brazilians and English deal with resources related to household water consuming practices.

1.2. JUSTIFICATIONS

This thesis presents a discussion on how the elements of practice are organised in the household tap water consuming practices in Brazil and England exploring if different cultural backgrounds may have influence in the performance of such practices and how this is related to behaviours considered as environmentally acceptable or non-acceptable. The study presents the possibility of contributing to different perspectives: theoretical, legal, political, managerial, and social.

1.2.1. Theoretical justification

Although several theorists (such as Bourdieu, Giddens, Reckwitz, Schatzki, Shove, among others) study practices, with works in the literature dating back to the second half of the last century (e.g. Bourdieu, 1977, Giddens, 1984), the practice theory begins to be associated to consumption studies only at the beginning of this century, and the paper written by Warde (2005) is considered seminal for bridging practice and consumption.

As Costa (2016) argues, the practice theory usually appears in the "area of organisational studies, to areas such as technology, public services, sustainability, among others" (p. 21), and can be further explored in consumer behaviour studies. In studies such as Hargreaves (2011) and Spaargaren and Koppen (2009), although primarily oriented to reducing organisational (companies) resources consumption by individuals, we see that the discussions begin to engage in extending sustainable consumption to other areas of people's lives. Middlemiss (2011), on the other hand, starts exploring a path still little explored in the practice theory literature, that of discussing that social organisations (e.g. churches, schools)

influence changes in the practices of people, applying the practice theory in sustainable consumption empirically.

In addition to Middlemiss (2011), here I intended to push the discussion of social organisations influencing practices even further. No study has considered yet if the cultural background also influences the practices, as is the case for migrants (who might perform practices differently than the mainstream of their current structure). In order to do this, I chose to use water as my research object. This is theoretically justified in some ways.

First, the lack of empirical research in the practice theory is something recognised by Shove (2019) as a valid critic. Elizabeth Shove is one of the main theorists of this theory and, in her writings, we visualise she focuses on the structures to discuss practices (Baringhorst, Marres, Shove & Wulf, 2019, Shove et al., 2012, Shove, 2003a). Although this is a valid way of discussing practices, here I suggest we could establish a discussion of Shove's approach by focusing on the social aspects of the practices. In order to do this, I add Daniel Miller's writings to this discussion. Even though they do not share a lot of theoretical affinities, Miller and Shove share a common ground. Miller (2007) says there is a lack of works theoretically bridging production and consumption in material culture, and he recognises that water consuming practices contribute in this debate, as we consume water in order to produce an outcome (e.g. beauty, cleanliness, health).

Accordingly, my approach brings together cultural and practice approaches. Brazilians perpetuate environmentally non-responsible consumer practices by configuring what is called as "culture of waste" (Barbosa & Veloso, 2014, Rebouças, 2015), and a potential source of these differences in identifying water consuming practices as acceptable or non-acceptable may come from the socially shared elements of meanings (Røpke, 2009, Shove et al., 2012), even when these consumers are inserted in different countries and socio-economic contexts.

Second, the meaning of sustainable consumption is something that deserves a deeper discussion considering the cultural background. Usually, it is defined as a way of consuming resources in a way that both current and future generations could also consume them (Brohmann et al., 2013, Salati et al., 2015). Considering that sustainable consumption has contradictions (and they are expected to exist) (Beck, 2010, Sargant, 2014) and that both Brazilians and English perform environmentally responsible and environmentally non-responsible water consuming practices in their households (Barbosa & Veloso, 2014, Sharp, 2017), I defend that sustainability is more complex than its mainstream definition. Assuming

that Brazilians and English residents might have different ways of performing household water consuming practices, this study reports the way these consumers consider as acceptable or non-acceptable and why they do so.

This relates to the understanding that Miller (2012) has on consumption studies. For the author, studies carried out within the residences is fundamental to understand *why* the consumptions occur, which adds to studies carried in companies (exploring *how* we consume). Thus, household consumption is believed to reflect more subjective aspects to that context, expressing how meanings are organised and transported from that environment to practices in other environments (such as work).

Halkier et al. (2011) also emphasise that the study of practices is useful to understand beyond the current moment, but also to assist in the perception of how these practices change in society. One way to understand this is to seek practitioners and investigate how they integrate the elements that constitute the analysed practices (Shove et al., 2012). As an example, we have the thesis of Costa (2016), who showed that practices have peculiarities according to the environment where they occur.

Therefore, this thesis on household water consuming practices aimed to investigate how some of these practices are understood as acceptable for some and non-acceptable for others and why and how their performance reflects different concepts of sustainability. The population of the two countries have distinct demographical, geographical and economical characteristics. This work discusses that the definition of sustainability can be something culturally built, being different to different people, which will impact in different ways on consumption practices. As stated by Shove et al. (2012), "there is, in addition, more to know about how the elements of practice circulate and about where responsibility lies for defining and facilitating conditions in which more sustainable ways of life might take hold" (p. 164).

This research also contributes to broadening the understanding of sustainable consumption within different narratives that residents of different countries (Brazil and England) might have due to the context where they carry out their practices. Furthermore, the border between practice and cultural approaches proves to be a valid basis for understanding how the definition of sustainability is organised in household water consuming practices in Brazil and England.

1.2.2. Legal and political justifications

Several authors sustain that the context where practices are performed influences the way their elements are organised (e.g. Hargreaves, 2011, Middlemiss, 2011, 2018, Røpke, 2009, Shove et al., 2012). By considering where the practice is performed, this "reveals the often surprising links between seemingly unrelated practices, the surrounding material infrastructure, legal, social and power relations" (Hargreaves, 2011, p. 95), as seen in the United Kingdom by interventions such as those of *Environment Champions* (Hargreaves, 2011)[2] or local policies such as those of the mayor of London, Ken Livinstone (Shove & Walker, 2010)[3]. However, as Hargreaves (2011) points out, even if the policies show satisfactory results concerning more environmentally friendly behaviours, resorting only to this mechanism is not always fruitful.

We can visualise this last consideration when looking to Brazil. In the 1930s', it was edited, approved and implemented the Water Code[4] (containing legislations regulating productive activities of mining, agriculture and fisheries, and regulating the use of natural resources such as forest and water (Braga et al., 2015).

> At the time, the Water Code established a very modern and complex water policy. The Water Code is considered worldwide as one of the most complete water laws ever produced, and the principles in it are invoked in several countries as models to be followed, even in modern legislations (Braga et al., 2015, p. 616).

Although Brazilian legislation is considered best practices in the regulation of the use of water (Braga, Flecha, Pena, Kelman & Coelho, 2015), perhaps due to the abundance and ease of access to the resource by the population (generally, but some regions frequently face water shortages), this has made the water to not be adequately valued by consumers, perpetuating situations of waste (Barbosa & Veloso, 2014). On the other hand, the United Kingdom has more consolidated initiatives to raise its population's awareness to combat inconspicuous consumption, as shown in the DEFRA[5] report (2009) and the website of campaigns developed by the Global Action Plan (GAP, 2017). This can be reinforced, also, through the confidence that the population has in the current quality of water provided by the local water system. While in Brazil "the consumption of water [bottled] is much more

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[2]In the paper, the initiative of these "champions" referred to adopting more sustainable practices in their work environment, such as avoiding wasting materials and not leaving lights unnecessarily on, for example. "Employees began to question and redefine the meaning and nature of working at Burnetts, and specifically to incorporate pro-environmental aspects into their professional identities" (p. 94).

[3]The authors report that the mayor, to reduce the traffic of vehicles in central London and increase the use of public transport, instituted a tariff so that people could circulate with their cars in established areas. The intervention was considered successful and resulted in both a reduction in cars, an increase in the number of cyclists, and reduction in the number of accidents and pollutants in the area, which implies an impact on various practices.

[4]*Código das Águas*, in Portuguese.

[5]Short for Department of Environment, Food and Rural Affairs.

connected to the replacement of the tap water consumption, which lacks the confidence of the population in much of the country" (Brei, 2007, p. 76), in the United Kingdom "tap water is perceived as having high quality", being broadly consumed in the homes both for personal ingestion and other water consuming activities (Doria, Pidgeon & Hunter, 2009, p. 5457).

Also, as discussed throughout section 1.1. (Theme and research problem), although Brazil already has legal devices to control environmentally non-responsible practices, such as the ordinary law number 9,881 (Lei Ordinária n. 9.881, 2014), from Maringá/PR, everyday life shows that only the creation of laws (although important) presents few results, as already said by Hargreaves (2011). Thus, dedicating efforts to understanding how populations organise the elements of practices is a valid way to understand how sustainability is seen in specific contexts, thus enabling the development of policies that tend to be more assertive when they are developed for specific locations.

1.2.3. Managerial and social justifications

Access to drinking water, although not available to everyone in the world, is considered a fundamental right, as established by Fachin and Silva's book (2012). Although this book focuses on the legal aspects of the rationale for access to drinking water as the sixth dimension of fundamental rights[6], the authors present information concerning the need for greater awareness of people for responsible use of the resource, once that non-responsible consumption can result in an even higher number of people facing problematic living conditions, for both current and future generations.

According to the authors, this is the reality of China: 20% of the world's population lives there, but the country has only 7% of the existing freshwater. The poor distribution of water (not just in China but globally) affects societies, establishing obstacles to access this natural resource and makes people closer to "malnutrition and diseases caused by water distributed in inadequate quantity and quality" (Fachin & Silva, 2012, p. 21). In Brazil, although we are privileged when it comes to the natural reserves that we have access to, the consumption of drinking water is not always done appropriately, reinforcing the findings of Beck's (2010) dissertation through the following quotation:

> With regard to the semi-arid region, the low water availability, allied to the irregularity of the rains, imposes a differentiated way of a relationship with this resource. In turn, the city of São

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[6]The other five dimensions of fundamental rights are: (1) individual freedom; (2) equality; (3) solidarity; (4) information, pluralism and democracy; and (5) peace (Fachin & Silva, 2012).

Paulo, which, although born at the confluence of several rivers, has gradually witnessed the pollution of its waters, today needs to capture water in distant basins, altering the course of rivers as well as the natural distribution of water in the region (Fachin & Silva, 2012, p. 22).

As stated previously, my research occurred in Brazil and in England (United Kingdom)[7]. Now, it is important to present the justifications for carrying out this study in these countries.

First, Brazil: I am Brazilian and I am attending a PhD degree in this country, so it is expected that I construct at least part of my data here (considering the ease of access and the fact that I was granted with governmental scholarships, leading me towards developing research with public interests). However, I justify this study in Brazil not only due to personal reasons.

> Brazil stands out on the world stage due to the high discharge of fresh water from its rivers, whose water production, 177.900 m³/s and more 73,100 m³/s of the international Amazonia, represents 53% of the freshwater production of the South American continent (334 thousand m³/s) and 12% of the world total (1,488 million m³/s).
> For some, these values characterise our abundance of freshwater, which has supported the culture of waste of available water, the lack of investments necessary for its more efficient use and protection, and its small economic value, that is, water has been considered as a common free-for-all good (Rebouças, 2015, p.27)

Thus, this study may not result in something immediate, but it discusses possible changes that can be environmentally friendly, knowing that Brazilian water supply problems come from a combination of geo-environmental and socio-cultural factors. "Even in the most populous states, what lacks most is not water, but a particular cultural standard that adds to the need of combating waste and degradation of its quality" (Rebouças, 2015, p. 29).

The second country is England. Similarly to Brazil, this country usually does not suffer from water availability problems, being considered a country with sufficient freshwater potential (it has between 2,000 and 10,000 m³ per capita/year, unlike Brazil, which has between 10,000 and 100,000 m³ per capita/year, being considered rich), which makes it a good option for comparing, as each county is in a different context of water availability (similar realities, not opposite ends) (Rebouças, 2015), and also considering that here I intended to analyse practices and their connections with water consumption and sustainability, instead of analysing distinct practices that are performed due to different resource availability in such contexts (e.g. comparing a place where plenty water availability and another place that constantly faces water shortages).

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[7]The United Kingdom represents a political union consisting of four countries (Scotland, England, Northern Ireland and Wales), but most of the official reports found (and cited here) do not differentiate between its countries. In such a way, I use the UK reports as representing England.

In addition, as Rebouças (2015) puts it, there is an inverse correlation between levels of wealth and consumption rates: in an analysis carried out in 50 countries, the findings point out that, from a certain level of development (wealth), it tends to exist greater incentive for the research of alternatives that result in greater efficiency/optimization in the consumption of water, resulting in a decrease in consumption. The International Monetary Fund estimated that the United Kingdom gross domestic product (GDP) in 2018 would be US$45,111.11, while estimating Brazil's in US$7,690.46 (International Monetary Fund, 2019), which (1) indicates a significant difference between the countries economic development levels; (2) relates to the information brought by Rebouças (2015); and (3) supports the comparison between Brazil and England.

Thus, when studying Brazil, considered a country whose culture points to waste of water (Barbosa & Veloso, 2014, Rebouças, 2015), and another country which is recognised for having more environmentally concerning agendas (Hargreaves, 2011, Shove & Walker, 2010), at the end of this study it was possible to present considerations that can be used by public management, both for the countries I studied and for other countries as well.

Observing the 2006 Human Development Report of the United Nations Development Programme (UNDP, 2006), we see that the minimum of water to meet human basic needs is 20 litres per day/inhabitant, and the population of several countries end up consuming much higher quantities, such as the United States (596 litres per day/inhabitant), Canada (766) and Brazil (192) (Arreguín-Moreno et al., 2009). Even if such countries contain proper conditions of access to drinking and sanitation, it is crucial to know more about household consumption, in order to develop efforts that could raise people's awareness, as done in Arreguín-Moreno et al. (2009), where the authors studied psychosocial factors related to water consumption in a semi-desert Mexican region.

As the performance of some household water consuming practices involves the presence of chemical products (e.g. detergents, soaps, shampoos), this also sheds light into the discussion of environmentally friendly products (also known as eco-labelled products or green labelled products, for example). As Joshi and Rahman (2015) found out, in their review of 53 empirical articles published from 2000 to 2014, there is a discrepancy: consumers consider themselves environmentally aware, but they rarely choose green products. This situation is common worldwide, being a phenomenon known as "green purchasing inconsistency" or "green attitude-behaviour gap". Reasons as "high price, low availability and lack of consumer trust in green products emerged as major barriers towards the purchase of green products"

(Joshi & Rahman, 2015, p. 140). Thus, knowing more about environmentally friendly behaviours could be useful to address solutions for resistances on green purchasing behaviours.

Finally, by considering the fundamental importance (both for current and future generations) of environmentally friendly consuming behaviours, understanding that using resources in an environmentally non-responsible way can compromise people's quality of life (e.g. the case of São Paulo, mentioned earlier, which indicates that non-responsible water consumption can result in both social and environmental consequences) and that the social environment can influence our behaviours by integrating the elements of the practices (materials, competencies and meanings, described in chapter 2) it becomes possible to develop a thesis dedicated to better understand the household water consumption and if the original cultural background surpasses the current background in the performance of household water consuming practices, which could even help us target better fitted eco-labelled products marketing communications.

2. THEORETICAL BACKGROUND

The theoretical background that supported this thesis (as already mentioned in the introductory sections) involves the overlap between practice theory (Shove) and consumption (Miller) in the interest of discussing the potential overlap of one's original culture over his/her current cultural environment, through the performance of household water consuming practices.

2.1. THE PRACTICE THEORY

The title of this section implies that the practice theory is a theory without different approaches in academia. However, like countless other theories, we can find authors defending positionings with greater or lesser approximations to each other. Researching about this theory, we can find names such as Andreas Reckwitz, Elizabeth Shove, Pierre Bourdieu and Theodor Schatzki.

As different perspectives were available, I chose Elizabeth Shove's approach for this thesis. This section was written as follows: (2.1.1.) at first, I present the justifications for choosing Elizabeth Shove's approach; (2.1.2.) then I describe the elements of practices, fundamental to understand the chosen approach; (2.1.3.) and, finally, I report how the reproduction and extinction of practices are understood.

2.1.1. Theorists

After defining which approach was followed in this thesis, I now justify it. Although some of the previous names were not emphasised, probably it is correct to say that there are "theories" of practice, as there is not a unified understanding about this way of describing, explaining and interpreting social phenomena. So, in this study I worked with Elizabeth Shove and related authors, and the following paragraphs summarise this approach.

The thought that we should refer to "theories" of practice is already something defended by Reckwitz (2002). As the author says, practice theorists "form a family of social theories which, in certain basic ways, differs from other, classical types of social theory" (p. 244). Reckwitz defines the practice as "a routinized type of behaviour which consists of

several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz. 2002, p. 249).

Reckwitz's definition partially overlaps Shove et al.'s (2012), mainly regarding this performative aspect of the practice at a particular time. However, Reckwitz's view presents some points that are discussed more comprehensively through Shove et al.'s (2012) approach, where they argue that practitioners are not merely "carriers" of practices (with practices already possessing their elements and qualities), but these practices reflect a combination of materials, competencies and meanings, visualising the practice as an entity (when worked at organisational levels) and also as performance (when referring to its reproduction, to the subject's agency power over something) (Evans, McMeekin & Southerton, 2012).

According to this approach, we can understand practices as a specific intersection of elements that results in an activity performed regularly without conscious deliberation (Shove et al. 2012, Shove, 2017). Evans (2019) explains the Shovian approach posits practices as the locus of the social (instead of individuals, social structures or discourses).

As practice theories can have many approaches, it is expected their authors have ideas that become closer and distant of each other on different levels. Through a bibliometric study of publications involving the practice theory and/or sustainability from 1997 to 2017, done with the assistance of a colleague who is a computer scientist, it was possible to establish some considerations about the authors, helping to sustain the choice of Shove's approach and related authors to her writings.

For the accomplishment of such study, two scientific databases were chosen: Scopus and Web of Science. Through the metadata, 434 articles among 199 sources (e.g. journals, books) related to practice theory "and" consumption "or" sustainable consumption "or" sustainability were analysed. A bibliometric analysis was performed, and some of the results are presented below.

When checking the 50 most cited authors through the VOSviewer software, two clusters were formed. Figure 1 demonstrates a clear difference in the approaches.
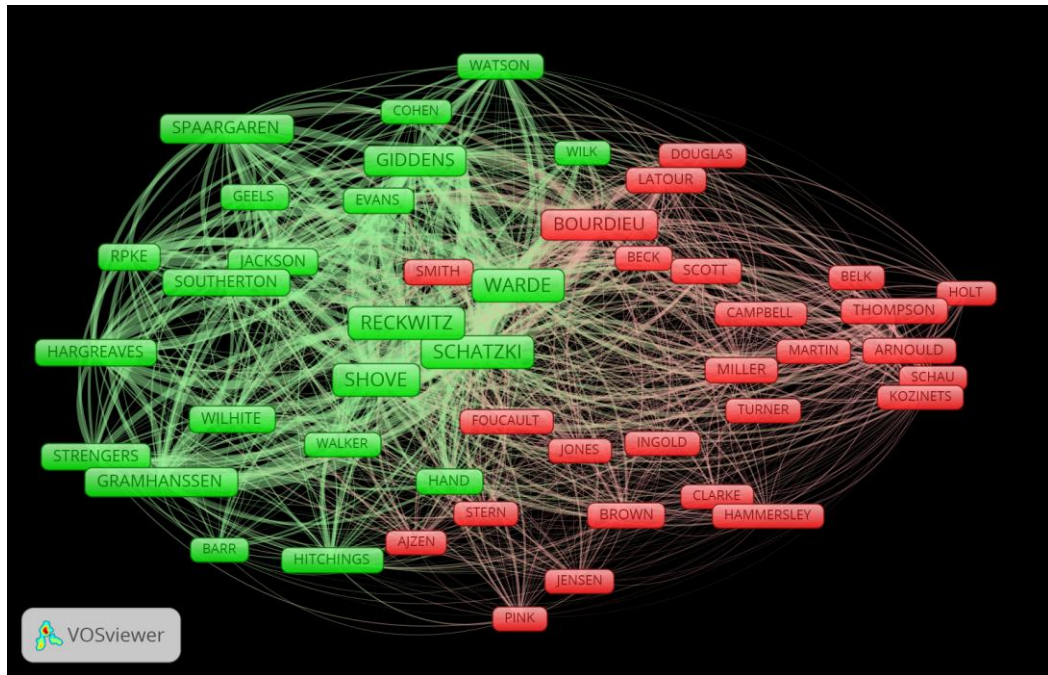
Figure 1. Co-citation clusters (main authors). *Note.* Authors present greater theoretical affinity with those highlighted with the same colour. Source: Prepared from the data (2017).

The same information can be presented non-clustered, showing the co-citations as a heat graph (Figure 2). The image shows that names such as those cited throughout this section are some of the main references in the study of consumption and/or sustainability through the practice theory.
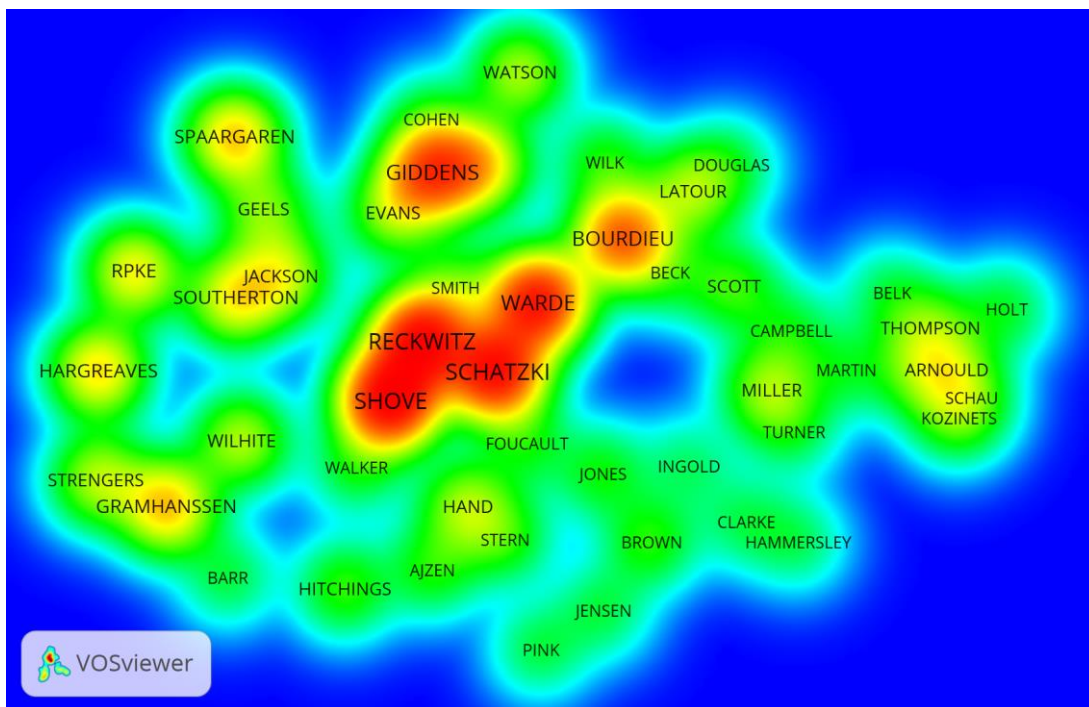
Figure 2. Citations heat graph (main authors). *Note.* The colours vary from blue to red according to the authors' number of citations. The interpretation goes from blue as the smallest gradation of co-

citations and advances, respectively, through green, yellow, orange and red as they become more cited by other authors. Source: Prepared from the data (2017).

In a final check on the authors' co-citations, the relationship was expanded to all authors (Figure 3). By observing the representation, the centrality of Elizabeth Shove for research like this is undeniable.
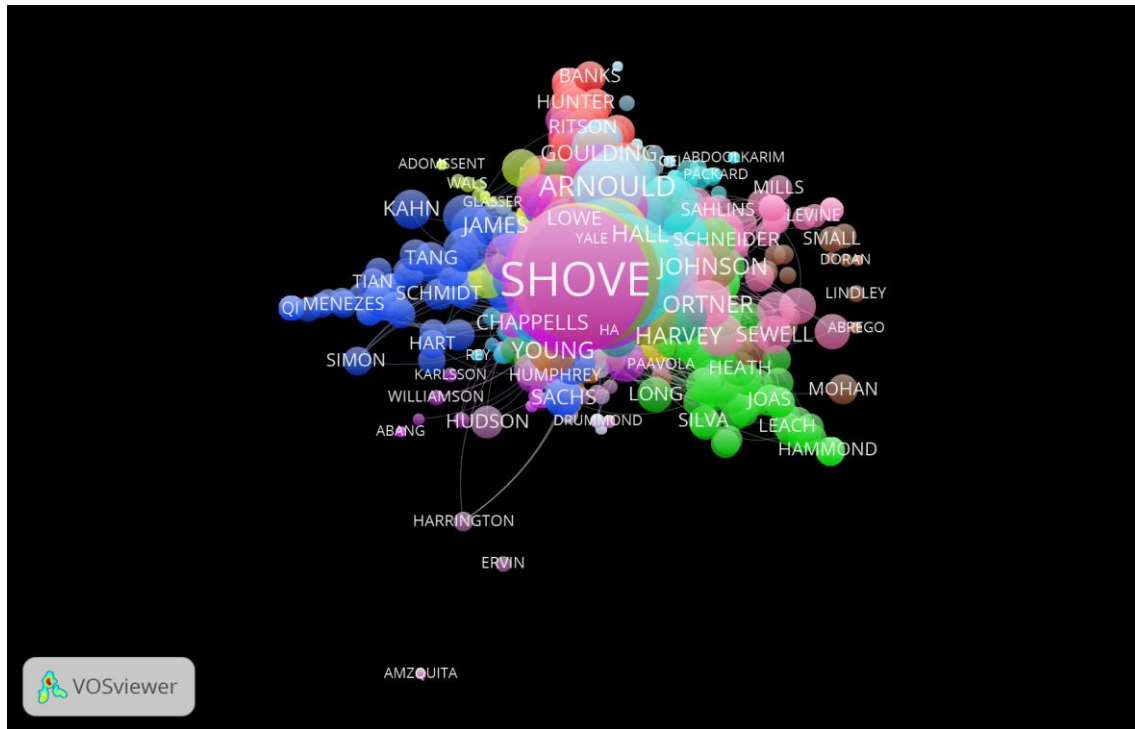
Figure 3. Co-citation clusters (all authors). Source: Prepared from the data (2017).

However, I do not fully agree with Shove's understandings. As I said earlier, she defends that practices themselves should drive social discussions (seeing them sovereign over individuals), which reflects her background as a sociologist, and makes her sustainability studies follow discussions on the sociology of consumption. Considering my background in marketing and consumer behaviour, I believe my thesis is more well-fitted into an applied environmental social science, as it explores the way locals and migrants report they perform their household water consuming practices, as a means of sustaining the argument that the original cultural background may surpass the current cultural background in the performance of household water consuming practices. This is something aligned with the review Evans (2019) did on sustainable consumption studies, affirming that "the field now sits closer to the applied environmental social sciences than to the sociology of consumption" (p. 1).

In this way, we can use practices to analyse consumer behaviours, evidencing particularities in the way the elements are organised. Specifically, on sustainable behaviours, Evans et al. (2012, p. 116) write the following:

> Here, ecologically damaging forms of consumption are not seen as a problem of individual consumer behaviour; rather they are understood as embedded within the prevailing organisation of practices. In turn, these are related to the collective development of what people take to be "normal" ways of life.

The quote above is aligned with this thesis, as we can see consumption practices as a construction on what is the "normal" in people's lives, whether this can be environmentally friendly or not. That is, depending on the resources, knowledge and meanings shared in that context, a practice can be interpreted as acceptable for some practitioners and non-acceptable for others.

Thus, although there is a pattern, each performance is unique, and the same practice may differ due to the way its practitioners organise the elements. In the literature, we already see studies of the same practices in different realities (e.g. Kuijer & De Jong, 2012, Wilhite, Shove, Lutzenhiser & Kempton, 2000), and cross-cultural studies of practices such as Darmon and Warde (2018) support the present effort to obtain data between countries. Halkier et al. (2011) reinforce the importance of the context for the organisation of the elements, stating that "practices are reproduced through imitation but they may also involve adjustment, interpretation and alteration" (pp. 9-10).

However, what are these elements? For Shove et al. (2012), practices are established through the active combination of the three elements mentioned earlier (materials, competencies and meanings). The three elements are described below.

2.1.2. The elements of practices

Materiality is something that frequently appears in Shove's writings (Shove 2003a, 2017, 2019, Shove & Araujo, 2010, Shove et al., 2012). As it suggests, its understanding is fundamental to understand the material elements. According to Araujo, Finch and Kjellberg (2010), material objects acquire value in the performance of specific practices and projects by means of and because of their roles in these performances. In this way, material objects contribute to the way ordinary consumption is shaped (Shove & Araujo, 2010).

Material elements refer to what is physically indispensable to the practice's performance. Here we observe things, technologies and materials that objects are made, for example (Shove et al., 2012). To illustrate, think in a football game. At the moment ignore the

rules (these are present in the competencies), but think that football cannot be played without ball and goal posts, they are indispensable for this practice. This will occur both in an official championship game and in an informal children's game. Let's focus on the children to understand this: in the absence of metal goal posts, other materials will be used so that the practice of playing football happens, like pieces of wood and/or shoes.

Similarly, as this thesis refers to household water consuming practices, we can think of everything that is necessary for these practices to occur: taps (and also their models, which may be more or less economical), showers, baths, swimming pools, dishwashers, sinks, hoses, irrigators, etc. It should be said that material elements of a practice do not represent this practice and they are not necessarily exclusive of such practice, that is, playing football goes beyond the presence of a ball (which can be used for practising other activities).

Artefacts, thus, can be seen as carriers and mediators of meanings, as we see in Shove and Araujo (2010). The possession of these resources assists in the symbolic experiences enabled by the practice, producing and disseminating meanings. "An artefact has no grounded meaning for users until it is appropriated and aligned with existing practices and other artefacts" (Shove & Araujo, 2010, p. 18). That is, ordinary consumption requires an active action incorporating objects into practices and particular sets of skills and competencies, contributing to the perception of meanings.

Elements of competencies involve expertise to carry out the practices and may vary from person to person. In addition to the skills related to the practice itself, competencies also include know-how and correlated techniques (Shove et al., 2012). Continuing with the same example mentioned in the material elements, when thinking about competencies in a football game we can describe them both in the rules (e.g. how to win the game, how many players in each team, fouls) as well as the different levels of technical skills players have (accuracy, defensive ability, speed, and free-kick shoot, to name a few that may be present in a greater or lesser extent on practitioners). Alternatively, in the practice of showering, we can view skills in the control of water temperature for example (shower can be electric or gas, with one or two registers, with temperature adjusting in the shower or heater, etc.); and also in the expected cleaning standards (such as the condition expressed by Barbosa and Veloso (2014) that things need to be "shining").

Last, elements of meanings include symbolic meanings, ideas and aspirations. Again, I reiterate this approach emphasises the context to discuss practices. Shove's approach focuses on the practice as the unit of analysis (instead of the unit of analysis being the individual as a

carrier of the practice, for example). Thus, the same practices can have different meanings according to those who practice them and the place in which the practice is performed (Darmon & Warde, 2018). While a professional football athlete can see in this sport his professional achievement, an undergraduate student can identify in the sport an opportunity to socialise. Showering, on the other hand, can either be linked to embellishment before a date as well as meaning the beginning of another day, if performed before going to work. This reinforces the argument that practices involve the intersection of various components and activities, which supports Shove and Walker's (2010) considerations that changes in one practice reverberate in many other practices. In other words, looking for understanding practices and their changes, solely focusing on the action could be unfruitful to understand a phenomenon (Evans et al., 2012).

Thus, material, competencies and meanings are organised in different ways and can be both parts of various practices at once and also not generate a practice at all, which is explained in the following section.

2.1.3. Reproduction, change and extinction of practices

In this thesis, I worked with a biographical methodology: the oral history (see chapter 3 for details). Practices also have their trajectories, making them change over time (Shove, 2003a). As I was interested in the processes locals and migrants learned how to perform household water consuming practices and the impact these have in their understandings of sustainability, it is worth to explain how practices evolve over time. Thus, we can observe three configurations of links between the elements: proto-practices, practices, and ex-practices,

Proto-practices indicate that there is not a connection between the elements (Shove et al., 2012). That is, they may or may not be fully present, but something in that context is missing for establishing a practice. We can understand this through the example of bathing in England, discussed in depth by Shove (2003a) and briefly summarised here to assist in the representation of proto-practices, practices and ex-practices: decades ago, people used to clean themselves mainly through baths and a few times a week. When showers were introduced to the market, the practice of showering was not consolidated, giving it a condition of "proto-practice" at the same time that bathing was a "practice".

Practices refer to the elements being actively connected (Shove et al., 2012). Materials, competencies and meanings relate in some way to the practitioner(s). In the bathing example (Shove, 2003a), the greater access of the population to the material element shower, along with changes in other elements (like the inclusion of the showering in the daily ritual of set up for another working day and the convenience of its use compared to fill in a bath, for example), for some the showering is seen as "practice", and the bathing is seen as "ex-practice".

Ex-practices represent a possible destination for practices. If there is no maintenance of the links established between the elements, they may no longer exist, and the practice may die or be modified to a different practice (Shove et al., 2012). The bathing was not necessarily wholly extinguished, but it became a less frequent practice due to the increasing migration of the population to showering (Shove, 2003). However, although no longer carried out in the same way, the bathing can be performed eventually depending on how the elements are organised, such as bathing on weekends to relax after a stressful week. Figure 4 assists in representing how practices can be organised.
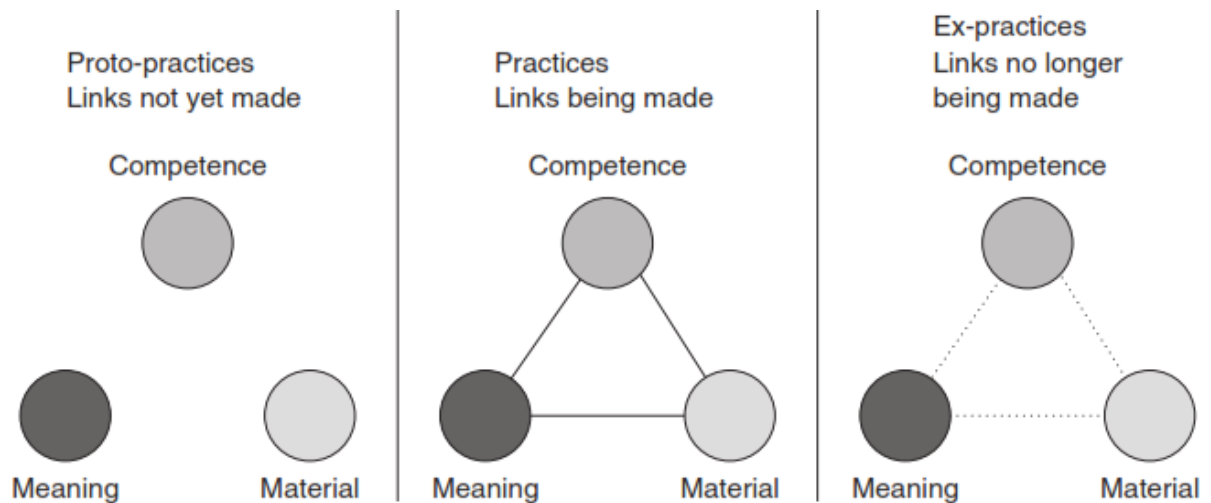
Figure 4. Proto-practices, practices, and ex-practices. *Note*. Continuous lines represent the connections formed between elements of practices, and the dotted lines represent that the connections between the elements of the practices no longer happen. Source: Shove et al. (2012), p. 25.

There is also another figure in Shove et al. (2012) that helps us visualise the organisation of practices (here as Figure 5), showing us how practices may share some of its elements with each other. While the material element "shower" (or "bath") is unlikely to be present in a practice other than cleaning yourself, the material element "water" will be identified in every household water consuming practice, such as bathing, washing clothes, doing the dishes, maintenance of the external area of the residence, personal hygiene and

others. So, we should keep in mind that practices represent a complex relationship between different elements, and we can also consider that the same practice can be proto- or ex- for some individuals and practice (with established connection) to others, like the example mentioned earlier about bathing. In Shove et al. (2012) the authors reinforce this thought by treating the practice as the unit of analysis rather than the individual, discussing the emergence and modification of practices as resulting from the context where the elements were found and how the individual appropriate them while carrying out the practice.
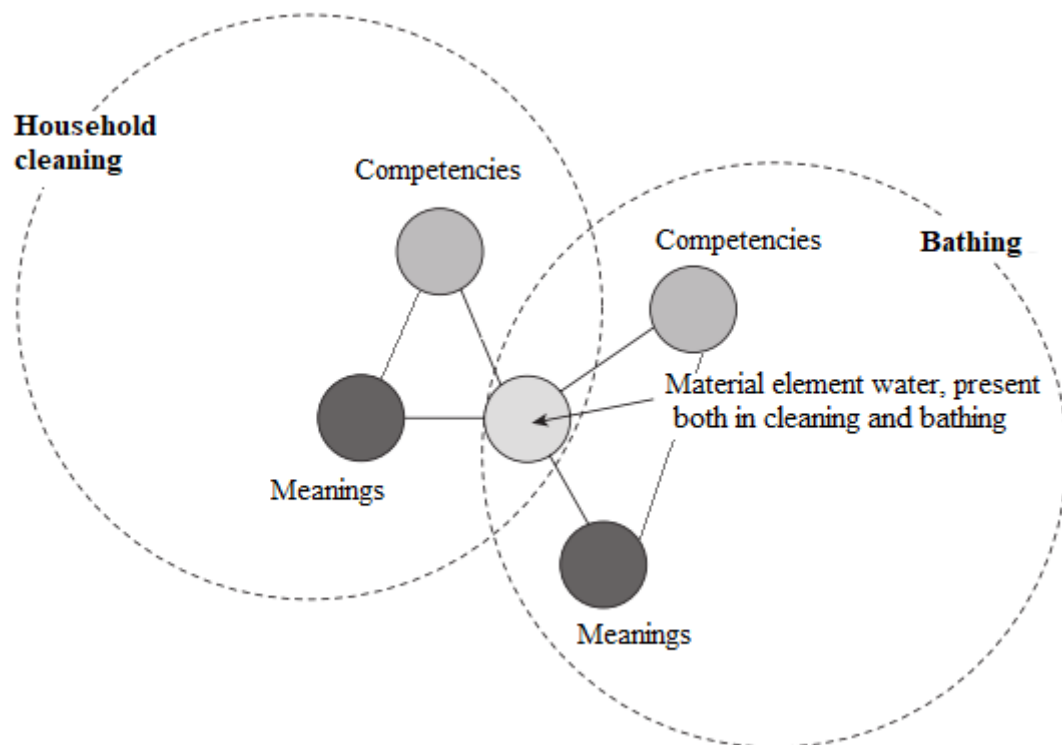
Figure 5. Elements of practices. *Note.* The dotted circles represent the whole practices, and the intersection of the material element demonstrates that practices may have elements that are common to each other, although resulting in different practices. Source: Prepared based on Shove et al. (2012), p. 37.

To understand how practices are distributed within and between societies, we need to think about the elements. According to Shove et al. (2012), the elements are more stable than the practices, being able to circulate between places and persist over time. Keep in mind that the coexistence of the elements does not guarantee that there will be a connection in an expected way, it only means that there is a potential to become a practice. It is like the example of the football ball: the presence of the ball and players interested in having fun together does not mean they will play football (they can decide to play another game, like dodgeball). Consequently, for "playing football" to happen, there must be a specific overlap of the three elements, and all other practices will have some absence.

Shove et al. (2012) complement the discussion of generation and modification of practices through the circulation of the elements. Although the term circulation may have a more tangible meaning, the authors point out three modes of circulation, which involve each one of the three elements of practice: "transportation and access" (materials), "abstraction, reversion and migration" (competencies) and "association and classification" (meanings).

Transport and access may be the most easily identifiable modes of circulation on the diffusion of elements, once they refer to the material elements. The presence or absence of the elements are determinant for the practices, and even transport alone can already foment discussions about practices, as in Scaraboto and Figueiredo (2015), where the authors investigated the creation of value by the circulation of objects (transference of physical ownership of these objects).

This is related to materiality, an issue inherent in Shove's writings. According to Shove and Araujo (2010), objects have an important role in practice, they "play an active role in constituting, sustaining, and transforming practices" (p. 27). The objects, as material elements, mediate practices.

The authors argue that when we turn our attention to everyday consumption practices, they involve items that are often neither visible nor special but can end up being viewed as holding meanings. When inserted into a context, the human-object relationship can result in a particular value, shared in that group or society. That is, while the artefact is not appropriate and aligned with practices and other material elements, it has no assigned meanings (therefore, it has no value). Material elements, therefore, by contributing to the reproduction or extinction of certain practices when circulating in that environment, can be understood as paths through which practices are established and valued in that time and space. In other ways, less tangible elements as competencies and meanings also circulate.

The ways through which competencies circulate are abstraction, reversal and migration, according to Shove et al. (2012). Although the performance of practices corresponds to a considerable portion of the competencies acquired by practitioners, not all skills will be possible to be obtained only via trial and error but will require training. Other competencies need to have their knowledge abstracted from a place before it can be reapplied with modifications (reversal) in a new context, as with know-how. These competencies can only move to places where practitioners have had at least prior contact with experience.

Consider the practice of washing clothes: in Shove (2003a), the author discusses some water consuming practices in the household environment and relates them to social

development over time, focusing on a discussion of the sustainability of these consumptions. In the book, the author presents how the different material elements inserted throughout the years affected practitioners' routines and priorities. Thus, washing was not performed always in the same way, and people had to adapt due to changes in technology (such as washing machines, dryers, washing products) several times to continue doing the laundry. The knowledge is mainly the same, but it ended up being adapted according to the situation.

The elements of competencies, such as the materials (described above), are essential for understanding the practices. They relate to previous knowledge that people have related to a practice. This refers to competencies such as environmentally friendly behaviours (Spaargaren, 2011) and environmental awareness (Sargant, 2014), for example. Thus, if a person had not learnt that doing some specific behaviours are harmful to the environment (such as "sweeping" the pavement with clean water), for that person this action will not be seen as something wrong or non-acceptable. For the same person, perhaps brushing his teeth with the faucet open all the time is understood as something wrong to do, because this was the example used in school when teachers taught about the importance of saving water. This understanding of something to be considered "right/acceptable" or "wrong/non-acceptable" also relates to shared meanings.

At last, meanings also circulate, but these circulate through association and classification. As this element involves subjective issues, the attributions present in the meanings will inevitably be "relative, situated and emergent" (Shove et al., 2012, p. 53), and the authors discuss that interpretations and symbolic associations made by practitioners are not contested, but they are accessed with the purpose of understanding the practices. Like competencies, interpretations and associations are not identified in the same way by every practitioner, but these interpretations/associations end up reflecting past practices and the environment in which their practitioners internalised them (Darmon & Warde, 2018).

So, through interviewing people in different countries, I was able to present a broader discussion on the development of practices among different contexts. Brazilians and English may even have experienced the same practices, but the way they have appropriated these meanings can present individualities, thus contributing to the thesis that the original cultural background may surpass the current cultural background according to the contextual organisation the elements of the practices had. More on this is discussed in chapter 4 (Analysis).

Exposing a representation of the elements and practices practitioners are organised around possibly is an infinite task (once that all practices are virtually accessible, which could result in a work of saying why a practice of an indigenous tribe of Oceania is not performed in the countryside of Brazil, for example). So, I decided to delimit a set of practices to study in this thesis: household water consuming practices, by Brazilians and English.

Practices, besides the three elements (materials, competencies and meanings), is also a result of a time and a space, which makes them something contextual, according to Shove et al. (2012). As stated by the authors, "put simply, experiences of time are part and parcel of the experience of practice" (p. 129), which made me think that some practices (such as work or leisure) lead to water consuming practices (a morning shower to go to work) or even a potential extra use of water (e.g. extra dishes to be washed due to a more elaborate meal at the weekend or having dinner at a restaurant).

As for the spatial aspects, in the book quoted above it is argued that the persistence of some practices unbalances the opportunities of performing other practices. This happens, for example, with vehicles decreasing the available space for cyclists (Shove & Walker, 2010). Therefore, different countries offer distinctive realities (e.g. geographical, cultural, economic, climatic) that contribute to shaping practices.

Thus, practices are not always rationalised, but they reflect a context where they are inserted. We should not think their changes linearly, but we need to understand how the changes in other practices also occur(ed). As in Hargreaves' (2011) article, the author did a case study in a company about changes in the consumption practices for pro-environmental behaviours, noting that only the elaboration of policies that seek sustainability may not be useful, adding that pro-environmental changes require changes in the practitioners' daily lives.

Hargreaves (2011) argues that people's patterns of consumption do not represent their attitudes, values, and beliefs (a direct critique of theories such as Ajzen's (1991) theory of planned behaviour, apparently), but they are part of the routine that accompanies the "normal" in people's daily lives. This consideration is reinforced by Shove et al. (2012) by claiming that "theories of practice are commonly thought to deal better with routine reproduction than with innovation" (p. 122). Thus, to change a practice we need to change the routine of its practitioners.

For Hargreaves (2011), it is necessary to transform the practices. This change occurs both internally to practitioners (where they challenge routines and conventions through new

doings and sayings) as well as externally (having contact with different practices). Thus, it must be an effort that involves the various elements, rather than appealing only to part of them. Not everyone may start saving solely due to a possibility of a fine, but by rethinking consumption more consciously (Shove & Warde, 2002), practitioners can redefine their relationship to the elements and re-signify their practices, such as the employees interviewed in the Hargreaves' study mentioned above. Working in the company of his study turned out to carry a meaning of protecting the environment, causing its employees to begin questioning whether their practices in the work were environmentally friendly or not.

Hargreaves (2011) and Shove and Warde (2002) consider that the understanding of how practices emerge, exist and die relates more to practices not making sense to people anymore and also by changes in the organisation of elements (Hargreaves, 2011, Shove et al., 2012).

Also, environmentally friendly practices can be performed by creating conditions for them to occur. Maybe people have not stopped to think about acting in a certain way, as some employees in Hargreaves (2011), who have redefined their relationships with work and, consequently, how they dealt with the material resources consumed in the organisation. However, in that study, only proposals for actions dealing with savings of office supplies and energy use are identified. These reductions just have a connotation of saving money for the company, which is not necessarily the focus of an environmentally friendly consumption.

Considering that changes in practices involve organising the elements (materials, competencies and meanings), it is possible that there are particular ways of establishing environmentally friendly consumption practices based on the practitioner's locus, influencing what sustainability means to this person.

2.2. CONSUMPTION AND ENVIRONMENT

Here, I present the way I worked with the overlap between consumption and sustainability. Both terms have different approaches, and I chose to explain my understanding of them mainly based on the work of Evans (2019), as the author bridges the connection between theories of practice and sustainable consumption at the same time he also updates Warde's (2005) paper.

First, I decided to follow Daniel Miller's discussions on consumption. The author defends there is a lack of studies about *why* we consume compared to those focused on *how*

we consume. He even criticises this scenario by saying that this majority of *how* studies follow a retail perspective of improving sales numbers.

> Despite the vast importance of shopping, there is really very little in the academic literature that even starts to answer plausibly this question of why we shop, in the sense of why we select the very particular items we choose to buy. Most of these more commercially minded books assume that research on shopping should take place in shops. Certainly you need to spend some time in shops […]. But mostly, if you want to understand why people shop, the place to be is inside their homes. The home is where the overwhelming bulk of commodities will be cooked in kitchens, hung in wardrobes, given to others (Miller, 2012, p. 66).

The author, on the other hand, presents his "peanut-butter theory"[8], based on the existing conflict between "expected vs. real" in every consumption. In short, everything we consume is evaluated considering characteristics from the situation we are facing. We can notice this when buying a present for a specific friend instead of a generic friend, for example. This was explored in the analysis when questioning locals and migrants about their perceptions of how/why they performed household water consuming practices in a specific way and it will be discussed in chapter 4.

Second, the understanding of consumption is something that should be delimited now. Otherwise, I would end up working with an ideology instead of an analytic category, as Evans (2019) advises.

Considering Warde's (2005) landmark article and his definition that consumption is "a process whereby agents engage in appropriation and appreciation, whether for utilitarian, expressive or contemplative purposes, of goods, services, performances, information or ambience, whether purchased or not, over which the agent has some degree of discretion" (p. 137) and the caution raised by Evans (2019) that Warde's discussion was based on the last 25 years of his article, Evans includes 3Ds to Warde's 3As (acquisition, appreciation, and appropriation): disposal, devaluation, and divestment.

The 3As and the 3Ds are equivalent opposites. They come from practice academics and, therefore, they fit for purpose of this thesis as a proper way to work with ordinary consumption (as is the case of household water consuming practices). They can be easily related to the elements of practices (Shove et al., 2012): acquisition/disposal for materials, appreciation/devaluation for competencies, and appropriation/divestment for meanings. Although commodities (i.e. water) may not have the "appreciation" deeply developed, other material elements involved in the practice may have, which sustain the fit. Consequently, they

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[8]This name refers to the good trade-off when parents (in his reality) decides to buy peanut-butter for their children, as this option is generally well-accepted considering particular taste preferences, and it is considerably healthy as well.

are a valid way to analyse practices, especially because I had four groups of interviewees and their practices had differences.

Third, the peanut-butter theory is also well-suited to the household environment, as its practices carry normative aspects about their desired outcomes, for example. Miller (2012) even says there are some contradictions in the households, which relates to Sargant (2014). This theory depends on the concept of normativity, which contributes to studying cultures of the time (similar to Shove, 2003a, where the author organised the evolution of multiple household practices in England), a topic with great potential for discussions from the migrants perspectives (considering they have conflicts between the norms they had versus the norms they currently have).

For that reason, we can end up performing more or less environmentally friendly practices and we end up considering them "normal", once that we were taught that as the proper way of performing them. Shove (2003a), for example, details that convenience and cleanliness have changed over time, and she considers the environment as a result of embedded technologies (such as air conditioners that had made environments more comfortable, influencing from clothing to practices such as siesta, used both to rest as well as a way to deal with very hot environments and return to activities when the sun was not at its peak, for example).

However, Shove's approach defends that practices (instead of individuals, for example) are the locus of the social, which is something Miller (2012), Warde (2005, 2014) and Evans (2019) go against by considering that people should not be excluded from consumption studies.

Consumption has an important role in the result of more or less environmentally friendly practices. Sargant (2014), although had studied food, discusses sustainability by writing that thinking about production and consumption of food in more sustainable ways is more a matter of rethinking the relationship we have with food, nature and ourselves than just thinking about ways of production that are environmentally less aggressive. Likewise, when dealing with water this consideration remains valid, whereas we have many practices involving the consumption of food (e.g. breakfast, lunch, dinner, business meal, fraternisation, birthday), we can say the same about water, even when restricting its consumption to the household environment (e.g. bathing, showering, washing clothes, washing the dishes, gardening).

We can use as an example of the practice of washing clothes. This practice is influenced by a set of understandings that people have about ideas such as feelings, appearance, disinfection, and deodorisation (Shove, 2003a). There have been periods (especially in the United Kingdom, focus of the referenced book) in which people wore more clothes and sanitised more regularly only a few layers of clothes (and parts of their bodies), while in other times both clothing and sanitisation have changed. Socially shared meanings, in turn, influence how practices are performed and affect their performance in more or less environmentally friendly ways.

By considering the environment where the practice occurs, it means that we have information like where, when and which whom people perform(ed) the practice. As I restricted the study to the household environment, I ended up reinforcing Miller (2012) when he says that the studies in this environment contribute to the understandings of the consumption *whys*. People's routines result in what Sargant (2014, p. 35) calls as practice narratives, defined as:

> Practice narratives are consumers' recollections about the "doing" of the practice', that is, recollections about daily food routines, social and physical contexts/constraints and frames of reference (norms, associations) in relation to the doing of the practice and/or engagement in sustainable alternatives (e.g. past experiences with sustainable food services).

Thus, the routine carries the repetition of behaviours throughout a period. If a person is inserted in a context where environmentally friendly practices are not stimulated, the process of change will be even more difficult, because the elements need to be organised in a way that results in such practices. As Shove (2003a) says, "the reconfiguration of meanings is evidently important when the transformation of practices is not strongly related to technological development" (p. 16).

We know that consumption carries meanings (Evans, 2019, Miller, 2012, Shove, 2003a, Shove et al., 2012) and that where the consumption occurs may influence the practices through the influence of meanings coming from the existing structures (Shove et al., 2012, Darmon & Warde, 2018). Therefore, it is important to know what influences the meanings related to Brazilian and English household water consuming practices, so that these meanings may form particular narratives about the practices (Sargant, 2014).

Mooij and Hofstede (2011) highlight that many consumer behaviours relate to cultural aspects, and Hofstede's model (known as cultural dimensions theory) reinforces that some values from society (i.e. power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance, and long-term orientation) influence consumer behaviour.

Although the authors defend that these dimensions already were broadly tested and still remains valid, other papers defend that the model has weak points, as Ailon (2008) does by criticising the mentioned model based on Hofstede himself. To summarise, we can use these values as a starting point, but they are not capable of generalisations, once that this model was built over not representative samples from the countries.

Following this idea, we should consider the discussion of cultural aspects related to consumption, which makes the household water consuming practices more related to the idea of *praktik* than *praxis*. Although we can translate both words as "practice", they are different.

While *praxis* refers to a dialectic unit of doing, thinking and redoing, discussing a consciousness exercised critically and based on a more immediate reality. In other words, this refers to a theoretical body that actively dialogues with these people's realities continuously. On the other hand, *praktik* refers to a routinised type of behaviour interconnecting this behaviour through different elements (Reckwitz, 2002, Shove & Araujo, 2010, Shove et al., 2012, Warde, 2005). Considering I only explored these water consuming practices and discussed their singularities without proposing any changes to the participants (which was the way I found that minimised my influence in their opinions and reports), I would like to frame practice, in this thesis, as *praktik*.

Brei's thesis (2007) helps in this understanding by evidencing that the same product (bottled water) can be marketed in several ways, looking for reaching different audiences. The consumer can choose to consume one brand instead of the other due to some socially shared meaning related to that brand, knowing that the product (water) is essentially the same. The same occurs in a scenario where both countries perform practices with the same purpose, but varying in terms of what is environmentally acceptable or not, which evidences the importance of the habits built, where "these connect social patterns, conventions and orders with everyday experience" (Darmon & Warde, 2018, p. 15). In this way, I emphasise the social environment importance to create an understanding (how Brazilians and English consume water in their different household environments), and I chose to do a cross-cultural study as a way to identify singularities from the practitioners' contexts.

We can find studies involving cultural particularities with many interests, like: comparing elements that indicate attractiveness for a gender (Swami & Tovée, 2005); etic consumption (Ariztía et al., 2014); and cultural values (Kasser, 2011), to name a few. By studying a place, we may know more about that topic, but when we expand the study to different countries, contextual elements turn out to be more explicit to compare.

Looking at Rosenbaum and Spears' paper (2005), we can add to this last consideration: the authors analysed local consumer behaviours (in Hawaii) by consumers from different cultures. Among tourists coming from seven distinct nations, the authors found which country had tourists with the higher average spend – in absolute values – in souvenirs (Japan), with higher trip length (Canada), the tourists average sociodemographic profile according to each nation, and which products and services are mostly chosen by each nation. They also analysed (via ANOVA) eventual differences between two tourists' groups (first-time or repeat visitors), like focusing on relaxation activities (repeat visitors' preference). As this study pointed out its explored gap due to lack of a cross-cultural study exploring the differences in choosing services (they just found different tourists segments participating in various activities), this thesis aims something similar: to do a cross-cultural study exploring similarities and differences in the formation of the definition of sustainability to different countries inhabitants.

I also considered Guhathakurta and Gober's (2007) findings to think about the idea of studying the same consumption in different countries. In this paper, the authors discussed particular characteristics from the region (Phoenix, Arizona, USA) in the per capita household water consumption, like weather (city's warmer regions consumed more water), family wage (higher wage, higher consumption) and family's average age (older families had higher consumption), for example. However, what if we consider the same characteristics in different countries? Would the household water consumption from a Brazilian inhabitant the same than an English inhabitant with similar profiles? Also, what about Brazilians who live in the United Kingdom and English living in Brazil? There may exist more subjective differences related to the elements of competence and shared meanings.

2.2.1. Culturally-built sustainable consumption

Sustainable consumption usually is defined as people satisfying their needs through consuming resources in a way that both current and future generations can satisfy theirs (Brohmann et al., 2013, Salati et al., 2015). However, its discussions unfold in many other fields, due to the multidisciplinary nature of the term. In the literature, we can find definitions such as economical sustainability (goods and services that are traded among individuals and groups in a way that improves their incomes and welfare – referring to both formal and informal activities) (Claro, Claro & Amâncio, 2008), sustainable consumption (lifestyles

organised in a way that reduces their environmental impacts towards ecologically viable levels) (Middlemiss, 2018), and, more broadly, environmental sustainability (Morelli, 2011, p. 6):

> meeting the resource and services needs of current and future generations without compromising the health of the ecosystems that provide them, and more specifically, as a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs nor by our actions diminishing biological diversity.

Even though these discussions cover different areas, they offer understandings that (at least ideally) should fit the whole world. I believe we still can expand these debates by narrowing our look.

We already have authors exploring "other sustainabilities", and we see they have a more local concern, as cultural sustainability (cultural capital from a society providing both material and non-material benefits, keeping the cultural capital available to the further generations also use and create it) (Throsby, 2003) and social sustainability (social equity and continuity of the community itself) (Dempsey, Bramley, Power & Brown, 2009), but they still discuss the theme as something applicable globally. Looking at the works mentioned above, they lead us to a gap of an unexplored definition: a culturally-built sustainable consumption.

As Middlemiss (2018) says, "there is no sense in this mainstream world that reducing consumption, or even transforming consumption, is an appropriate response" (p. 222) but, instead, she defends that more attention should be given to social complexity and politics. This involves thinking in a more nuanced approach, considering different social worlds, where people have different motivations, have access to different resources and infrastructures, and live in different environments that require from them different sets of competencies. Thus, a single solution is flawed, and our consumption needs to consider social differences.

All we do involves consumption in some point, which implies in saying that consumption is essential to our lives and it is vital to sustainable development, as we see in Brohmann et al. (2013). Societies where consumption is non-sustainable (e.g. deliberate extraction of resources from nature, waste of resources, lack of re-utilisation) are the main responsible for the global deterioration, even more than the impacts from fossil fuels explorations. The authors inform that four areas of household consumption have the highest negative environmental impacts: "food, housing, personal travel and mobility as well as tourism" (p. 3). The household consumption is even more worrying because it grows 2-3% a

year, driven by ever-increasing energy demands (higher than every other sector but transportation) (Brohmann et al., 2013).

Sustainable development has a goal "to use nature in a manner that conserves natural resources. Currently, the way we use natural resources is largely unsustainable. It is hence desirable to make decisions that minimise resource use" (Rausch & Timpe, 2013, p. 161), and in businesses this goes beyond the availability of the offer, but it also involves the way companies present their goods and services, and also how these offers become affordable and attractive to consumers (Sargant, 2014). Consequently, we can understand the sustainable development of a society as resulting from sustainable consumption.

There is a common understanding that we need to re-think our current lifestyles (nowadays, they are environmentally and socially unsustainable, as the limited availability of resources and climate change show us), which goes beyond than solely lecturing consumers about sustainable consumption, but requiring social and economic changes, which reflects in the narrative from that context (Brohmann et al., 2013, Miller, 2012, Sargant, 2014, Shove, 2003a, 2003b).

The search for sustainable development involves knowing more about the way in which practices are organised (Shove et al., 2012) to, in a final moment, suggest what could be done differently in the pursuit for sustainable consumption even in economically distinct countries. As says Shove (2003b, p. 408), "what matter is how the constituent elements of discourse operate together, and how individuals position their own routines in terms of a range of rationales, these being arguments that justify and at the same time provide a guide for practice". These accumulated experiences result in what Sargant (2014) called as sustainable consumption portfolio and can be organised as a narrative (see Shove, 2003a) influenced by higher or lesser presence of environmental consciousness, which is defined as "someone's tendency to position himself to matters related to the environment, for or against them. Consequently, individuals with higher degrees of environmental consciousness tend to take decisions considering the environmental impact of his stands and actions" (Gonçalves-Dias, Teodósio, Carvalho & Silva, 2009, p. 9).

Sargant (2014) applies this discussion to food consumption. When thinking about how to make food production and consumption more sustainable, this involves re-thinking our relationship with food, nature and ourselves (instead of just thinking about a production environmentally less aggressive). Also, the author highlights a contradiction in sustainable food consumption: although the market for sustainable food and services is growing, little

attention is focused on the day-to-day sustainability of these same goods and services, and she writes that "even consumers with 'green' values do not prioritise environmental considerations in all areas of practices" (Sargant, 2014, p. 46).

Thus, the one who sustainably consumes something may not sustainably consume everything. Even in an economically developed country, where evidence says that its population tends to be more socially aware (Kasser, 2011) and present lower water consumption (per capita) when compared to economically developing ones (ANA, 2019, Browne et al., 2013, Rebouças, 2015), we can also find non-sustainable practices. Consumers understand the need for more sustainable practices but are less aware of their share, so their environmental awareness is higher than their understanding on how to perform in a more sustainable way (Sargant, 2014).

Last, it is clear that current definitions of sustainability do not cover particular situations like the specific combinations we encounter in different social contexts. The debates in this topic tend to focus on broad understandings, which leave blind spots at the micro-level. Different societies present particular ways of performing practices, which may represent a different mix of practices that are considered the proper way of doing something in one place at the same time that a different society consider the same way of doing as improper (and have their own way), which reinforces the necessity of this effort of defending the existence of culturally-built sustainabilities, particularly looking into household water consuming practices.

2.3. SUMMARY

After presenting the theoretical background supporting this thesis, now I combine them into a discussion aligning the practice theory, consumption and the consumption of a natural resource (water). At the end of this section, I hope to demonstrate how these different literatures can be put together to expand both Elizabeth Shove's approach with Daniel Miller's perspective.

The study of water is not a new concern. Pahl-Wostl, Mostert and Tàbara (2008) already discussed there is a need to change thinking about the management of water resources, defending that cultural and institutional contexts should be considered in this subject. According to the authors, the existing formal – laws and regulations, formalised structures and procedures – and informal rules – socially shared norms and rules developed by

social practice – existing in these contexts helps our understanding about human behaviour (here, consumer behaviour).

Due to the infinite combination of connections between the elements of practices, Shove et al. (2012) even say that we live in a "world of practices" (p. 126), which express the idea that practices may emerge or modify due to contextual combinations of previously disconnected elements (as said in section 2.1.3.). This thought, also, helps to problematise the reality from Brazil and England concerning tap water consumption.

If we have a vast availability of water and people know that wasting is wrong, why does the culture of waste (Barbosa & Veloso, 2014, Rebouças, 2015) persist? How are the elements organised with this result? Moreover: knowing about the inverse correlation between levels of wellness and water consumption used (Rebouças, 2015), it is possible that England has some political agendas motivated by the fact that its population is confined to an island, having all its tap water supply mainly coming from that island. Therefore, if the English population cultivates the practice of waste, they are going to suffer its consequences more immediately than Brazilians doing the same in Brazil, as these share ecosystems and watersheds with almost its whole continent.

Thus, we need to delimit a context for comparing a behaviour, knowing that there is a direct influence from the combination of the elements of practice (Shove et al., 2012), which may make the same practice be performed differently according to the way its practitioners organised the materials, competencies and meanings they have.

This study may not result in something immediate, but it discusses eventual changes that may prove themselves sustainable (in the broad way), once that we know that the Brazilian water supply problems result from a combination of geo-environmental and sociocultural, because "even in the most populous states, what lacks most is not water, but a cultural pattern that adds the need to fight against its waste and the degradation of its quality" (Rebouças, 2015, p. 29).

Changes are difficult, as they involve practices that may be centenary and cultural and religious beliefs that consume water irresponsibly (Salati et al., 2015). Pahl-Wostl et al. (2008), in their conclusions, wrote that "despite the fact that culture is often referred to as a key element to understand the context specificity of resource management remarkably little work has been devoted to developing a sound foundation for investigating this relationship" (p. 494). This thesis is in this gap, aiming to help the understanding of the consumer

relationship with a natural resource. Salati et al. (2015) even affirm that water must be considered as something scarce with economic value, rather than a gift of unrestricted use.

Having presented the theoretical background that guided this thesis, I present a table summarising some of the main references used (Table 2).

Table 2
Theoretical alignment with thesis objectives.

Objectives	Theoretical background	Main references
Describe water consuming practices that are performed differently in the Brazilian and English household environments	Practice theory	Evans (2019), Halkier et al. (2011), Shove et al. (2012), Warde (2005).
Identify if contextual characteristics affect acceptable/non-acceptable water consuming practices in Brazilian and English households	Consumer behaviour	Barbosa & Veloso (2014), Evans (2019), Middlemiss (2011, 2018), Miller (2012), Shove (2003a).
Define what can be perceived about the way Brazilians and English deal with resources related to household water consuming practices	Cross-cultural	Braga, Tundisi, Tundisi & Ciminelli (2015), Darmon & Warde (2018), Shove (2003a).

Note. Source: Based on previously mentioned references.

In the next chapter, I detail the methods, explaining how I developed the research and the justifications for each choice.

3. PROCEDURES AND METHODS

Research requires planning. It is an effort that must be previously trained, so each further step (data construction and analysis) becomes easier to complete. Maybe data "construction" might have sounded strange. Usually, we see words like "gathering" or "collection", but in Coelho (2017) there is a discussion supporting this other term. In qualitative research, we should not necessarily use data "collection", which imply something like data being equally found by every researcher, and these people would capture them as a biologist would do. Instead, due to the subjective nature of the research objectives, the data is constructed as the researcher explores the constructions made by these individuals.

Thus, when I first came to this moment of the thesis, a myriad of methods was at my disposal, requiring me to choose those which one(s) would help me most in the pursuit to understand how the concept of sustainability is performed in the context of household water consumption practices in Brazil and England. I needed to choose how to coordinate the ideas while searching for answers, also having clear to myself what I was doing, as Eco (2016) says. According to the author, the one who writes a thesis should deal with some questions about how the study will be developed, which involves the decision of doing a historical-scientific thesis or a contemporaneous one, verify if it is possible to access all the required sources, as well as if the way chosen for data gathering (his word) and analysis helps in the pursuit of the objectives.

Even considering myself a qualitative researcher, I also had contact with quantitative research. The PhD program I attend (Programa de Pós-Graduação em Administração, PPA-UEM, Brazil) provided two classes in research methods: one on advanced quantitative methods and one in advanced qualitative methods. After finishing the two classes, each one of the paths could be followed in this thesis, being the decision based on the objectives.

As Bispo (2017) claims, PhD students should understand their research goals and use every method that could help them in pursuing such goals. Or, quoting the author, "the research goal should drive the method and not the opposite" (Bispo, 2017, p. 161). So, I returned and re-read the objectives. As my specific objectives involve subjective considerations, they require a qualitative thesis.

With this first decision in mind, I needed to establish how I would work with the practice theory. To do so, I started looking for papers again.

While verifying their methods, I noticed a plurality of methods that were compatible with the theory, both for construction and data analysis. Some of these materials are in Table 3.

Table 3
Examples of qualitative methods found in the literature using the practice theory as theoretical background.

Authors	Data construction	Data analysis
Costa (2016).	Specialised journals, focus groups and non-participant observation.	Content analysis.
Cruz (2009).	Secondary statistical data.	Principal components analysis.
Darmon & Warde (2018)	Interviews	Comparative analysis.
Hargreaves (2011).	Ethnography (participant observation, field diary and semi-structured interviews).	Grounded theory.
Langer & Farrar (2003).	Focus groups.	Thematic analysis.
Middlemiss (2011).	Case study (interviews)	Realistic evaluation framework.
Teixeira (2015).	Semi-structured interviews	Content analysis.
Watson & Shove (2008).	Observation and in-depth interviews.	Documental analysis and interpretive analysis.

Note. Source: Prepared based on the references.

As a perfect method does not exist (or even a single method, as Table 3 shows), each possibility had its pros and cons, which made me dedicate the next section to this: justifying my methodological choices.

3.1. THE METHODOLOGICAL CHOICES

This research was designed through a qualitative approach. Whereas this was my choice, this does not imply in saying that this approach is superior to other methods, such as quantitative or even mixed methods. Creswell (2014) discuss that any of the approaches mentioned above have their peculiarities, being the researcher responsible for choosing according to the research objectives.

I first decided to interview local Brazilians and English but, in my qualifying exam, the examiners raised the concern that merely interviewing these groups would not configure a cross-cultural study. I knew subtle differences in the context people were inserted should be considered, so I could deeply discuss cultural differences. The way I came up with to cross-

culturally discuss sustainability through water was expanding the groups: I already had started my interviews with Brazilians and I would not have the available time to stay long enough in England to perform an ethnography, but "what if" I could access the perceptions of some migrants? Would they keep their practices in the way they used to it in Brazil? Does anyone consider our habits strange? Is there a better way of doing some household activity and we do not know? Why would it be better? What if an English comes to live in Brazil? What would they change in their way of doing things? Why? Looking for answers to questions like these helped me in my further analysis.

To obtain the individuals' considerations, I had several possibilities for data construction techniques, like the examples mentioned in Table 3. Alam (2005) writes that the methodological predominance in marketing involves hypothesis tests, even that researchers recognise that qualitative research are vital for developing the area (but they face higher peer resistance). What Alam (2005) recommends is that each author demonstrates methodological rigour when describing how the research was handled. From this point, I present the justifications for my methodological choices.

As mentioned, my thesis involves data from two countries (Brazil and England), which allows a cross-cultural approach. According to Martinus and Hedgcock (2015), studies that investigate different countries are highly appropriate when dealing with global level questions, but they warn that researchers must be alert to cultural and linguistic differences. This is challenging, as the countries have different languages (Portuguese and English). However, besides Portuguese native speaker, I am also proficient in English, which allowed me to construct the data in both languages. Also, in England I was supervised by Dr Lucie Middlemiss (University of Leeds) during six months; we had regular meetings where I could discuss my thesis and my data with her, improving a better use of my data as well.

In Brazil, I was both researcher and insider. Renganathan (2009) claims that in cases like this the researcher should be reflexive at all time, knowing that he/she may also be part of the study, which is completed by Martinus and Hedgcock's (2015) discussions. By studying household water consumption, I am also consuming this resource, which is both an advantage and a limitation, because some observations are already culturally associated and do not raise questions (Renganathan, 2009).

Elder et al.'s (2014) paper exemplifies this last paragraph: in the study, the authors examined water consumption habits (as beverage) by elementary school children, promoting this habit through some interventions (e.g. distribution of water to the students, in-class

activities around water consumption and take-home materials) in four schools, two in San Diego (United States) and two in Tlaltizapan (Mexico). The countries had some similarities, as receptiveness for the activities (both from schools and children), although the authors also highlighted some particular differences, like the dry climate in one place and water with distinctive taste in the other. This example made me think that if the authors had researched only one place, characteristics like the ones mentioned above could have been missed because they are part of that environment. Therefore, some questions were in my mind even before I started my field research: does the warmer climate in Brazil make people consume more water than in England? Do the English consume more responsibly because they are on an island and people are aware they have less availability of resources?

Some aspects like those reported by Elder et al. (2014) were objectively measured through statistical techniques. On the other hand, they did not get deeper into the whys from those individuals. This is not a limitation, only shows a different possibility of study. Did these children modify some of their household behaviours after the intervention? Or, further, did they have any influence on the water consuming behaviours of the other family members? Thus, by personally leading a cross-cultural study, I was able to observe a wide range of behaviours, meeting many people from both countries.

Seeking to guide researchers who use observations, Probst (2016) and Waddington (2004) recommend that researchers keep a balance between being both an insider and an outsider in contexts where they may have some experience. They recommend this so that researchers can get closer to the individuals at the same time they maintain a distance in becoming local (characteristic from ethnography), which could make these researchers less critical while in-field (reinforcing Elder et al., 2014).

Knowing that this thesis involves questioning people about their water consuming practices, this includes activities like household cleaning, personal hygiene and washing clothes, for example. This creates an impediment to some techniques that require direct observation of events, like participant observation (Cavedon, 2014), as it is very invasive to people's privacy. However, as I lived six months in England (PDSE scholarship n. 88881.190509/2018-01), this allowed me to meet with and talk to with many people (locals and migrants), which helped me to get insights to do the interviews, detailed in the next chapter (analysis).

Thus, several options were identified (e.g. focus groups, ethnography, participant observation, and life history, to name a few), and I had to make a choice. All these methods

had strengths and limitations that I did not consider a good trade-off for me, so I made a choice due to the following reasons: considering the necessity for a link between researcher and researched, as well as the particularities of household water consuming practices, and also the fact that I intended to understand differences in the performance of practices for Brazilians and English, the Oral History was my choice.

3.2. ORAL HISTORY

As I said earlier, I do not think there exists a superior method or approach, just some that might fit better to each study, as Campenhoudt, Marquet and Quivy (2017) also say. In this section, I will explain the method that guided this thesis, inspired by the way did by Gaffuri (2016). Therefore, about oral history, this section contains: (3.2.1.) Historical origins and variants; (3.2.2.) Fitting the method to the practice theory; (3.2.3.) Fitting this thesis to the method. Even though Gaffuri's (2016) dissertation used another method – life history – both oral and life histories origins are inseparable, as you will see next.

3.2.1. Historical origins and variants

Storytelling is something common to humans. Maybe this is one of the most ancient ways to share information. As it deals with characteristics like experiences and individual considerations, oral history also "is one of the oldest, best known, and most often used methods in qualitative research" (Chaitin, 2008, p. 583). This happens because there is a significant convergence between many points from oral history and qualitative research, as Janesick (2010) explains.

These convergences refer both for more instrumental aspects using interviews, observations and documents as evidence as also more conceptual questions like the experiences lived by the people as a way to help us understand the world with a different look (Janesick, 2010). However, what is the origin of this method?

As mentioned, oral history relates to qualitative research. Although it will only formally receive methodological relevance around the 1940s, oral histories registry and analysis were systematically done since the XIX century (around 1860), with works related to record oral histories of influent North-Americans. At the end of the XIX century, these

interests resulted in the establishment of the American Folklore Society (1890), which contributed to disseminate these histories (Chaitin, 2008).

Scientifically, the method is more recent, with its origin dating from the around-1920 work *The Polish peasant in Europe and America: monograph of an immigrant group* (from William Thomas and Florian Znaniecki), as reported by Barros and Lopes (2014). I say "around" because this is unclear: while some authors say that its publication was in 1918, others say 1920 (Barros & Lopes, 2014, Thompson & Bornat, 2017). Fact is that study is considered seminal due to its innovation in using, besides the traditional at the time (documental sources), field research with personal documents (letters, mostly) and life histories of Polish immigrants who came to the United States, which allowed to comprehend and interpret these immigrants' behaviours starting from the meanings they put into their actions. The work was also the first of a movement called Chicago School, established a little earlier (1915), known by its empirical sociological works, with studies supporting that

> besides knowing the objective life conditions from the individuals, it is necessary to comprehend the meaning they give to their environment, their situation and their actions (the meaning they create), which can only be done in the life history's realms (Barros & Lopes, 2014, p. 45).

In the following years, many other works studied people's life stories (Anthropology, mainly), with a particular interest in the perspective of immigrants, slaves and workers (Thompson & Bornat, 2017). Their stories helped to expose life quality, habits and customs from different realities, based on the narratives of those groups who were (are) at the margin of the society.

These interests continued until another social interest started receiving more interest: the political history. In this context, we see the growth of oral history. The year was 1948, and the historian Allan Nevins (Columbia University) proposed a modern technique to historical documentation, registering the memories of important people for the United States. Therefore, the oral history method arises as a new option among the biographical methods.

Although oral history was continuously being more recognised academically, in the post-Second-World-War years the quantitative research ruled the field, and qualitative approaches only resumed their growth in the 1970s, first in France and Italy (Barros & Lopes, 2014).

In the literature, terminologies like life history, oral history, narrative history and others overlap. This occurs because all of these methods use oral sources as a way to construct the data. As oral history only started demonstrating more evident borders with these other terms from the 1970s, establishing the Oral History Association (1966, in the United States)

and the Oral History Society (1973, in the United Kingdom) (Thompson and Bronat, 2017), from now on I refer to oral history as a separate and distinct method (although related) from the methods mentioned above.

Thompson and Bornat (2017) write about the overlap between oral history and life history, which helps in differentiating them:

First, oral history. The term is used more by historians and those who work with communities, "but also by broadcasters and many social researchers, for the recording of any kind of memory of the past. Oral history often focuses on just one theme, or one phase in a life" (p. viii).

Life history, on the other hand, usually is carried out by anthropologists and sociologists who seek to understand societies and social change. The method records "the story of a whole life, from childhood through to the present. Thus, while oral history often is not a life story, recorded life stories are always oral history" (p. viii).

So, academics of many areas do oral histories without necessarily claiming that the method belongs to a specific one, which makes interdisciplinarity something common when using this method (Chaitin, 2008).

Here I use "method" because this is the term used by Chaitin (2008) and this is the way I see oral history: a complete methodology in itself, sufficient for both data construction and analysis. In the literature, we can find discussions arguing that oral history is a technique, others saying that it is a methodology and even some understanding it as a discipline (Amado & Ferreira, 2006).

According to the authors, those who understand oral history as a technique argue this based on some operational aspects, like experiences related to unveiling the data, which involves recording procedures, transcriptions and storage of these interviews, as well as the equipment required (e.g. recordings, video cameras, organising models). Those who defend this position usually work with organising and preserving collections and/or are social scientists that usually work with written sources, using oral history as an additional source.

For those who consider oral history a discipline, Amado and Ferreira (2006) consider this understanding as confuse. The authors say that the arguments are made in a complex and, sometimes, contradictory way. In this way of thinking, oral history originated research techniques, methodological procedures and a set of concepts, which would give it the status of a theoretical *corpus*. The foundations of this understanding get fragile when we understand

that a historical discussion must base its discussion in some theory, not *be* that theory. History always represents a construction; it is a narrative that explains events.

At last, Amado and Ferreira (2006) write about the third understanding, oral history as a methodology (which is the view they defend). The authors claim that oral history,

> like all methodologies, just establishes and directs working procedures [...], a bridge between theory and practice. This is the field of oral history – which, in our understanding, does not allow to consider it as a practice only. However, in the theoretical area, oral history is capable of only *raising* but never *solving* questions; it formulates questions, but cannot offer answers. (p. xvi, emphases in original).

After this, I finish the historical overview of oral history by positioning it as a complete methodology. As said by Amado and Ferreira (2006), the researcher needs to choose some theoretical approach to investigate the research questions, which I do in the following section.

3.2.2. Fitting the method to the practice theory

After briefly exposing the oral history historical context, the way that it arose and earned recognition by academics also reflects its objectives. Therefore, here I relate this method to the practice theory.

Schatzki (2012), when discussing research methods for practices, exposes that we have many possibilities to do this because practices are more intangible than material entities. We need to discover practices, while we readily perceive material entities and activities. Therefore, we need to consider other possibilities than direct observation to reveal them, and Schatzki (2012) defends the use of language as a way through which we can access activities and practices.

The author argues that even well-prepared researchers (be it for understanding the literature or consuming information from sources as documentaries) may not know how the practices are organised and how they may be organised (even the individuals themselves may not realise or know this). Schatzki, then, defend that ethnography (due to its quality to insert the researcher in the environment to become a "native") is a proper method. However, he also considers other methods that may be useful to comprehend social issues, like oral history.

Oral history, according to Schatzki (2012),

> documents reflective participant's temporal journeys through series of bundles and constellations, thereby offering glimpses of the organisations and timespaces of these bundles at different times, the links among them, the activities that compose them, evolutions in these matters, and what is involved in individual people participating in multiple bundles over time. (p. 25).

As this is a way to document people's experiences, the researcher (or historian, as some works say) end up having access to information that he/she could not obtain from other sources, as happened when he/she analyses the reports through some theory (Chaitin, 2008). We can also use the method to consumer behaviour studies, as Elliot and Davies (2006) defend: "oral history brings back to our analysis of early mass-consumer culture the voices of ordinary consumers" (p. 244). While the interviewees were transmitting their memories, I was able to understand, through different perspectives (which represent groups of people), how the elements of practices are organised around household water consuming practices.

Elliott and Davies (2006) reinforce the importance of the method in consumer behaviour studies by noticing that the majority of studies do not see consumers as individuals (but as numbers and metrics). In other words, studies need to "give voice" to consumers, which has historical value both for the current moment (registering evidence) and for the future, so that other people can study the past as a way to better understand their present. This is the case of Shove's book (2003a), for example, which is one of the references that I use here to know more about the British scenario and support my considerations.

The authors still add that the records do not try to support an "objective" reality. The scientific value is in the narrative's historical value, as "the interviewee narrates for historical purposes stories about their involvement with and meaning given to a particular topic structured by life events and changes" (p. 246). The history, consequently, is anchored in a time and in a context.

Although some researchers question the validity of histories as a reliable source, Amado and Ferreira (2006) emphasise that the history by its own is not a scientific knowledge but, using these memories along with a theoretical basis and a research methodology, the histories allow researchers to discuss some subject, supporting and also guiding the understanding of the research questions.

Coelho (2017) defend that researchers should not investigate looking for "preciseness, the certainty of the explanation, but for coherence, consistency, plausibility, in one word: the *quality* of the information" (p. 3, emphasis added). Although the author had argued based on ethnography, we should keep in mind that both ethnography and oral history are considered biographical methods, which allows me to use the quote from Coelho (2017) to support the method I chose. Therefore, there is not a concern about some metric of a minimum number of interviewees. This does not mean that interviews are sufficient by their own, but the researcher must present "with clarity to the reader, not just the evidence that

sustain his interpretation, that is, he needs to demonstrate how he built his inferences; but the paper also needs to establish connections with the theoretical basis used" (Coelho, 2017, p. 3).

Considering that we can apply the oral history in studies using the practice theory (due to the use of language as a way to elaborate the practice performed) and that consumer behaviour studies benefit from using oral history (enabling a more humanised access to consumers), a study addressed to consumer behaviour practices of a natural resource, by consumers from different countries, has support in terms of theory and methods. Therefore, I now describe how I operationalised the oral history in this thesis.

3.2.3. Fitting this thesis to the method

The basis for oral history is the use of interviews to generate the stories. As these reports tend to be complex due to the amount of information provided, I asked all the interviewees for permission to record the interviews in a digital voice recorder. The use of this recorder allowed me two things: (1) higher reliability of my data, as I could revisit the interviews as many times as I wanted to; (2) deeper involvement during the interviews, as I did not have to divide my attention between ask the questions and write the answers. The main way through which my data was constructed was via oral history interview (Janesick, 2010), both in Brazil and England. More details about the field research are in the following chapter (Analysis).

During the occasions when I did the interviews, I planned my questions according to the way the stories were told. Ritchie (2015) recommends that the interviews ask from the general to the specific issues, in a way that the interviewee gets familiarised with the rhythm and builds trust with the researcher. So, after getting their consent (written and verbal) to register their participation and use their information in this research, I opened everyone's first interview with a broad (but related to my subject) question: "tell me about your routine, from the moment you wake up until you go to bed".

After the initial report, I started asking the interviewees for more details. Janesick (2010, pp. 46-47) exposes different styles of questions that researchers can use during oral history interviews, as descriptive questions (or, as the author calls, "help-me-understand" questions), structural/paradigmatic questions, follow-up/clarifying questions, experience/example questions, comparison/contrast questions, and closing questions.

After writing about the theoretical basis, it helped me to define *a priori* the following themes to a narrative analysis: hygiene, eating, household maintenance, weekends, special occasions and seasons. Thompson and Bornat (2017) consider a good strategy to the researcher the division of the interviews into three stages: the first involving the broad question (here, the "routine" question); after, the second stage refers to non-verbal encouragement, where the researcher only intervenes when asking for more details; and the third stage, as both parts may have developed some rapport, should be used by the researcher to ask about challenging questions.

Even if the first and second stages (Thompson & Bornat, 2017) could have been carried out in the first interview, I told everyone I would need at least two interviews. I had two reasons for asking them for a minimum of two interviews. First, it allowed me to transcribe the interview and to prepare additional questions I used to deeply explore or clarify some answers. Second, interviews in different days allow the interviewees to think about their memories. So, when the next interview happened, many of them added information from the previous day(s), as happened in Gaffuri's (2016) life histories interviews.

These interviews occurred with at least one week in between (except with I12's third interview, which occurred three days apart from her second interview, as the person was leaving on holidays), and each person generated approximately four hours of recording in a three-days set of interview (I9 was the only one who had a four-days set). I did all the interviews, both in Portuguese and in English, being the interviewees the ones who chose the language we would use in our meetings. The interviewees also decided where and when we would meet (e.g. in their homes, in their workplace, or elsewhere). All of them were either people I already met or someone known by a person I met.

The data was transcribed all by myself using Windows native app "Notepad". This software uses a continuous text, so I do not have the number of pages from each interviewee. The procedure I chose to analyse the interviews involved a more intimate approach with my data: I did not rely on a software-based analysis, but I deep read all of the transcripts and I tried to establish a narrative that connects the different narratives across different shared practices, using only a Microsoft Word document to organise my notes.

Also, to better understand the realities, I observed (non-participant) tap water consuming practices in public spaces (e.g. usage of fountains and lakes, cleaning of pavement) and presence/absence of ecological appeal in domestic utensils that use water (e.g.

packaging information, information provided by salespeople) as a way to get insights for the interviews and have additional sources to reflect upon the oral histories.

At last, I would like to highlight (once again) the fact that oral history is a complete methodology, which means that the analysis was guided by the own method. Thompson and Bornat (2017) emphasise that data construction has limited importance, and the data needs to be analysed in a way that the story shows social value. The interpretation process, according to the authors, must be previously thought to identify the existence of a story that needs to be told due to its practical and theoretical value.

For the analysis, even though I worked with recent events (the way people currently consume water and its impact on their understanding of what sustainability means), I tried to explore how the different procedures were established by both Brazilians and English, reporting how they first learned how to do it, if these procedures changed from moving to different places, and how they see the differences when they see other people performing household water consuming practices, to name some topics, which made my analysis be aligned with the understandings of Janesick (2010) and Thompson and Bornat (2017).

Many approaches could have been used to discuss the data (e.g. "single life story narrative", "collection of stories", "narrative analysis", "reconstructive cross-analysis", and "polyphony and dialogue"), but given the amount of data (approximately 4h/interviewee), the number of stories (12 interviews), the different groups (Brazilians and English – locals and migrants), and that water can be found in many household practices, I decided to do a narrative analysis (Janesick, 2010, Thompson & Bornat, 2017).

This choice also helps in the text format. Considering this is a thesis, this procedure turns easier to connect the background theory with the stories in a narrative and it also contributes to internal consistency, cross-checking the different contexts with previous discussions and unexplored gaps (see chapter 4 for specifics).

After defining the theme and justifications related to the study (chapter 1 – Introduction), theoretical background (chapter 2), the next step, according to Thompson and Bornat (2017) is the continuous revaluation of the author's thoughts and what the fieldwork is making him/her think. Therefore, the researcher needs to decide how he/she will tell a story that represents the histories accessed. So, the authors present three basic questions that the researchers must address: who is the author (in this thesis I am the author, although some oral history academics consider the interviewees as the authors of their histories); which media will be used (storytelling can appear in different media, like movies, documentaries, podcasts,

news, to name a few, but here I am telling the story through a PhD thesis); and what is the interpretation/analysis procedure.

About this last one: Thompson and Bornat (2017) claim that "much oral evidence, springing from direct personal experience – like an account of domestic life in a particular family – is valuable precisely because it could come from no other source. It is inherently unique" (p. 364). Oral history is interpreted according to a specific theme and context. The analysis, though, is sustained by comprehending the individuals' realities, where we consider the narratives "interesting not only as personal histories but, mainly, as an excuse to comprehend an object, a situation, an unknown social universe" (Barros & Lopes, 2014, p. 55).

Within these limits, I hope I have been able to expose how my thesis fits oral history. I prepared a script for the interviews but, although the script contains the main questions, each interview followed its own path.

3.3. QUALITY AND RELIABILITY

It may sound strange that a qualitative study opens a section to write about quality and reliability. How does this work, considering that this approach does not have all the metrics and indexes that we see in quantitative research? Roulston (2010, p. 201) also addresses this question and, while discussing how to ensure quality specifically for qualitative research that uses interviews, she mentions four "phases" to be observed as a way to demonstrate methodological rigour: 1. learn how to ask questions in ways that may be understood by participants; 2. design an appropriate methodology; 3. reflexivity in the research process; 4. analysis of interview data that conceptualizes interviews as metacommunicative events.

In this thesis, the way I followed Roulston's (2010) phases involved being as transparent as possible about what I wrote. This is one of the reasons why I chose to write in the first person (all my previous works were in the third person), exposing my thoughts and choices, which relates to phases 2 and 3 and it is also something consistent with Campenhoudt et al.'s (2017) considerations that the author should not unnecessarily stick to a "pompous" (p. 25) writing. As Bansal (Bansal & Corley, 2011) says, "given that there isn't a single 'right' method, [qualitative] researchers must be *transparent* about how they engaged deeply with a phenomenon and show the evidence for their conclusions" (p. 236, emphasis in original).

Besides that, for phase 1 (learn how to ask questions) I transcribed the interviews before the following meeting, making voice notes during the transcription, so it helped me to remember questions I had from insights when transcribing the recordings. In the rare occasions when I could not transcribe the interview earlier than the meeting, I at least heard the recording again and did the same procedure of recording voice notes to prepare the next script.

Finally, phase 4 was elaborated in the next chapter (Analysis), where I developed the text integrating my data with the literature. Table 4 summarises this chapter.

Table 4
Methodological references.

Objective	References	Main works
Design	Qualitative research	Creswell (2014), Denzin & Lincoln (2005), Tracy (2013).
	Cross-cultural	Martinus & Hedgcock (2015), Renganathan (2009).
Data construction	Oral history (interviews)	Ferreira & Amado (2006), Janesick (2010), Ritchie (2015), Thompson & Bornat (2017).
	Non-participant observation	Probst (2016).
Data analysis	Field notes	Thompson & Bornat (2017).
	Oral history	Janesick (2010), Thompson & Bornat (2017).

Note. Source: Based on previously mentioned references.

4. ANALYSIS

Here I will tell some stories. As said before, this thesis is a cross-cultural study of two countries, Brazil and England, so the narratives add to each other and help me in the discussions.

However, before these stories, it is important that I present to you both the Brazilian and the English scenario on water consumption. I do not intend, with these scenarios, to affirm that this is the reality of every Brazilian and/or English, but I intend to offer an overview of my interviewees, which will help me to sustain the thesis that sustainability is something culturally specific.

4.1. BRAZILIAN WATER CONSUMPTION SCENARIO

4.1.1. Institutional evolution of water management

Here, I present an overview of water management in Brazil, mainly through legislation approved throughout the years. It is important to say that I do not use the term "evolution" as meaning "better", but I use it in a chronological meaning. Thus, the following pages are useful to understand the Brazilian water consumption context and the way this resource was managed throughout the years.

Although Brazilians' laws regarding water management are considered best practices worldwide (Braga et al., 2015), this was not always true; the first water legal appearances date back to the XIX century. In the following pages are the main events involving water regulation, offering an overview of how our leaders viewed this resource. Also, you should observe that Brazilians' legislations always managed water through something called "extended anthropocentrism"; that is, human needs were always prioritised over other living beings (Aquino, Cavalheiro & Pellenz, 2016). As this thesis discussion refers to cultural consumption, it refers to something established through many years, so it is important to highlight some landmarks.

After Brazil's independence (1822), we had the first Constitution, from the Brazilian imperial estate. The "Carta de Lei" (first Brazilian constitution) centred all the powers in the Emperor, and "the constitutional text does not mention, in any part, anything related to water use, possession and regulation; it only focuses on providing unrestricted ownership" (Braga et

al., 2015, p. 614). Although the Law from 1st October of 1828 had disciplined to the City Councils competence to legislate on any water stagnation (e.g. wells, fountains, aqueducts) (Aquino et al., 2016), the first appearance on water protection only occurs in 1890 in the Penal Code, which established prison in a closed regime from one to three years to those who corrupts (or violates) drinking water, be it for general or personal use (Braga et al., 2015).

In a first movement concerned with Brazilians' droughts, between 1886-1889 D. Pedro II created, through an international multidisciplinary commission, the Drought Commission. This commission had as its landmark on the Brazilians' northeast droughts the conclusion of Cedro dam (state of Ceará). The purpose of this Commission was precisely to expand the assistance on local issues; building weirs and public reservoirs (Braga et al., 2015).

After the proclamation of the Republic (1889), at the beginning of 1891, it was decreed and promulgated the Constitution of the Republic. In Article 33 of this Constitution, it says that it competes to the National Congress legislate on rivers navigation, but the ownership could still be from third parties (except in cases of necessity or public utility, situations in which expropriation could occur) (Braga et al., 2015).

Only in 1906, it is possible to identify a beginning of concern from the Government in regulating productive activities (i.e. mining, agriculture, fishing) concerning natural resources. In the following year, it was elaborated the Water Code ("Código das Águas") project. However, this project would need almost three decades to be approved (1934), as it needed many adjustments to the Brazilian reality on droughts scenarios. This happened because much of this Code was inspired from legislation from countries like France and the Netherlands, with characteristics different from our reality, as their weather is mostly humid, and they have better access to water flows (Braga et al., 2015).

In 1934, the Constitution also stated that the State could remove the ownership of water courses from the landowners. About the Water Code, approved in that year, it is important to say that 30% of its articles (approximately) were about the hydraulic use focusing on low-cost energy production to industries that were arriving in the country (Braga et al., 2015). Therefore, we can observe that the concern was not in the water, but the industries, demonstrating that the lack of value identified in the water occurs in Brazil from a long time, as reinforced by Aquino et al. (2016), which may be a precedent for the culture of waste (Barbosa & Veloso, 2014, Rebouças, 2015). The lack of concern is not exclusive of our history: nowadays, we still have 20% of the world without access to drinking water, in a mix

of geographical conditions, absence/insufficient basic sanitation, water pollution and waste, populational growth, and consumption patterns (Fachin & Silva, 2012).

In the 1946 Constitution, we can notice a movement in decentralising the power from the Federal Government to make the states and cities responsible for legislating on the water. However, this power was not executed, once that there were not observed any conflict that would require the attention of these spheres' legislators and managers. Otherwise, the electric energy continued centred in the Federal Government; in 1965 were established the National Department for Water and Energy ("Departamento Nacional de Água e Energia" - DNAE) consolidating the energy sector as responsible for managing the water (Braga et al., 2015). Again, water continues to be seen as an input.

A new Constitution, in 1967, reinforces the one from 1946. The lakes present in more than one state and all the water flows inside the national borders are included as property of the Union. Among other responsibilities, the Union rules the water, which no more is a responsibility of the states (even if they were acting on complementary behalf of the Union), which now they could only manage (Braga et al., 2015).

Seeking to contribute to the water resources management, in 1978 the Special Committee for Watersheds Integrated Studies ("Comitê Especial de Estudos Integrados de Bacias Hidrográficas") was established, acting on many basins through consultative executive committees; that is, there was no imposition of decisions, but they looked for providing considerations based on important experiences (Braga et al., 2015).

During the 1980s, we had some landmarks concerning water resources management, as Braga et al. (2015) report. Starting in 1980, there was a desire to modernise the national water management, which was based on the Water Code (1934), although it was never fully implemented. During the 1980s, also, some technical sectors from the government (many located in the Ministry of Mines and Energy ("Ministério de Minas e Energia") included, through the III National Plan of Development (1980-1985), the decision that "the Government will sponsor the establishment of a National Water Management Policy" (p. 618). In 1986, the Ministry of Mines and Energy (along with other state and federal agencies) suggested to organise the National Water Management System and, in 1987, the Brazilian Water Resources Association established the Water Resources Management Commission. This commission was responsible for promulgating the State Decree n. 25,576, responsible for creating the State Water Resources Council in São Paulo, considered the "embryo of Paulista and national systems for water resources management" (Braga et al., 2015, p. 618).

At the end of the 1980s, in 1988 was enacted the Constitution of the Federative Republic of Brazil. This Constitution established, in its Art. 21, Subsection XIX, that competes to the Union to institute the National Water Resources Management System ("Sistema Nacional de Gerenciamento de Recursos Hídricos" – SINGREH), as well as to define the criteria to grant the right of use, which differentiates the water resources management from the environmental sector and made this a historical landmark. This Constitution, therefore, offered a new look to water preservation, especially about the public domain (Aquino et al., 2016).

By the end of the century, in 1997, the Brazilian President sanctioned the Federal Law n. 9,443 (known as Water Law, or "Lei das Águas"), which established the National Water Resources Policy and created the National Water Resources System. This law, along with the Federal Law n. 9,984/2000 – which created the National Water Agency (Agência Nacional das Águas – ANA) (part of the Ministry of Environment) – consolidated the Water Resources Sector institutional reform (Braga et al., 2015). With this law, the water is now seen as a public common-use good that has economic value. This revoked "articles from the Water Code dated back from 1934 and established new rules to discipline the water use, preservation, and maintenance on the planet" (Aquino et al., 2016, p. 72). Although the purpose of the charges is not something clear, according to Silva (2010), this can leads us to think that the Brazilian Government thinks that punitive control is a proper strategy to inhibit undesired behaviours, which we already saw in Hargreaves (2011) that making people aware and helping them to resignify their relationship with the consumption could also be a proper strategy (maybe better?) for environmentally-friendly behaviours.

In the last years, it is worth mentioning the 2009 addition from Law n. 12,058. This law added to the ANA's attribution of regulating and supervising raw water irrigation and adduction (if they involve water sources from the Union), fixing efficiency standards, defining tariffs (when applicable) and managing and auditing concession contracts (when present). Also, in 2010, ANA got new responsibilities from the National Information System on Dams Safety ("Sistema Nacional de Informações sobre Segurança de Barragens" – SNISB), as "SNISB organising, implementing, and managing; promote the articulation between the dam inspection bodies; coordinate the preparation of the Dams Safety Report and forward it annually to the National Water Resources Council on a consolidated basis" (Braga et al., 2015, p. 625).

We know that the Constitution holds the hierarchically superior laws, but we can also see that many other infra-constitutional laws are present entirely or partially on water protection throughout the years. Aquino et al. (2016) summarise the most important ones:

> Water Code (Decree n. 24,643, from 10-7-1934), the Federal Law n. 9,433 (instituted the National Water Resources Policy), the Federal Law n. 9,984 (established the National Water Agency – ANA), and the Federal Decree n. 3,692 (which complements the operational structure of the ANA).
> [...]
> The Federal Law n. 9,605/1998 typifies environmental crimes, including the crime of pollution. At the administrative level, the Federal Decree n. 3,179/99 provides for administrative sanctions for those who trigger or cause water pollution. The most recent legal instruments on water are in the Brazilian Civil Code, which came into effect in 2002. (Aquino et al., 2016, p. 71).

As well as the laws are organised at different levels, the water management is also made by multiple agencies from the National Water Resources Management System ("Sistema Nacional de Gerenciamento de Recursos Hídricos" - SINGREH) in many levels and on different attributions. Knowing this, Braga et al. (2015) organised a table that summarises the existing agencies and their attributions (here presented as Table 5, where it is summarised these agencies hierarchy).

Table 5
National Water Resources Management System – SINGREH

Agency	Attribution
National Water Resources Council (Conselho Nacional de Recursos Hídricos – CNRH)	SINGREH's higher agency. Constituted by the government, users and civil society. It is responsible for subsidising the national water resources policy and mediate water use conflicts in higher instances.
Water Resources and Urban Environment Department (Secretaria de Recursos Hídricos e Ambiente Urbano)	A federal entity in charge of proposing the national water resources policy formulation, as well as monitoring its implementation; also, acts as CNRH's executive secretary.
National Water Agency (Agência Nacional de Águas – ANA)	The agency that coordinates the SINGREH's implementation nationwide, and also regulates water resources use in rivers from the Union's domain.
State Water Resource Council (Conselho Estadual de Recursos Hídricos – CERH)	The higher state agency, constituted by the government, users and civil society. It is responsible for subsidising the state water resources policy and settling water use conflicts within the state.
State Water Resource Management Agency (Órgão Estadual Gestor de	The agency that coordinates the State Water Resources Management System implementation and regulates water uses from rivers within the state.

Recursos Hídricos – OEGRH)	
Water Basin Committee (Comitê de Bacia Hidrográfica)	Collegiate constituted by the government, users and civil society. This agency can approve the basins water resources plan, monitor its execution, establish charging mechanisms, and suggest to the CNRH the values to charge.
Water Agency (Agência de Água)	Technical and executive support to the water basins committees, being the one responsible for keeping the water balance updated on the water availability, keeping the users' registers, charging for the water use, managing the information system, and elaborating the basin's plan.

Note. Source: translated from Braga et al. (2015), p. 625.

Therefore, it is undeniable that Brazil is supported by different levels of expertise in water management[9]. Although, this expertise does not guarantee that the Brazilians know how to consume water in an environmentally responsible way (Carmo, Dagnino & Johansen, 2014, Jacobi. 2011), or that the states properly manage this resource[10] (Jacobi, 2011, Silva, 2010), once innumerous adjustments and modifications had been reported since the XIX century, and it still is an "in test" (Braga et al., 2015, p. 648) water resource managing system on its efficiency and efficacy.

Some juridical understandings focus on water protection, as mentioned by Fachin and Silva (2012), where the authors posit the drinking water access as a fundamental right. Some other understandings go beyond: they propose to understand water with a juridical personality (instead of an "object"), where the concerning expands to any living form (not only human) (Aquino et al., 2016). However, this understanding is not broadly shared in society.

In the Brazilian history, water is not seen as something valuable but as an input to the industries, for a long time managed through agencies whose primary concern was the county energy system (as the previously mentioned National Water and Energy Department in the 1960s, for example). Just in the last years, this view has started changing, but the waste and the lack of urgency are already institutionalised in many generations, which makes difficult to work with environmentally responsible consumption campaigns. In the interviews, I tried to ask people if they knew how the waters are managed and if they look for new ways to consume in more environmentally friendly ways. I discuss the results in the narrative made from the stories, both in Brazil and in England.

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[9]According to Jacobi (2011), in 2011, Brazil already had more than 160 state water basins.
[10]"Until 2011, almost fifteen [years] after the first national water law's approval, no system was fully operationalised" (Jacobi, 2011, p. 5).

On this thesis grounds, I see water as a fundamental right (Fachin & Silva, 2012) and as an indispensable resource to everyday life (Brei, 2007, Lanna & Braga, 2015, Pirula & Lopes, 2019, Shove, 2003a, WHO & UNICEF, 2015), so that this will drive my analysis towards consumer needs.

4.1.2. Brazilian urban water consumption

As well as the laws changed throughout the years, the same can be noticed on the Brazilian urban water consumption. Although nowadays the legal instruments are more complex and more concerned with environmental protection, the success of water management critically depends on consumers, in a triad described by Jacobi (2011) on the elements of water governance. A political element focused on balancing the current interests and realities; the social, which includes the population; and the credibility factor, result from people's beliefs on the instruments and supporting politics. Therefore, if the laws needed to be modified throughout the years, so it did tap water consumption, which represented different realities.

The Brazilian population, as well as the rest of the world, has seen considerable growth in the last decades. From, approximately, 14.33 million people in 1890 (IBGE, 2007) to about 209.25 million in 2018 (IBGE, 2018), representing 1,360% growth in almost 130 years. Knowing that drinking water is a finite resource, this growth concerns those who share pessimistic Malthusian visions. However, as Carmo et al. (2014) highlight, constant technological developments and social adaptations have demonstrated that the available water capacity is still adequate for our society.

Notice that I am not saying that the population size issue is not important. A bigger population will demand more investments in infrastructure and essential services, as Carmo et al. (2014) highlight. However, as the authors report, besides "how much" is consumed (related to the amount of tap water), we should also observe "how" the consumption occurs (the usual in that context).

According to the last Brazilian Census (IBGE, 2010a), 84.35% of its population was living in urban area, and the Brazilian Government's perspective is that this percentage reaches 90% in 2030 (Brasil, 2016). This is concerning because, when we observe household water consumption in different Brazilian regions, all of them increased this consumption between 2000-2008, with an average increase in 4.2% per year (IBGE, 2002, 2010b), and this

expected increase will demand more complex managements to adequately fulfil these people demand.

Besides tap water consumption increase, the Brazilian population also increased its bottled water consumption. Between 1974-2008 there was an over 4,000% increase in bottled water consumption (Carmo et al., 2014), which might be related to the lack of confidence that Brazilians have in their tap water (Brei, 2007), although I cannot affirm this based on my data, as the Brazilian residents I interviewed (both locals and English migrants) were equally divided between using filters and drinking right from the tap (but all of them prefer to drink cold water, which leads some of them to store tap water in bottles in the fridge).

Although there is a direct relation between the increase in income and the increase in consumption, this relationship is not the same in every Brazilian state capitals (e.g. Macapá: although it has one of the largest per capita/day tap water consumption, its population had one of the least per capita income among Brazilian capitals) (Carmo et al., 2014).

When we focus our attention specifically to Paraná, the state where I live and developed the thesis, the situation is similar to the situation of Brazil as a whole. It is possible to observe a relationship: in Paraná, the regions[11] where water basins have better environmental indexes are also the regions with better social and economic indexes. The Alto Iguaçu (Curitiba), Paraná 3 (Guaíra), and Pirapó (Maringá) basin regions, in general[12], have low percentage of inappropriate agricultural use (3.67%, 4.33%, and 10.67%, respectively)[13], good percentage of the effluents resulted (74.39%, 64.07%, and 80.15%)[14], low percentage of poverty (13.04%, 19.99%, and 17.95%)[15], medium indexes of health (0.848, 0.859, and 0.902)[16], and high indexes of education (0.690, 0.762, and 0.767)[17] (IPARDES, 2011a, 2011b).

Although the global average points that the main tap water consumption comes from the agricultural sector (70%) (ONU-BR, 2018), in Paraná these percentages are less expressive, being the demands distributed in the following way: public supply (42%), industrial sector (24%), agricultural (21%), and livestock sector (13%) (Águas Paraná, 2010d, p. 18). This distribution, also, is considerably different from the Brazilian average, where

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[11]After each basin, I mentioned one city as a reference from the state region of that basin, with the purpose to geographically locate the reader.

[12]In the data gradation notes from the water basins, the indexes are graded in a four-groups continuum varying from (1) "more favourable" to (4) "less favourable" (IPARDES, 2011a, 2011b).

[13]Alto Iguaçu and Paraná 3 were graded as (1). Pirapó was graded as (2) (IPARDES, 2011a).

[14]Alto Iguaçu and Pirapó were graded as (2). Paraná 3 was graded as (3) (IPARDES, 2011a).

[15]All the three basins were graded as (1) (IPARDES, 2011b).

[16]Alto Iguaçu and Paraná 3 were graded as (3). Pirapó was graded as (1) (IPARDES, 2011b).

[17]Alto Iguaçu was graded as (4). Paraná 3 and Pirapó were graded as (1) (IPARDES, 2011b).

"around 20% of Brazilian water consumption goes to industrial activity, while 62% goes to agricultural production. Household consumption, in turn, represents just 18% of the total Brazilian water consumption, according to 1998-2002 data" (Carmo et al., 2014, p. 171).

Therefore, we see that the public water supply in Paraná (involving both households and commercial places) demands a considerable amount of water, which offers an opportunity for the water agencies to raise public awareness on the way that tap water is consumed. It is possible to perceive that some actions were carried out through the Paraná State Plan for Water Resources ("Plano Estadual de Recursos Hídricos do Paraná" - PLERH/PR), where programs and subprograms to strategically act on the water resources preservation and consequent required decision-making actions are carried out (Águas Paraná, 2010c). The PLERH/PR also demonstrated openness to interact with other tap water consumer sectors (being those the "governmental sector", the "user sector", and the "civil society sector") through regional events in different places across the state, stimulating a participative process on the state water management (Águas Paraná, 2010a).

However, in these events, the user sector was the one with the lower number of participants. From five regions where these participative events happened (in chronological order: Toledo, Paranavaí, Londrina, Curitiba, and Guarapuava), the average participation from each sector was: 59.16% from the governmental sector, 30.45% from the civil society sector, and 10.39% from the user sector, among a total of 857 participants (Águas Paraná, 2010b). The range from the user sector varied from 1.54% to 18.78% depending on the region. This lack of participation triggers an alert, because one of the results from these regional meetings highlights, on monitoring and implementation of the PLERH/PR, the need for "involvement of Universities, users, councils, committees, civil society, public agencies, and entrepreneurs, starting from the premise of open access to all the social sector in digital, printed, and mass-communication media" (p. 16). Thus, we see a worrying situation: at the same time that the public supply is the higher tap water demandant in Paraná (Águas Paraná, 2010d), there is also a lack of engagement from these consumers to show interest in the management of this resource.

As Carmo et al. (2014) say, thinking about sustainability requires a historical dimension to understanding consumption trends. Although I did not intend to do a historical review on water management, the stories that I heard allowed me to understand how the elements of practice (materials, competence and meanings) are present in the accessed Brazilian context.

About the elements, I first write about the material ones. In Brazil, widely known as an economically developing country, it is not very common that many houses buy products with eco-friendly connotations. This is true from foods, where organic food is usually 30% more expensive than non-organic (Neto, Denuzi, Rinaldi & Staduto, 2010), as well as household equipment, like washing machine and toilets with different water flows.

Observing Brazilian surveys on the possession of household appliances, we can notice that there was a significative increase in the residences with washing machines (from 33.6%, in 2001, to 61.1%, in 2015) (IBGE, 2019a), and we also notice a low number of households with dishwashers (4.8% of households) (Szwarcwald, Leal, Gouveia & Souza, 2005). This allows for some considerations.

First, on the access to these items. The increased access from lower-income social strata is relatively recent: in 1997, the minimum wage was R$112.00 per month, while the washing machine price was, at least, R$139.00 (1.24 minimum wage) and the dishwasher price was R$289.00 (2.58 minimum wage) (Silva, 1998). Nowadays, in 2018, the minimum wage was R$954.00 (Reuters, 2017), and the prices of these same items start from R$240,00 (0.25 minimum wage) and R$1,225.00 (1.28 minimum wage), respectively[18]. Although we may see washing machines in the majority of Brazilian households, dishwashers are rarely present. This absence may reflect a situation that people grew up without having this appliance in their households, too distant from their realities (maybe even being considered a superfluous item), with money being used to satisfy other necessities that were considered more important (e.g. buying food and paying bills).

Also, the population may not know the environmental advantages related to these appliances, which relates to the elements of competencies. It is estimated that the proper use of a dishwashing machine can generate 28% savings in electricity and 50% in water when compared to the manual performance of this practice (although washing the dishes manually does not require electricity, it is common – besides the ambient light that may be on – to turn on a near television to have some background noise, for example, or even heating up some water to remove the grease) (Richter, 2011). The low Brazilian ownership rates of dishwashers, therefore, may also result from this lack of knowledge. Carmo et al. (2014) expose that the household number growth may represent a growth in the consumption of durable goods (e.g. fridges, cookers) as well as water and electricity. "Similarly, population ageing can contribute to the growth of consumption of durable goods as a result of their

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[18]Prices obtained through "Zoom" price comparison website in September 2018, known for listing in its database only trusted retailers from the Brazilian e-commerce. https://www.zoom.com.br.

accumulation over their life cycle" (Carmo et al., 2014, p. 176), although it is questionable if a more environmentally conscious choice accompanies this consumption growth.

This last consideration also relates to the elements of competencies. In a four European countries study (Germany, Italy, United Kingdom, and Sweden), it was found that when people look for a new household appliance, usually the main characteristics are "low water and/or energy consumption" (82.9%), "very good cleaning/washing performance" (72.5%), "low operating noise emission" (48.2%), and "low purchase price" (37.1%) (Richter, 2010, p. 230). This kind of study is something that was not done before in Brazil, which revealed an opportunity to be explored during the interviews, also helping to understand why some practices are performed in the way they are in Brazil (also in coordination with other material elements).

The elements of competencies, consequently, might need a different focus in Brazil. As demonstrated earlier in this chapter, many agencies participate in Brazilian water management, and this was not always done in an inclusive way to the general population. As Jacobi (2011) writes, "this implies an understanding of the juridical-institutional framework, the socio-territorial dynamics of the basin, the actors that influence the management, the content of the basin plan, among others" (p. 11). Thus, the Brazilian legislation on water management is quite complex (not only in the technical sense but also about being very broad).

> Therefore, it is necessary to think about water resources policies in the context of socio-environmental policies that work together with other governmental spheres and allow transversality, reinforcing the need to formulate environmental policies based on the dimension of problems at the regional level, and in many cases at the metropolitan level, reinforcing the importance of a shared management with emphasis on co-responsibility in public space management and quality of life. (Jacobi, 2011, p. 18).

Adding to this the fact that the Water Code is considered as partially implemented (Jacobi, 2011), it is highlighted that

> the participation of qualified and representative actors assumes, consequently, an even more relevant role in the complaint of the contradictions between the private interests and the public interests in the building an environmental citizenship that overcome the values and identity crises and proposes a new one, based on sustainability values (Jacobi, 2011, p. 17).

The knowledge about the water conditions to which the consumers are exposed is also something that should be better publicised. In Giatti, Neves, Saraiva and Toledo (2010), the authors discussed with the residents from the city of Manaus the perceptions that these residents had on the quality of their tap water, exposing some additional information before these group discussions (which impacted in the competencies of that group). It was clear that, generally, the population only had basic knowledge about safety procedures when dealing

with water with questionable quality, such as the need to filter, boil, and use of hypochlorite. It became "evident that the population barely knew the possibility of contamination from chemical elements, like heavy metal contamination, which could trigger a variety of chronic diseases through the systematic ingestion of contaminated water" (Giatti et al., 2010, p. 339).

The water issue needs to be thought about how people have appropriated this resource in their lives, which results in different realities. These understandings are performed together with the other elements and result in the observed practices, as evidenced by Alves et al. (2018). The authors present that when analysing the relationship between the waste of water by the people, the culture has a crucial role in defining what people understand as acceptable or non-acceptable household water consuming practices. Although the authors did not explicitly define what they considered as "waste", their interviewees' excerpts indicate these people consider that reducing consumption could lead to higher environmental consciousness levels.

However, we have to keep in mind that thinking about water consumption requires from us to consider how different societies consume this resource, as defended by Galizoni (2005). In the author's thesis, she studied different groups of individuals living in rural areas, which significantly impacts how the elements can be appropriated and performed around the household water consuming practices. For example, less water availability and absence of facilities as swimming pools may impact the meanings that people have on the practices they perform.

About these differences, Alves et al. (2018) reinforce Braga et al. (2015): the consumers tend to relate punitive control as an effective strategy to rationalise water. Nevertheless, this reduction of water consumption is less effective for high-income families, which annoys people with less financial resources; the excerpt from one of the interviewees of Alves et al. (2018, p. 7) shows this: "People who use more must pay more, but they should also be aware and not spend that much. Just because you can pay more it shouldn't mean you need to use more water, it does not give you the right".

It is believed that greater environmental awareness can be achieved through education, culture and empathy, where more information on how to perform an environmentally more responsible water consumption should be disseminated. Alves et al. (2018) reinforce the findings of Middlemiss (2011) by evidencing that their interviewees consider that children can exert pressure to introduce environmentally friendly practices in the

daily routine of their households due to what they learnt in school, for example. The authors also highlight that governmental agencies should require from schools this agenda.

In a complementary way, Giatti et al. (2010) performed group activities with consumers about their perceptions on the quality of the water they consumed. The authors identified that "the biggest practical challenge for promoting local health would be mobilising the local community, being it [something that is considered] interesting" (p. 339). Although in Giatti et al. (2010) study the local conditions were particular to a specific neighbourhood from Manaus, maybe this "interesting" issue reverberates to other contexts, because the lack of an immediate sense (usually) comes from the lack of proper conditions to tap water access in quantity and quality for consumption; this lacks can make possible awareness-raising efforts end up being seen as unnecessaries, without value or so.

Also, it should be highlighted that practices reflect their societies. In Giatti et al. (2010), the population was not adequately aware of improper conditions of their tap water, which meant they did not recognise potential harms and, consequently, not claiming for better conditions on tap water supply. "In addition, it was verified that the solution must go beyond water supply, being necessary the constant use of educational methods, so that the individuals can effectively use a new and safe source of water" (p. 341).

Thus, it is possible to observe that different activities involving tap water consumption are perceived differently according to the way they are performed. There is the perception that younger people consume more water than the elders, by taking longer showers and washing their vehicles more frequently (Alves et al., 2018). Possibly, this may be related to the discussions brought by Shove (2003a), where we see that the notions of comfort and cleanliness, for example, influenced in the way that practices (like personal cleaning) changed through the time (from bathing to showering) due to what that society considered more valuable.

Maybe the lack of knowledge/instruction about environmentally friendly behaviours made people consider a particular mix of practices as acceptable, which impacts the way that that society understands as sustainable consumption. As said by Alves et al. (2018), the establishment of this environmental consciousness is influenced by culture, but education also has a fundamental role in this understanding.

Along with that, as Jacobi (2011) writes, the sustainable development depends on a paradigm change that ensures effective citizenship. This includes qualified and representative actors, both referring to the denunciation of contradictions and environmentally non-

responsible practices as well as helping to build an environmental citizenship that "overcomes the crisis of values and identity and proposes another, based on values of sustainability" (Jacobi, 2011, p. 17).

The mainstream says that

the National Water Resources Policy [Lei das Águas] has as its main objective to ensure to both current and future generations the necessary availability of water, in proper quality standards to its respective uses, at the same time that it seeks to prevent and to defend against critical water events and also against sustainable development, through the rational and integrated use of water resources.. (Braga et al., 2015, p. 622).

However, assuming that sustainable consumption is something culturally-built, I believe it is possible to drive better marketing communications with Brazilians considering their specificities.

4.1.3. Interviewees living in Brazil

Before describing the English case, I would like to detail the interviewees I had access to in Brazil. Here I introduce the Brazilian residents (locals and English migrants), presenting an overview of each one of them.

I interviewed five individuals in Brazil, all of them adults. Three of them are locals and two of them are English migrants. Only one of them (I3, Brazilian, male, 22 years old) was still living with his parents.

I1 is Brazilian. He is 24 years old. He is from another state (São Paulo), but he has been living in Maringá for seven years. He moved to the city when he got approved to attend an undergraduate course and he lives in the city since then. Nowadays, he is attending a Masters. He shares a flat with I2, but he lived in other places during all these years.

I2 is Brazilian. He is 23 years old. As I1, he is also from São Paulo, but from another city. He has been living in Maringá for six years, for the same reason as I1 (to attend an undergraduate course), and he is also attending a Masters. He also lived in other places before sharing the flat with I1.

I3 is Brazilian. He is 22 years old. He always lived in Maringá, but not always where he currently lives. He lives with his parents, he is attending an undergraduate course, and he works as a freelance artist.

I11 is English. He is 49 years old. He is from Manchester and he also had lived a couple of years in Japan. He has been living in Maringá for 17 years, and he works as a private English teacher. He is married to a Brazilian woman and has one son.

I12 is English. She is 25 years old. She is from London. She has been living in Maringá for one year. She works as a private English teacher she is married to a Brazilian man.

Table 6
Interviewees (Brazilian residents)

Code	Nationality	Gender	Age	Work
I1	Brazilian	Male	24	Student (postgraduate)
I2	Brazilian	Male	23	Student (postgraduate)
I3	Brazilian	Male	22	Artist (freelance)
I11	English	Male	49	Private English teacher
I12	English	Female	25	Private English teacher

Note. Source: Field research.

All these people had multiple interviews (minimum of three). The reason why I chose to use impersonal identification codes ("I", from "Interviewee", plus a number) is because I did not ask them to choose an alias. All of them were extremely receptive, so this made me feel comfortable in calling them by their names during our meetings. I assured the confidentiality of their information and I guaranteed I would not use their names in any way. I even considered using a keyword that could represent something distinguishable in their narratives here in the analysis, but I thought that if an improper word could demonstrate some prejudice (even if not intentional) this would be forever, so neutral identifications according to their order in my four groups (Brazilians living in Brazil, Brazilians living in the UK, English living in the UK, and English living in Brazil) sounded a better idea.

Last, I offered the transcripts of our meetings to all of them, but only two of them accepted.

4.2. ENGLISH WATER CONSUMPTION SCENARIO

4.2.1. Institutional evolution in water management

Similarly to what I did with the Brazilian case, here, I wrote about how the structure of governance of the English water is organised. This section contains the water scenario on the availability of this resource, the organisations that are responsible for managing and providing water with drinking quality, and an overview of the main policies related to water in England. All of these ends up focusing on Yorkshire, the county where the field research was conducted.

Initially, as said in the first chapter, English and Brazilian water availability are similar. Although some areas have droughts, the United Kingdom has between 2,000 and 10,000 m³ of water per capita/year, which represents a sufficient water provision, comparable to the Brazilian scenario (Rebouças, 2015). Also, consonantly to the Brazilian state where the field research was conducted (Paraná), the data constructed in England was in the county of Yorkshire (West Yorkshire), known as a region where droughts are not frequent. This reality reveals a sceptical population when the water industry and governmental agencies advertise campaigns focusing on water scarcity: after all, rainfall is plentiful (Knamiller, 2011).

The water industry is a privatised service as well as in Brazil. Depending on the UK region, there might be one or more companies in charge of water supplies. In Leeds, the only company is Yorkshire Water, being responsible for water abstractions, treatment, supply, wastewater treatment, and returning treated water (Bakker, 2003, Yorkshire Water, 2018). The water provided to the customers has high quality (which requires energy to treat and transport, impacting on the carbon footprint), and the company says that: "whilst we supply homes with high-quality drinking water, only about 4% is used for drinking – about 30% is used to flush the toilets" (Yorkshire Water, 2018, p. 30). The provision of water with different standards is something that the company is already considering: "we're looking at how we can help industrial costumers use a lower standard of water where drinking water isn't needed, for example in cooling processes" (Yorkshire Water, 2018, p. 30).

This lower quality water still is safe water, capable of being used in industrial processes and for any other uses (as cleanliness and washing practices, for example), but not for drinking purposes. As seen in the Brazilian scenario, we can visualise the presence of various water regulation bodies in the UK to certify this. Bakker (2003) summarises these bodies in a table, here presented as Table 7.

Table 7
Water regulation in the UK

Scale	Regulator	Role	Issues
European Union	European Commission (EC)	Legislation, standard setting	Comprehensive: water resources, wastewater, water quality, pricing, environmental
National	Environment Agency	Environmental regulator	Regulatory (water resources, river water quality) and operational (flood control, fisheries navigation)

	Office of Water Services (OfWat)	Economic regulator	Grant license to supply; supervise competition; set price caps; monitor service quality; handle complaints
	Department of Environment, Food and Rural Affairs (DEFRA)	Standard setting, drafting of legislation, water policy, appoints regulators, special permits (e.g. drought orders)	Comprehensive
	Drinking Water Inspectorate	Water quality regulator	Drinking water quality monitoring and enforcement
	Competition Commission	Reporting; Appeals	Monopolies, mergers and the economic regulation of utility companies; company mergers; price cap limits
Regional	Environment Agency	Tribunal on regulatory decisions	Water resources (water abstraction licenses); environmental water quality (discharge consents; monitoring)
	Ofwat Customer Service Committee	Handles water company customer complaints; represents consumers in OfWat policy-making process	Standards of service; compensation; customer complaints

Note. Source: Bakker (2003), p. 71.

On the other hand, in the UK the customers may be charged differently from the way Brazilians are. In Brazil, everyone uses a water metered system, which implies customers paying for their water use during a specific time window. In the UK, besides the metered system, "if households do not have a water meter the householders pay a fixed rate for their water", as Knamiller (2011, p. 21) says. The author explains the fixed rate system "is based on the rateable value (RV) of a house which is related to the value of the house, not to the number of people in the household or to the amount of water consumed" (p. 21). Households built until 1990 still can have this system; after that year, all new households have water meters installed. Nowadays, according to the Water UK (2018) website, the number of households with the metered system is "around half" (para. 1), which represents the country is facing a transition.

If the person lives in a household built before 1990, he/she can choose which system to use (if they want to continue with the fixed rate or if they want to change to the metered),

but once the choice to the metered system is made, the customer has 12 months to change back to the fixed charges. Once this period is over, the change is forever. Knamiller (2011) adds that, according to the Water Industry Act 1999, all the water users are secured to the right of this change without costs. If the customer moves to a new address, the new place will have a water meter even if the household dates before 1990.

According to Bakker (2003) and Knamiller (2011), the metered system leads to a reduction of household water consumption, be it by optant consumers (those who chose to change to the metered system) or compulsory consumers. The savings, on average, vary from 9-21%, and the peak demand consumption was reduced by 10-44% (according to the weather conditions where the consumers live). There was no significant distinction between optant and compulsory consumers.

Consequently, the meters ease the consumers' access to see how much water they are using. On the other hand, Knamiller (2011) reports that those who read the meter "did not read the meter to see how much water they consumed, but to check for leaks or the accuracy of their bills". Therefore, apparently, the savings are not necessarily related to water efficiency, "defined by the Sustainable Development Commission as 'using less water to derive the same water service'" (Knamiller, 2011, p. 10), but to save money.

Even though the residents reveal that their savings may be more related to money than to the water itself, we cannot affirm that they do not care about this natural resource. Maybe the many policy changes implemented in their lives are already internalised, and they do not realise the influence of water demand management policies. Supporting this claim, Table 8 presents the summary made by Knamiller (2011) related to significant events in water demand management from 2005 to 2009, being updated by me.

Table 8
Significant events in water demand management in the UK from 2005

Year	Month	Event	Focus	Description
2005	Sept.	Waterwise funded	Research institution	Independent, non-government organisation, promoting water-efficiency
	Oct.	Water Saving Group founded for three years	Research and policy making advisory board	Governmental group to explore the promotion of domestic water efficiency
2006	Mar.	Folkestone & Dover Water Services (FDWS) granted water scarcity status	Legislation	FDWS allowed to undertake compulsory metering of domestic customers

	May	Rathouse report for Market Transformation Programme (MTP) "Water meters and household consumption: focus groups" (unpublished)	Research	Qualitative research with four focus groups
	Jun.	House of Lords Science and Technology Committee publish "Water Management"	Research	Report of Sub-committee review of water management from 2005-2006
	Aug.	OfWat set voluntary targets for water companies	Legislation/ regulation	Voluntary standards of achievement for water efficiency in homes
	Sept.	Institute for Public Policy Research publish "Every Drop Counts: Achieving greater water efficiency"	Research	Think tank research on current water efficiency policy and proposed recommendations
	Oct.	Consumer Council for Water publish "Using Water Wisely"	Research	Deliberative research with focus on consumers attitudes and behaviours towards water and communication techniques
	Dec.	UK Water Industry Research (UKWIR) publish "Sociology of Water Use" (Medd & Shove)	Research	Report from Traces of Water seminar series, from 2004-2006
	unknown	UKWIR publish a review of research on water metering (Herrington)	Research	"A critical Review of Relevant Research Concerning the Effects of Charging and Collection Methods on Water Demand, Different Customer Groups and Debt"
2008	Jan.	DEFRA publish "A Framework for Pro-Environmental Behaviours"	Research	Governmental emphasis of importance of behaviour and pro-environmental behaviours
	May	DEFRA & Department for Communities and Local Government (CLG)	Legislation	Mandatory standards for building including water efficiency in Code for Sustainability Homes
	Oct.	Waterwise publish "Evidence Base for large-scale water efficiency in homes"	Research	Review of research by water companies on water efficiency in homes
	unknown	OfWat amendments to water scarcity regulations	Regulation	New fast track system for declaring water scarcity status
2009	May	CLG changes to Building Regulations	Regulation/ legislation	All new buildings to aim for 125 litres/per person/per day through

				water fittings
	Jun.	OfWat set mandatory targets for water efficiency in homes	Regulation/ legislation	Mandatory standards of achievement for water efficiency in homes
	Sept.	DEFRA publish "Public Understanding of Sustainable Water Use in the Home"	Research	Building on CCW's 2006 work. Covering attitudes, willingness to act and practices.
	Dec.	Publication of Walker Report on metering	Research	"An Independent Review of Charging for Household Water and Sewerage Services"

Note. Source[19]: Knamiller (2011), p. 15.

Even though the British have extensive support from agencies regulating the water supplied to the population (as Table 8 shows), only recently the Water Demand Management (WDM) policies gained a momentum. As we can see in Table 8, the landmarks on WDM date all from 2005 onwards, which makes Knamiller (2011) consider that there is still a gap of research addressing how people use water at home and how they interact with WDM measures.

Part of this gap refers to a lack of belief that the customers have on the impact of their savings when compared to industrial water consumption (Howarth & Butler, 2004, Knamiller, 2011). To clarify: people trust in the quality of the water provided, but they do not necessarily believe that their behaviours have significant impacts. So, how do the English consume water in their households?

4.2.2. English urban water consumption

Although we have data that offer some considerations on English household water consuming practices, these research still are considered as lacking "how people use water in the home and how people perceive of and interact with WDM [water demand management] measures", as Knamiller (2011, p. 9) affirms. Knowing this, the author considers that there is still space in academia for behavioural-oriented studies.

Weather characteristics, as mentioned earlier in this thesis, is something that needs to be explored when talking about cultural differences in household water consuming practices between Brazil and England. Inhabitants from the United Kingdom face a more severe winter

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[19]I emailed some people from Water@Leeds, an interdisciplinary research group from the University of Leeds asking for help to update this table (considering they might be more aware of the main events after the period covered by Knamiller. Until the moment when I submitted this thesis for exam, I have not had a response yet.

than Brazilians, which makes them perform more practices related to heating. These practices mostly refer to the idea of comfort, as discussed in Shove (2003a), but it comes at a cost: heating water for domestic use represents 5.5% of British carbon emissions (Knamiller, 2011). So, although heating practices are not something environmentally friendly, they are considered necessary in order to provide some comfort to people, which makes people see these practices as necessary and not as problematic.

Another need the government and some agencies are already aware of is the access to education services by the population. These organisations offer campaigns that aim to make people aware that everyone should take care of water, consuming it without waste, as Middlemiss (2011) already pointed out that community organisations like schools or churches positively impact in sustainable lifestyles (e.g. the children learn something at school and teach and ask for that behaviour at home).

It is important to say that even that governmental efforts try to educate the population about environmentally more responsible practices, there will always exist realities where we can find people over-consuming water. The Environment Agency (2018) says that regions like the southwest of England may face water deficits by 2050 if they continue to consume water in the way they do now. The region has one of the highest water consumption rates per capita in the United Kingdom, 170 litres (Knamiller, 2011), while the average person in England consumes 140 litres per day (Environment Agency, 2018). This data by its own is concerning, but the region has also one of the lowest levels of rainfalls, which adds an extra layer of alert.

All this water consumed also echoes in other areas. Looking at the numbers, as said earlier, only 4% of all this water is consumed for drinking, while 30% of it goes to flush the toilet. Just like the Brazilian case, we can literally say the companies are treating water to flush it down. This requires resources and processes that have environmental impacts in different degrees. Part of this is due to the apparent broad availability of water (you just need to open the tap, and there it is the water, right?), which generates the called "flush and forget attitude" (Knamiller, 2011, p. 23). This term means that people consume water without thinking about what the companies needed to do to provide that water and what these same companies will need to do to treat this water after people use it.

Also, part of this behaviour may be related to the fixed rate system. As people pay a fixed price, they may think they are allowed to use all the water they would like. This assumption is supported in the evidence provided by Knamiller (2011) that the change to the

metered system, on average, may represent 10-15% in savings. As metered system households are still facing a transition from the fixed rate system (Water UK, 2018), this is something to look in the long run, as other changes in the English culture, like the change from only baths to baths with shower or only showers in the households (Sharp, 2017, Shove, 2003a).

Just as the Brazilian water consumption scenario, it is possible to visualise the different elements of practice in the United Kingdom as well. First, the material elements are perceived more easily. Differently from Brazil, in Europe, the dishwasher market is consolidated, with 33% of British households having this good in 2007 (in Europe in general, 48%) (Richter, 2010). Depending on the source, this number can be even higher, with some considering that in 2007 37% of British households had dishwashers, according to the Office for National Studies (ONS, 2019). Nowadays, this number is even higher (46%, in 2016-2017), as Figure 6 shows (ONS, 2019).
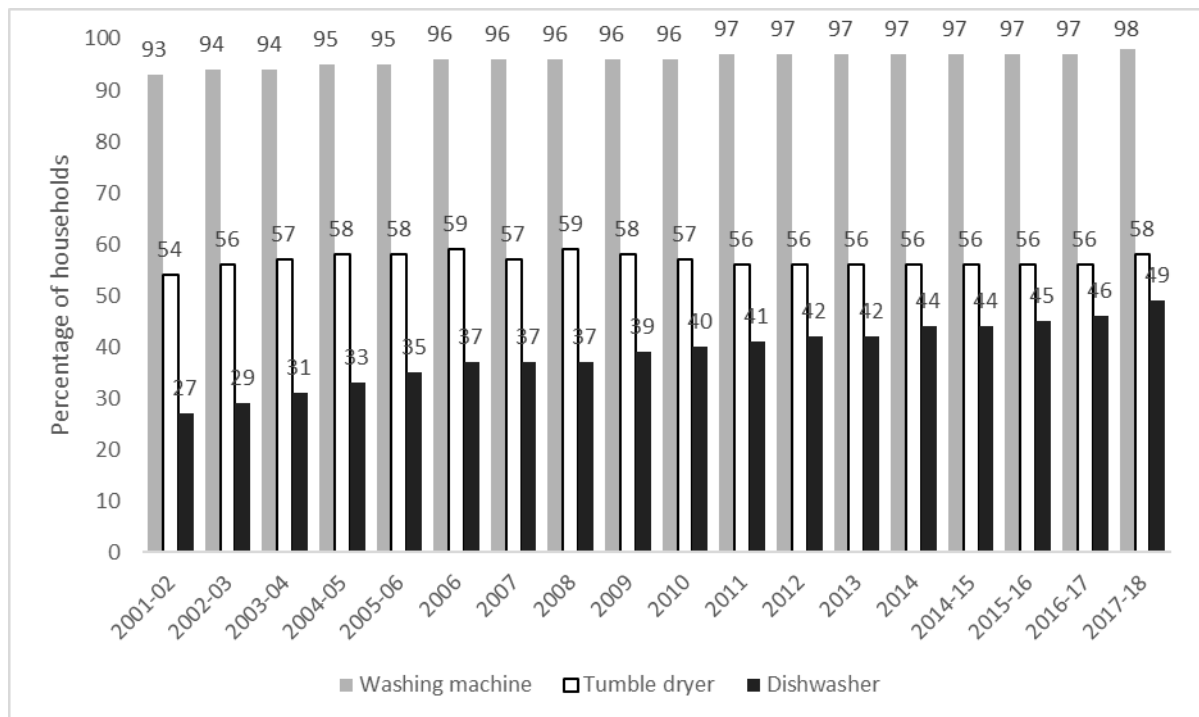
Figure 6. Percentage of households with durable goods in the United Kingdom (UK) from 2001 to 2018. *Note:* Source: ONS (2019).

Also, the English are not "just buying" dishwashers for their households. Richter (2010) reports that the top three British reasons when choosing a dishwashing machine is: good performance (27%), low water/energy consumption (24.4%), and low price (15.1%). Notice that price is not the main influence when choosing a dishwasher. Part of it may be related to the English average income, as we will see further.

Washing machines, on the other hand, are even more present in English households (Figure 6). Almost every household has one (98%), and the chosen criteria are different from the dishwasher ones. While price was the third for dishwashing choosing, Sammer and Wüstenhagen (2006) found that, for washing machines, it was considered the first priority (among 12 features[20]) for 31.8% of respondents (Europeans), energy consumption for 11.9%, and water consumption for 7.9%. When asking for the second priority, energy consumption becomes the main feature (25.2%), followed by price (21.2%), and water consumption (11.9%). As third priority, the order of features remains the same. This result recalls the discussion that people maybe are not trying to reduce their water consumption, but the money they spend.

The Office for National Statistics (2018) presents a table containing the mean household income from 1977 to 2017/2018 (Figure 7)[21]. The current mean income (per capita) is £1,164.03/month, and the prices[22] of dishwashers start from £170.00, which represents 0.15 of an income. Also, it should be added that this dishwasher is new, labelled with A+ in terms of energy consumption and consumes 6.5 litres per cycle (without a reference value for comparison). As Payne said, in interview for Christie (2014, para. 6), "One cycle in a typical dishwasher costs the same in energy and water as heating between four to six washing-up bowls of water in the kitchen sink, or running the hot tap continuously for six to nine minutes (depending on whether the household has a metered or unmetered water supply)".

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[20]Brand, Design, Dimensions, Dryer integrated, Energy consumption, Equipment, Low noise, Price, Short wash time, Wash load capacity, Water consumption, Other.

[21]To make it easier to visualise, I chose to use the data as a graph just with the last 20 closed years (1997/1998 - 2016/2017) and with monthly per capita values, as I did with the Brazilian numbers. The average UK household size is 2.4 person (ONS, 2017).

[22]Prices obtained through the "PriceRunner" price comparison, known for listing in its database only trusted retailers from the British e-commerce. https://www.pricerunner.com/.
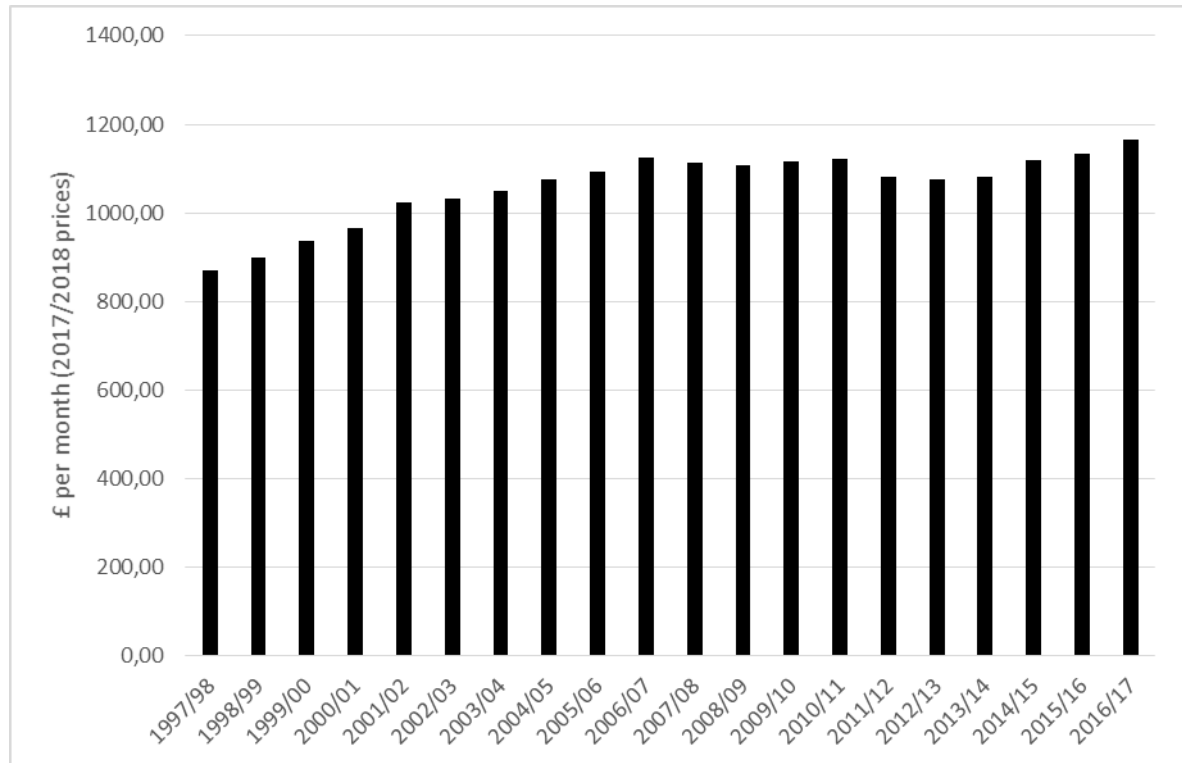
Figure 7. Mean equivalised household disposable income, 1997 to 2016/2017. *Note*. Source: ONS (2018).

Washing machines, in turn, cost from £149.99 (0.13 of an income) (5 Kg, class A+, without indication of its water consumption). Sammer and Wüstenhagen (2006) present that the European Energy Label was implemented in 1995, offering to consumers the opportunity to compare appliances using the same scale (rated from A to G according to their energy efficiency, being A the most energy efficient). Although the price had been the first criteria mentioned, the authors found "significant willingness to pay for A-labelled energy efficient products" (Sammer & Wüstenhagen, 2006, p. 194). So, it is possible that price is the main criteria among the A-labelled washing machines.

According to Richter's research (2010), 90% of the dishwashers were less than 10 years old, and over 50% of them were less than five years old. In the UK, the average is 4.4 years old. Additionally, 80% of all dishwashers produced after 1999 consume almost 30% less energy than the previous models. In 2005, 90% of all dishwashers were class A for energy consumption, and none were in class C or below. As a comparison, the author writes that in 1999, 9% of the dishwasher models were class A and one-third were class C. Considering that after 2007-2008 (years of this Richter's research) the percentage of households with dishwashers grew 9%, the average age of this good can be even lower, and the models can be even better in terms of energy consumption nowadays.

These considerations lead to the second element of practices: competencies. As Sharp (2017) discuss, in the late 1990s, the water companies were interested in promoting water efficiency in water consuming activities, as a strategy to deal with water shortages. The companies used different mechanisms, as regulations/restrictions (e.g. hosepipe bans), technological changes (e.g. promoting the adoption of low-flow taps and financing new technologies of grey water recycling), or even financial incentives (e.g. free installation and trial period of water meters in households changing from the fixed rated system).

Also, competencies can be developed through snowball effect. Sharp (2017) relates a case where people learnt about rainwater harvesting from early adopters in their neighbourhood, "and then, schooled by their friends, applied for a rainwater tank themselves" (p. 91). The author reinforces that we need to look at different realities where the water consuming practices occur, putting effort in making people aware that we first need quantity of available water. We do not need drinking water to every practice (e.g. flushing toilets or cleanings), but we do need *enough* water for everyone. Consequently, we must understand the reality of each place to discuss which competencies people need to develop and how. For example: it would not be fruitful to discuss irrigation techniques to a rain-fed region.

In the English scenario, if we look at how old the dishwashers are, they usually are 4.4 years old (Richter, 2010) or even less nowadays. Considering that Richter (2010) describes that 75%-85% of these machines were bought after the energy label implementation (1995), probably people had broad access to that classifications. In contrast, we can see in another work from the same author (Richter, 2011) that British inhabitants do not use the dishwashers in the best way.

While in Brazil we notice a lack of knowledge about the advantages of using a dishwasher, in England people may be aware of the advantages but they do not use it in the best way. It is estimated that approximately 40% of free space is left in each dishwasher load, as well as unnecessary use of resources by pre-rinsing the dishes before putting them into the machine (manufacturers recommend users to just wipe off leftovers) (Richter, 2011).

Unfortunately, although British (Europeans in general) have a well-established easy-to-understand Energy Efficiency Index label on the products (present in the market for more than 20 years), there is none as good to water (just the consumption without classification, which requires people to know previously if the product is a good option in terms of water efficiency or not) (How to Save Water, 2012, Richter, 2010).

Fortunately, on the other hand, the belief of an abundant water supply started to erode during the 1980s-1990s (Knamiller, 2011). The period matches with the laws regulating that, starting in 1990, only metered systems could be installed in the households, which reinforces the idea that the fixed rate may ease practices of waste. Additionally, this may have given some elements of competencies when people started to realise that the UK has water shortages and that everyone should be aware that they should not use water unnecessarily (although what "necessary" represents will be discussed later). Also, when people receive the bill from the metered system, they at least will have a parameter if they are consuming more or less water than the previous period(s). However, as Knamiller (2011) highlights, people tend to see in the bills how much they need to pay, instead of how much water they consumed. This points to a situation that is quite similar to the one found in Brazil: do people save for money reasons or for environmental reasons?

As much as the competencies have great importance in changing behaviours, Sharp (2017) says it is not conclusive that these strategies lead consumers towards more environmentally friendly behaviours. These strategies contribute, but this process is also tied to socially shared understandings. As the example mentioned by the author about alternative piping mechanisms in the households explains, "plumbers are increasingly knowledgeable about dual pipe system. In these respects, we can see that what behavioural theorists may represent as an individual 'choice' is actually tied up in broader community understandings about plumbing" (p. 86). This leads us to the meanings, the last element of practices.

Besides English (and people in general) rely on their community to some decision makings, they also consider important the role of the Government in telling them which behaviours they should consider (Howarth & Butler, 2004). The presence of the Government adds "credibility and urgency to any individual action" (p. 38), in opposition to private companies that consumers distrust their motivations.

Therefore, practices depend on the social environment where people are, influencing the way these practices are performed. Shove (2003a) described how some water consuming practices evolved in the UK throughout the years, and Sharp (2017) summarises that "practices are formed by and in a community" (p. 103), with the meanings being culturally and timely tied. As an example, we can see that the meaning of personal cleanliness changed in the last centuries, being something related to health or disease depending on the period we look at. Meanings reflect something that society expects, which will influence on what people

think about water consuming practices, such as hydration, food preparation, cleaning (of selves, clothes, and homes), and others (Sharp, 2017).

After all, we cannot base our strategies to deal with water just on reports and tendencies. We need to understand from where those behaviours trajectories came. As said by Knamiller (2011, p. 49),

> this is not to say that quantitative/positivist studies are 'bad' or superfluous. Quantitative data and statistical analysis, of course, reveal many important aspects in regard to water use and water efficiency. The criticism is that positivist methodology and quantitative information on its own is not adequate for understanding water demand and reduction. Yet this approach is dominating the development of mainstream interventions to reduce water use. If our aim is to reduce water consumption we need to explore other factors that may not lend themselves to quantitative research. This includes an understanding of how people use water in the home and what factors drive this use. Therefore, if we want to study reduction in water consumption, we can't rely just on quantitative data.

As in the Brazilian case, there are particular characteristics we need to pay attention to in the English scenario I had access to.

4.3.3. Interviewees living in England

As it was done with the Brazilian residents I interviewed, I would like to offer an overview of the interviewees I had access to in England, introducing each one of them (locals and migrants).

I interviewed seven people in England, all of them adults. Two single Brazilian migrants, one English local, and two cross-national couples (one Irish-Brazilian, and one English-Brazilian).

I4 is Brazilian. She is 28 years old. She is from Rio de Janeiro, and she has been living in Leeds for five years. She moved to the city when she got accepted to attend a Masters. Nowadays, she is a PGR. She lives in a private flat. This is the only city she has lived in England over these years, but she has lived in other places.

I5 is Brazilian. He is 29 years old. He is from São Paulo, and he has been living in Leeds for four years. He moved to the city when he got accepted as a PGR. He shares a house with an English, and this is the only place he has lived in over these four years.

I6 is Brazilian. She is 51 years old. She is from Rio Grande do Sul, and she has been living in York for 16 years (a city 45 kilometres away from Leeds), although she has been living in England for over 20 years. She moved to England to attend a Masters, she briefly returned to Brazil and, when she got a job offer in England (in Leeds, where she currently

works), she moved back. In this last return, she met her husband (I10), with whom she has two children.

I7 is Brazilian. She is 45 years old. She is from São Paulo. She has been living in England for over 20 years. She moved in to England to attend a Masters, she lived abroad (Japan and Thailand) some years and she has been currently living in Leeds for nearly six years. She is married to I9, who she met when living in Thailand.

I8 is English. She is 67 years old. She is born and raised in Leeds. She is retired and she also hosts short-term students in the house she lives with her husband, who is also English.

I9 is Irish. He is 44 years old. He is from Dublin. He is married to I7 and he has been living in Leeds for nearly 10 years, although he already lived in many other countries (Australia, India, Italy, Morocco, Thailand) and in England (London) before for five years. He works as a teacher. Actually, in his own words, "I teach teachers how to teach English".

I10 is English. He is 48 years old. He is from London. He works as a solicitor and he has been living with his wife (I6) and children in York for 16 years.

Table 9
Interviewees (English residents)

Code	Nationality	Gender	Age	Work
I4	Brazilian	Female	28	Student (postgraduate)
I5	Brazilian	Male	29	Student (postgraduate)
I6	Brazilian	Female	51	Portuguese teacher
I7	Brazilian	Female	45	IT position
I8	English	Female	67	Retired / landlady
I9	Irish	Male	44	English teaching trainer
I10	English	Male	48	Solicitor

Source: Field research.

Last, I offered the transcripts of our meetings to all of them, but all of them declined.

4.3. THE 3 STORIES

As you can notice from the introduction I gave of my interviewees, all of them are adults. I did not interview any child or adolescent, and I made this decision because constructing data with adults is scientifically valid. We can compare this group, even with similar sociodemographic characteristics. Adults represent the "today" of our societies. They are the majority economically active. According to Instituto Brasileiro de Geografia e

Estatística (IBGE, 2019b), 96.1%[23] of the Brazilian economically active population were 18 years old or above. In the United Kingdom, 78.6% of people who were between 18 and 64 years old were employed, according to the Office for National Statistics (ONS, 2013). This group probably is the one who addresses changes in the media and develops projects of legislation. By learning more about our today, we may find results of changes that began decades ago (like the 1992 Helsinki convention[24]) as well as different practices among countries, which can give us insights about what we can consider more or less effective and environmentally friendly throughout the years in urban household water behaviour.

Household water consuming practices are complex, as they are present both in everyday life and on special occasions (e.g. holidays, commemorative events, weekends, travels), so I decided to tell three stories for the sake of discussing that sustainable consumption is something culturally-built.

First, I explore how Brazilians and English wash their clothes. In this story, I show how economic realities shape household structure, which ends up influencing practices. This story focuses on material elements.

The second practice I discuss is bathroom cleaning. Differently from the first story, this one shows that a distinctive infrastructure may require people to perform a practice in a specific way. Material elements are also present, but here we start seeing stronger cultural influences shaping how practices are done. This story focuses on elements of competencies.

Last, my final story is about washing dishes. When washing the dishes manually, Brazilians and English (locals and migrants) can freely choose how they would like to do this. This third practice aims to demonstrate culture shaping a practice and the different levels of influence that original cultural background and current cultural background have, considering that both the Brazilian and the English infrastructures are similar and allows people to decide the way they would like to perform this practice.

In these stories, I include both my interviewees' and my own perspectives (considering I was also a Brazilian migrant in the UK and my experience gave me insights to do the interviews), which I found the best way to organise the narratives.

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[23]Data from 2015.

[24]"Convention on the Protection and Use of Transboundary Watercourses and International Lakes" (1992, in Helsinki), which had as objective to protect surface and groundwater by reduction and control of pollution at the sources, with the United Kingdom signing its participation in 18th March 1992 (United Nations Treaty Collection, 2017).

4.3.1. The unknown "washboard sink"

From now on, every story will have the following structure: first, I delineate my experience with the practice I am going to discuss, followed by the situation that triggered my attention to such practice and discussion. Washing clothes is something I have never done in my parents' home, but I had to when I moved to England. Before moving in to the flat I shared with four other people (one Chilean, one Chinese, and two Indians) for the six months I was in England, I stayed in a hotel for about 10 days. When I moved in to this flat, I was almost out of clean clothes, so you can imagine washing them was a priority.

After leaving my stuff in my bedroom, I checked the common areas of this flat: two bathrooms, one storeroom, two boiler rooms, one living room, and one kitchen. There was no room as the one called "service area" in Brazil (a dedicated room where we store cleaning products and where we wash clothes). It is a laundry room, but service area is how it is widely known (actually, this is the way some interviewees referred to this room).

Thus, I did not have a dedicated room to put the clothes to dry after taking them out of the washing machine. The washing machine, by the way, was installed in the kitchen, which was strange to me (as this material element is not related to food). Also, there was no "*tanque*" (the place where we hand wash things).

I wrote this word ("*tanque*") in Portuguese because we do not have a word for it in English. In one of the meetings with my English supervisor, I was describing some differences I had noticed in the household practices and I mentioned the absence of this item. She was not understanding my description of it, so I showed her a picture. I do not remember her exact words, but I do remember she laughing and saying something like "we don't even have a word for it!", so we came with this new word: "washboard sink", a material element frequently mentioned by Brazilian migrants in their interviews.

4.3.1.1. We better hide our clothes

Brazilians and English households are built differently. Besides the weather requiring thermal insulation and heating systems in the English buildings, we can also find differences in the areas we have in our homes. As I said above, in Brazil we have what is known as "service area", which is a place where we concentrate some of our cleaning practices. In this room, we locate the washing machine, some place to store cleaning products, some washing

lines, maybe a place to iron clothes (or this is where people usually store the folding ironing board), and what I called as washboard sink. Figure 8 shows a typical Brazilian service area.

Figure 8. A typical Brazilian service area. *Note*. Source: Google Images.

The washboard sink is something particular to the Brazilian scenario in this thesis. As I said, this is a facility where people hand wash things in it, and we can find it in virtually every Brazilian household. As the word suggests, it is a sink with a washboard attached to, and we can find it made of different materials (e.g. stone, stainless steel, synthetic materials). For a better look of it, see Figure 9.

Figure 9. The washboard sink. *Note.* Source: Google Images.

This infrastructure impacts the way in which people wash their clothes (and even other items, as we will see further). In Brazil, even though this hand wash facility is in every home, people usually rely on washing machines (leaving the washboard sink for delicate items or other stuff (like shoes, for example). The use of washing machines was similar among all Brazilians (locals and migrants) and it can be summarised in the following way: towels and sheets are washed weekly; personal clothes are washed according to how full the laundry basket is (I6 and I7 wash clothes more than once a week, considering their families).

Considering the use of washing machines as the mainstream (currently), we can assume all of them had to learn how to operate this appliance (I3, the only one who still lives with his parents, said he knows how to use the machine as well). The way these people learned how to wash their clothes can be grouped in two possibilities: (1) someone told them how to do it (usually, their mothers); and/or (2) learning by doing. I4's report represents both situations.

Q: You said you would prefer your clothes in the way they were washed in Brazil. How is this? What's your perception about the way you wash your clothes here and there? Is it anything related to the products you find here being different from the products you find there?
A: I think this is not related to the products, because in Brazil I felt my clothes were WAY cleaner, you know? They had a way better smell. But, for example, the product I use here is the same my mom uses there, it is the same brand, you know? Ariel. So, I don't think there's any difference in the products, I think the difference is in the machine. In the previous places where I lived in here [Leeds], I think my clothes were cleaner than now. There is also the fact that in the place I live in now I have to pay four pounds every time I use the machine. It is a big machine, so I end up mixing more clothes than I would do in the previous places. I would separate different colours and so. I have some white clothes that turned grey-ish, which dissatisfies me. There is also another situation I HATE in this building I live in now: there are some people here in England who are CRAZY, they put bleach to clean their clothes… which I think there had been some accident when the next person came to use the machine and some bleach was still in the dispenser, so this next person's clothes were damaged. Thus, trying to avoid new episodes like this, they [managers] WELDED all these dispensers. So, what do I do now? I have to THROW the washing powder over the clothes and this is HORRIBLE, because the machine has different timings to release the washing powder, to release the softener… and when you put everything together the clothes do not smell as good as before, the softener has inferior performance, I need to put or a white towel or a white cloth over my clothes, otherwise the softener will stain my clothes. I already damaged socks, they got stained… so many clothes got stained. This makes me angry.
[…]
Q: Yeah. What about washing clothes? How did you learn this?
A: Oh, this was through "learning by doing" [laughs]. It was like this… I asked my mom… I even remember the first time I arrived in Leeds, on my first day, I went to the supermarket. I didn't even know where it was, I was totally lost… I clearly remember this day. So, I was inexperienced, right? I went to the supermarket and I had to buy things to eat at night, things like pizza, cutlery, things for breakfast, basic stuff, right? And I remember I bought everything wrong. Like… I bought washing powder. This is something heavy and I was full of clean

clothes… washing powder was something I wouldn't need that day. So I was learning all this. And my mom was telling me, "look, don't buy this washing powder brand, it stains, try this other one" […] And I was learning this way. Because the machine had the instructions… "put the soap in number 1", and then I would put the soap there and the clothes in the machine. And, in the beginning, a lot of clothes shrunk, because you can't put some fabrics to dry in the machine… and my mom didn't know that, people don't use dryers in Brazil. She never told me "you can't put these fabrics in the dryer" (I4, Brazilian migrant, female, 28 years old).

This procedure reinforces the discussion of Barbosa and Veloso (2014) that, for Brazilians, washings stimulates a higher consumption of water, electricity, and soap, as it follows a logic "whereby different types of clothing must be segregated" (p. 2). Even though washing machines well manage the use of resources compared to hand wash, which can require three to four times less water per washing (Pakula & Stamminger, 2010), it still uses resources that vary according to the frequency of use and the setting. Another thing that influences washing machines efficiency is their technology: vertical axis technology (i.e. top loaded) are less water efficient than horizontal axis technology (i.e. front loaded) (Pakula & Stamminger, 2010). In Brazil, top loaded machines are the most common.

English migrants wash their clothes (and learned how to) in the same way as Brazilian locals. I11 hires a twice-a-week cleaner (Brazilian) who handles his family's clothes, and I12 also uses a washing machine, but none of them bought a dryer (or a washing machine that also has this function). In Paraná, according to IBGE (2019a), 77.4%[25] of the households have washing machines, a better scenario than the Brazilian reality (61.1%), but still distant from the UK as a whole (98%) (ONS, 2019), and it also indicates the use of washing machines as the main way of performing this practice.

Nonetheless, this scenario of most households having washing machines is recent. IBGE (2019a) shows that only in this decade the majority of Brazilian households started having a dishwasher (2011). Paraná crossed this line a little earlier (2007-2008) which suggests that, earlier than this, most people used to wash their clothes manually. This may be a reason why the washboard sink still is so present in this country (Figure 10). This recalls the discussion of proto-practices, practices and ex-practices presented in chapter 2, as washing machines and the washboard sink represent different ways of washing things.
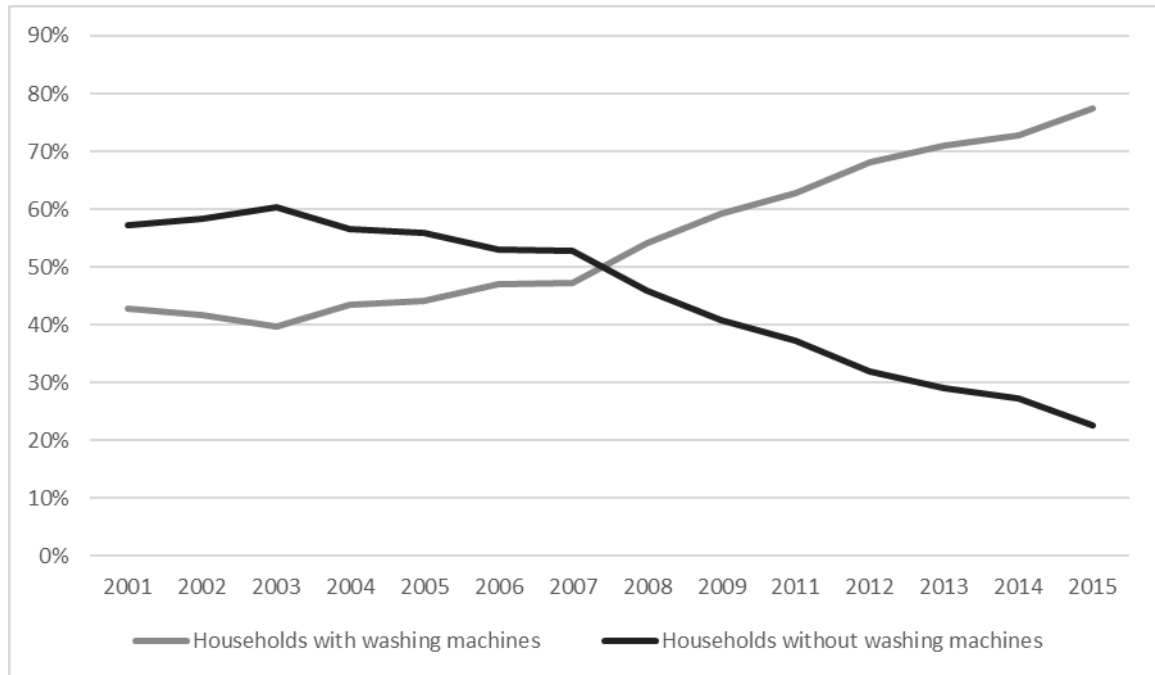
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[25]Data from 2015.

Figure 10. Percentage of households with washing machines in Paraná (Brazil) from 2001 to 2009 and 2011 to 2015. *Note.* Source: IBGE (2019a).

Forasmuch as all the Brazilians I interviewed had at least 22 years, some of them only had washboard sinks during some moment of their lives (e.g. I2, I5, I6, I7), and this impacted the way they would expect to perform some specific cleaning when they moved out to England.

> Q: Ok. One thing… you told me that, when you lived in Brazil, for a long time you didn't have a washing machine, and you had to use the washboard sink. The washboard sink… is it something that you miss here or not?
> A: Yes, YES [laughs]. Not only to wash clothes but to wash shoes. Because I9 goes out to run and he returns with his shoes full of mud… and the shoes need to be clean in the bath. I don't like to do this there. It is the same when I need to wash some shoes, something that is really dirty… car mats, these things, it needs to be done in the bath… BECAUSE I DON'T HAVE A WASHBOARD SINK [laughs]. So, yeah, I miss it (I7, Brazilian migrant, female, 45 years old, capitals indicate emphasis).

Considering the service area as the place where these hard cleanings are done, this place seems to be related to dirt, almost like a symbolic purgatory where things need to stay before being able to be used again (Keyte, 2013, Miller, 2008). This may be a reason why some Brazilians migrants reported feeling uncomfortable in having things spread in the house in mountable racks while drying (this is a situation particular to the English environment, which is detailed in section 4.4.1.2., and it refers to the way English residents dry their clothes considering their weather is unstable to leave clothes drying outdoor). These things do not seem to fit in these other rooms, which is a perception English locals apparently do not share.

Q: What did you have to adequate, to learn? For example, you said that in Brazil you did not need to have a dryer because the weather there is warmer and here you NEED to have one. Is there anything else you notice living here in the UK?

A: One thing I miss a lot, since the beginning, is the washboard sink. I still miss it. Because here we don't have a place to wash shoes. We simply don't have it. Or you wash it in the shower or… I don't even know if people wash shoes here. I think maybe not. So I missed a lot having this place, even more than the washboard sink, that we call as "area"… this place where you have the washboard sink, where you put your clothes to dry. This is something that always bothered me because there are some clothes… just like there are some dishes I cannot put in the dishwasher, I also cannot put these clothes to dry in the machine. So, every time, even though I pay to use the dryer, I still return to my room with some wet clothes. Then I need to open that mountable rack to dry them. This is it. And it is even worse in winter because it takes more time to dry things. Sometimes I stay two or three days with this rack opened right in the middle of my home. It is ugly. I have also seen, for example, in my supervisors' home, you know, who has a big house… he certainly pays good money in that rent. He is in another moment of his life, he is a PROFESSOR and everything. He has a big yard and I thought "well, he must have an area". HE DOESN'T. No area at all. It is the same situation as mine. When they wash their clothes, if it is raining outside and it is cold, you cannot put things outside. If it is summer, ok, they have a washing line outside… but, if it is cold, you can't. So they dry what they can [in the machine]… what they can't, they hang in that misplaced rack. It stays or in the middle of the kitchen or in the middle of the dining room… it is something very uncomfortable. Because you are welcoming some friends in your room… visualise this… then you enter in the kitchen and there it is some underwear drying. I consider this very strange. It doesn't make any sense to me. I could even consider a scenario where "oh, I live in a student house, they save space", which is one thing, but in my supervisor's home what doesn't lack is space, right? I think this really is something cultural. THEY DON'T EVEN HAVE AN OUTSIDE RAIN SHELTER to… "oh, this is ugly", and at least you could put outside. Not even this. It is an open yard (I4, Brazilian migrant, female, 28 years old, capitals indicate emphasis).

On the other hand, asking I12 (English migrant) about her perception of the washboard sink, she said "I think it is very old-fashioned. That would be something before washing machines existed. You know, the fact you need to scrub the clothes against [it]". Actually, she is right. The washboard sink is something old-fashioned, considering the trajectory of this practice (Shove et al., 2012). However, we see that the Brazilian economic reality shaped this practice, also affecting other household environments, and I asked I12 about this different way Brazilians wash clothes:

For us [in Brazil], a lot of our clothes say "for hand wash only", and I do remember saying to my mom "this t-shirt is hand wash only", and she said "do you really think we hand wash clothes here?", and I would say "no", and she would say "just put it in the washing machine". I know it is hand wash only, but you have to put it in the washing machine, there is no other way. Yeah, we don't hand wash it at all in England [laughs] (I12, English migrant, female, 25 years old).

This leads us to England.

4.3.1.2. Hand wash only… hand what?

English households, as mentioned in the previous section, are built differently than Brazilians. They will have bedrooms, kitchen, bathrooms, perhaps some living room, but no "service area", this room where Brazilians concentrate their washings. Almost every English home has a washing machine but, considering people in this country do not have a dedicated room for this appliance, this need to be put somewhere. In my experience, and from all the interviews I did for this thesis, this place is the kitchen. The following image is from Grayson Heights, the building where I lived in Leeds, but it is not from my flat (mine was not as tidy as this one) (Figure 11).

Figure 11. An English kitchen. Source: Google Images.

Every English I interviewed always first learned how to wash clothes using washing machines, and their reports were similar to I4 (someone telling them how to or learning by doing). The frequency of their washings also varies in the same way as I reported earlier (according to how full their laundry baskets are). Nevertheless, differently from Brazilians, people here started using washing machines earlier in their lives. Even when having one in their homes was something difficult (considering their economic situation at the time), people would go to a laundrette.

Q: And what about the way you do these activities today? Ahm… back then, was it different THE WAY these activities were done? Because now you have a washing machine. And back then?
A: I went to the laundrette to do the washing. Because we didn't have a laundrette, a washer. Ahm... lots of things. Totally. Now we have microwaves. Life is much easier. We only had a very small fridge, now I have a big fridge where I put my... IT IS TOTALLY DIFFERENT, totally different (I8, English local, female, 67 years old, capitals indicate emphasis).

Also, another thing people do differently in England (compared to Brazil) is the way they dry clothes, as I4's excerpt demonstrated. The fact that the English weather is significantly different than the one we generally face in Brazil certainly influence this indoor drying system. But, on the other hand, we need to consider that some material elements related to washing clothes are considerably more accessible there.

In section 4.2.2. (English urban water consumption), we could see that washing machines (new) start from values that represent nearly 13% of the minimum wage (versus 25% in Brazil) (ONS, 2018, Reuters, 2017). This certainly had some influence in shaping the way people wash clothes: English residents, nowadays, do not depend on manual washes, as nearly every home has this appliance (98%), and more than half of them (58%) have a tumble dryer (ONS, 2019). Hence, considering this reality, people ended up considering as unnecessary the practice of hand wash, relying on the use of machines (I12).

Possibly, the way these elements are organised may also have impacted the infrastructure of the homes: people do not identify the necessity of hand washing things, they rely on washing machines, they do not consider they need a room dedicated to washing things, and they had to integrate the material elements related to washing clothes in other household environments (e.g. washing machine in the kitchen, clothes hanging in multiple rooms).

Q: Here, you don't have a dryer, you dry everything in the heaters. In Brazil, we have the habit of hiding things, we have this closed area.
A: Oh, yeah, right.
Q: Is this something you… how was this for you? Doing this here?
A: It is funny, because… here we have less of this [laughs]. I think we don't even have this. If someone comes… once I was in a conference call from work. I was working from home. And then I made this call with all my clothes hanging behind me [laughs]. Only in the end, when I noticed it, I felt embarrassed. They weren't supposed to see my clothes. But I even think no one notice this, I think this is something from Brazil [laughs].
Q: Is this something that bothers you? Or is it something that people here don't mind about?
A: People here don't mind about this. And I had never even thought about it… actually, this situation not even bothers me that much. It was just in this… in this call, because it was from work, it was something formal, I felt "oh, no, clothes hanging around in a formal call [laughs], this was too much". And I don't know where that came from, it must be from Brazil, from the fact that, in Brazil, we hide them, right?
Q: In normal situations, like when someone comes to your place, is there any problem with having clothes drying around? Or even when you go out to visit someone?

A: No, not at all (I7, Brazilian migrant, female, 45 years old)

This dynamic transformed what English residents consider as "normal" (Evans, 2018), so people may not even realise that they could have other possibilities. I12, however, faced the situation of a different household layout after moving out to Brazil, and this impacted her perception of the way this practice is organised in her everyday life.

Q: Here in Brazil we have this separated area where we put the washing machine. In England, we put the washing machine in the kitchen. How do you see this difference?
A: I think it is nicer, it is a lot nicer to have it out there. I can close the door and I don't hear it. The problem with having a washing machine in the kitchen is you can hear it, so if you are in there cooking or doing something else, you can hear it. And I know, in my mom's house, the washing machine was under my parents' bedroom. And my dad is a very light-sleeper. And my mom used to like putting the washing machine on overnight, while they are sleeping. And he used to say it would wake him up. It was that loud. So, it is good… I mean, it is not like it is far away, but it is back there. I don't have to hear it. And there is just a blip when it is ready, when it is finished. I can hear that and I know I need to take the washing out. So… it is nice to not have to worry about it (I12, English migrant, female, 25 years old).

Thus, the material elements people have access to influence the way a practice is performed, which is something works such as Baringhorst et al. (2019), Costa (2016), Pakula and Stamminger (2010) and Shove and Araujo (2010) already showed us, even though their emphasis on cultural influences were marginal. In this story, I intended to show that the economic reality where people live in shapes their structures, which turns into influencing their practices. My next story starts to challenge Shove's approach by demonstrating that culture shapes practice, and what people think matters (which is something her writings do not consider).

4.3.2. The absence of plugholes

I was not used to cleaning the bathroom at my parents' home in Brazil, whereas in England I was required to do it in the flat I lived in. There, I and my flatmates would take turns to do this cleaning, and there was not a predefined day to do this. In Brazil, it is common to have the bathrooms deep cleaned weekly, which is both the reality I am used to seeing in my parents' home and the one reported by all the Brazilian residents I interviewed (locals and migrants).

In Leeds, this multi-ethnic flat showed me that we had different standards of the proper periodicity for this cleaning. We had two bathrooms and we decided we would be responsible for cleaning the bathroom that was closer to our rooms. I shared the responsibility of cleaning mine with the Chilean and with one of the Indians. We tried to keep this cleaning

done every two weeks (considering all three of us barely stayed in the flat during weekdays). Among the three of us, I moved in first, so we agreed I would do the first cleaning.

I was using that bathroom for a couple of weeks, but only when I had to clean it, I noticed something very distinct from the Brazilian bathrooms: there was no plughole in it! How should I clean this bathroom? This is a story about a forced way of performing a practice.

People have different social conventions of how cleanliness is achieved (for instance the use of lots of water to make things "shine") (Barbosa & Veloso, 2014), which is also influenced by the infrastructures they have access to (for instance the presence of different flooring materials, like carpet, linoleum or tiles) (Shove, 2003a). Brazilians usually pursue a high standard of cleanliness in the home (Barbosa & Veloso, 2014), while the English are more permissive with more superficial cleaning practices (Knamiller, 2011, Shove, 2003).

4.3.2.1. The "shiny" Brazilian way

First of all, it is important to say that Brazilian and English bathrooms are built differently. In Brazil, they are waterproof, with tiled walls and floor. The floor 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, as extraction fans are not common. Figure 12 shows a typical Brazilian bathroom. A sink and a mirror complete the room, with shelves or cabinets to store the toiletries.

Figure 12. A typical Brazilian bathroom. *Note*. Source: Google Images.

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 interviewees living in Brazil, 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 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 cleanliness link the use of water closely to cleaning, as the activity has the objective of making the bathroom shine, making it look as clear as pure water.

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, female, 25 years old, capitals indicate emphasis). Even though I11 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 and 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 & 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) (Figure 12), 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.

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 (4.4.2.2.), 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? Do 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, 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), we believe this can also be tracked back to the elements of meanings, as the infrastructure reflects what the society considers important (Cypriano & Pépece, 2016, Shove, 2003a). For example, in the last 40 years, in Brazilian cities newly built apartments are changing, as inhabitants' preferences for many rooms shifted to a design focused on fewer and shared rooms, which relates to changes in culture and family structure (Cypriano & Pépece, 2016), which evidences the trajectories of practices due to changes in what makes sense to that society at that time and space.

Usually, Brazilians perform a weekly deep clean in their houses (Barbosa & Veloso, 2014), combining vacuuming and/or the use of a wet cloth/mop. I found the presence of water in every Brazilian household cleaning practice, which means that, in Brazil, water is related to cleaning (i.e. washing the dishes, cleaning all the rooms, personal cleaning). 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, female, 28 years old).

Therefore, for Brazilians, the use of water is strongly related to cleanliness (Barbosa & 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 (Darmon & Warde, 2018, Miller, 2008, 2012, Shove et al., 2012). English, on the other hand, clean their bathrooms differently.

4.3.2.2. The "sticky" 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 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 (Figure 13). 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 can keep a bin in the room, although some might flush things water companies do not recommend (as baby wipes). 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. In fact, Figure 13 represents almost perfectly my bathroom (bath, toilet, and sink were positioned slightly different).

Figure 13. An English bathroom. *Note.* Source: Google Images.

As in Brazil, the way the bathrooms are 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 in 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:

Q: […] "Oh, I clean my bathroom. I do this and this"... but HOW is it?
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, 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. […] having a degree of order gives me a sense of calm or whatever" (I10).

This "kind of orderly state" is a situation that appeared when asking the interviewees more broadly about their standards of cleanliness. 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 and migrants, excepted for I11, who has a twice-a-week cleaner) reaffirmed I10's quote. The following quote, from one of the cross-national couples (the first interview, where I questioned the couples about their routines, 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.
> I9: 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, female, 45 years old; I9, Irish, male, 44 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 standards of 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?
> I7: Yes. Ahm… you washed the floor, here you [laughs] don't do it. Cleaning my bedroom… I didn't have a 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, 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 someone teaching them how to do it or even asking someone how to do it).

> 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, female, 28 years old, capitals indicate emphasis).

Also, as discussed earlier, based on Cypriano and Pépece (2016), the household infrastructure reflects what is considered important in that society. While in Brazil hygienic douches are widespread and people (all genders and ages) got used to its use, in the UK they are barely known. The opposite goes to the baths: as said in the previous section, in Brazil people do not use this facility regularly (it is almost decorative), while in England baths are used frequently, they are mandatory in the room. As baths are essentially a waterproof personal cleaning unit that can have showers attached to them as well, adding to this the fact that they are used as baths regularly (whereas people said they mainly have daily showers, all English locals said they bath themselves at least once or twice a week) (see Shove, 2003a), and that England is colder than Brazil as a whole (which could make uncomfortable the use of hard floors), probably the bathroom design and construction reflects these differences, and impacts on the way they are cleaned.

These differences in the design might also be related to cultural conventions on cleanliness, however. 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.

Therefore, the different shared conventions about 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 elements of meanings.

4.3.3. Single or double bowls sinks

I do not remember when I washed dishes for the first time. This is something I do daily, but I believe I have been doing it virtually in the same way since ever. In my parent's home, I usually wake up earlier than everyone, so I have my breakfast, wash the dishes I use, and I leave to my room. Dishes from lunch and dinner usually are washed by my mom.

In Leeds, this situation was similar. I used to wake up first, have my breakfast, wash my dishes and leave the kitchen. However, there I also cooked my other meals (and washed these extra dishes), which made me sometimes share the room with other people while cooking. We agreed all of us would be responsible for our personal dishes, leaving the sink free of dirty dishes, so the next person could have more space to cook their meal.

We did not have a dishwasher in the flat, so everyone would wash their dishes manually. We had a single bowl sink with an extra plastic bowl (removable) and, even though we had exactly the same material elements, I noticed different ways of performing this practice.

As my last story demonstrated, people have different social conventions of how cleanliness is achieved, which is something that can be influenced by the infrastructures they have access to (performance can also be forced by this structure though). If they could, these people would like to do differently. This third story explores the following scenario: considering an environment where English and Brazilian residents can perform a practice in the way they prefer, will they perform this practice as locals or will they perform this practice in the way they learned in their home country? Roll up your sleeves, it is time to wash some dishes.

4.3.3.1. Individual attention

Again, let me first describe the Brazilian material elements people usually have access to wash dishes, which is slightly different from the English ones. Brazilian kitchens usually have a single bowl sink (on average, but it is possible to find households with double bowls sinks) which, as well as washboard sinks, can be made of different materials, but stainless steel and synthetic materials are the most common ones. The presence of dishwashers is not common in this case, as only 4.8% of Brazilian households have one

(Szwarcwald et al., 2005)[26]. Sponges are used along with water and washing up liquid to scrub the dirt off the dishes. Depending on how hard the dirt is, people also use steel wool and hot water (Brazilian household plumbing systems usually have cold water only). A drainer completes the layout (Figure 14).

Figure 14. A typical Brazilian kitchen sink. *Note.* Source: Google Images.

In Brazil, people wash the dishes by hand, soaping them individually. After soaping the dish, two situations occur: (1) the dish is rinsed and placed aside to dry; or (2) the dish is put aside while the person soaps more dishes before rinsing them (individually). In these situations, the tap can either be left running water continuously or it can be turned off while soaping the dish.

> A: Ahm... I don't have many things to wash… it is, like, one knife, one fork, and one plate. So, usually, I wash the knife and fork first, and then the plate. But, usually, the plate is not even too dirty. However, when I cook FOR REAL, which is when I decide to do something, I always go from the least dirty to the dirtiest. This is my way of doing it. So I start, I don't know, maybe from the glasses, cutlery, the plates, and then the pots, for example. It is something like this.
> Q: Do you soap everything and rinse afterwards? Or do you soap and rinse at the same time?
> A: I soap everything and then I rinse. I only put washing up liquid and I soap them, I scrub everything. Then I rinse them individually. After I finish rinsing one, I turn off the tap again. And then I start to rinse the next one… I turn on the tap to rinse it, and I turn it off again when I finish this other one. So I keep doing this.

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[26]This was the only national statistic I found. IBGE's historical and statistical series do not cover dishwashers. This data has a long time, but we still can sustain the gap between Brazilians and English households, as this last country had 33% of its households with this appliance (same period) (ONS, 2019).

Q: These dishes… are all of them outside the sink bowl or are them inside?
A: Usually, they are outside. Outside the bowl, over the sink area. I do this individually, I only do this on and off in order to not leave the tap on all the time, to not waste (I2, Brazilian local, male, 23 years old, capitals indicate emphasis).

All Brazilians (locals and migrants) reported procedures at least similar to this one above. It is worth to point out that all of them keep the same procedure as they used to see in their parents' home, it only varied if they used to see the tap being left on all the time or not (I2 and I5 reported they were used to see their mothers washing dishes with the tap on, but as they grew older, critical thinking from high school and university raised their environmental awareness and made them adopt a different procedure). The only exception was found in the cross-national couple I7-I9 (Brazilian-Irish): they do not turn off the tap while soaping their dishes, they keep it on all the time. Although all the other Brazilians save some water by turning the tap on and off when doing it by hand, it still consumes more water than the English way, but they refuse to change their procedure. They do not consider this procedure proper (Evans, 2018).

Q: You said something about cleanliness. But what about water? Do you have any perception about the way people use water here [in England]?
A: Yeah, they have a different way of washing dishes here. They have a different method I don't fully understand. They use a bowl and they fill this bowl with water and put things in there… I don't remember if they… well, they soap there. Some people do not even rinse these dishes, they take the dish from there and they put to dry. But some people rinse the dish. This is different.
[…]
Q: What about your perception of the way people wash dishes here? How is it?
A: I don't know, I'm more concerned with the soap, if it will make me ill, if it won't. Then, when I take something someone has washed, I do a quick rinse [laughs]. But I don't know, it is different, it is different from what we are used to. It is a little strange for us (I5, Brazilian migrant, male, 29 years old).

The presence of water is related to cleanliness and even hygiene. Differently from the second story, Brazilians now have all the material elements they would like to perform the practice the way they desire, aiming to achieve the result they want to. Again, this goes beyond the material elements, relying on the elements of meanings. The power of meanings is so expressive that it raises barriers to different ways of performing a practice, even when this other way could be less resource consuming.

This was the case with the dishwashers. All the Brazilian locals (and some of the migrants) only washed their dishes by hand, and they had negative perceptions of this appliance, even though research shows that using the dishwasher with a proper combination of how dirty the dishes are and how loaded the machine is (Richter, 2011) (which is an

element of competence similar to the use of a washing machine to wash clothes, turning it on with a setting that matches the load, how dirty the clothes are, and the fabrics that are inside).

A: I was always taught to see the dishwasher as something unnecessary (I3, Brazilian local, male, 22 years old).

Q: In the first day, you told me you consider dishwashers as something unnecessary. Since then, do you still think the same thing?
A: It is absolutely unnecessary [laughs] (I1, Brazilian local, male, 24 years old).

However, when these people actually had an experience with a dishwasher, their perception of it changed, even though they have not started using it for environmental reasons. Considering that in England this material element is more widespread than in Brazil, this certainly was something that eased this change of perception.

Q: Before having a dishwasher, before start using one regularly, how you used to see it?
A: Well, this is something I was always influenced by my mom. My mom thinks dishwashers are a waste. She says you have to clean your plate before putting it inside. So, she used to say "if you are going to wash something, wash it properly at once". And I always thought that. When I moved to this other place, before the one I am living in now, there was a dishwasher there and I used to use it as a cabinet. I used to put pots in there until some day I don't know what came to my mind and I said: "well, I will try it once". And then I loved it, I said "wow, I was so wrong" [laughs], washing by hand is way more exhausting.
Q: Was this episode here or in Brazil?
A: Here, but I lived in this other place, I don't know, maybe six months before trying it.
Q: Right. Nowadays, if you return to Brazil, is this something you would intend to have?
A: AHAM. Yes, it is (I4, Brazilian migrant, female, 28 years old, capitals indicate emphasis).

Still, there is also a cultural element that may be holding back the dishwashers' market. The following excerpt is the immediate subsequent line from this last I4's quote:

Q: Any particular reason?
A: Mainly with family, because it is way more practical. Each one just quickly cleans the plate, put it inside the machine, and it is done. Mainly because I think… me alone, me and my boyfriend alone already use a lot of dishes. If I had a family… wow, I need one. Even more here in the UK, there are no cleaners. In Brazil, I think people care less about this because they always have a cleaner who would do this cleaning (I4, Brazilian migrant, female, 28 years old).

Brazil has an expressive number of cleaners. In 2018, 6.24 million people worked as cleaners, the highest number in the last seven years (Elias, 2019). These workers tend to be the main responsible for the dishes in families who hire them for their households (be it exclusive or daily) (Teixeira, Saraiva & Carrieri, 2015), at the same time they may feel they are there not as part of that environment, but as a possession (Soratto, 2015), which reveals a

disconnection that can lead them to be seen more as a thing than as a person, which could place them in the role of a material element to perform this practice.

In this way, Brazilian way of washing dishes reveal there is a connection between the use of water and cleanliness, also revealing cultural influences in the elements of meanings that shape people's perceptions of material elements, consequently impacting on the use of resources. English, however, reveal another trajectory in their performance of this practice.

4.3.3.2. Soak them all!

The material elements English have in their households are similar to the ones we saw previously in the Brazilian households (4.4.3.1.). Besides the fact dishwashers have a stronger presence in this country, the only other material element I see as different is the sink: in England, people usually have a double bowl sink. These bowls can either be twins (Figure 15), with different sizes (one of them has narrow width) or removable (which means it is a single bowl sink plus an extra one). In the flat I lived in, it was a plastic bowl, but we never used it in the English way: this bowl was used to store the dishes after their washings. It was left over the counter near the sink, but it was never used to do the washings.

Figure 15. A double bowl kitchen sink. *Note*. Source: Google Images.

If the material elements were similar, I cannot say the same about the elements of competencies. As I5 described earlier, English do not use running water every time when they are washing dishes. English locals fill the bowl with clean hot water and soap, and then they soak the dirty dishes in this solution, scrub them and put them on the drainer. Eventually, if the person considers this water is getting too dirty, the procedure is repeated.

Q: One thing... when you wash your dishes. Do you do everything by hand? Or, like, with a dishwasher?
A: No. By hand. The kitchen is too small for a machine. Far too small.
Q: Would you put a machine in there if you had the space available?
A: No, I don't think I would. 48 years married, I've never had one, so... why would I need one now?
Q: [laughs] Ok. Yeah... in Brazil, we wash our dishes differently. How do you wash your dishes? Describe for me the procedure... like... you wash one by one? In a bowl?
A: No, no. You put three, four things... wash them, put them on a drainer, then get another four, put then in the wash, then put them on the drainer. How do you do in Brazil?
Q: Yeah. In Brazil... like, we soap, we rinse all of them. And then you open the tap, the water, and you clean the soap and put on the drainer. All of them.
A: REALLY [in an incredulous way]? Very different.
Q: Yeah. That is why I need you to describe it for me, because... so I can write about this. Is it in a bowl that you put things inside? Hm... in a bowl... water and soap? How is it?
A: YEAH. Just in the sink. You just put water, washing up liquid...
Q: You fill it with water... put the dirty dishes inside...
A: The clean ones first. The cups. And then the dinner ones. I wipe with tissue. And then the pans, put them in the water. When I think the water is getting dirty... like on Sunday, that it is a big dinner... so, maybe, we change the water three times. Because there is a lot of cooking utensils.
Q: During this, you keep changing the water if it gets too dirty, right?
A: Yes (I8, English local, female, 67 years old, capitals indicate emphasis).

This last quote is from an English woman who is married to an English. In contrast, when I questioned cross-national couples about the way they wash dishes in their homes, it seems that the Brazilian way prevails when doing it by hand. I6 and I10 currently use a dishwasher, but they still need to wash some things by hand sometimes (if there is no available space to fit big pots in the dishwasher, for example).

Q: Uhum. And you said you started washing the dishes the Brazilian way. How was your perception when you saw, discovered this way? I don't know if I6 showed you... how was this transition?
A: [Laughs] First things first. I can't remember. So... I don't recall it as a significant event. It wasn't an event that affected me... I being challenged that my way of washing dishes was wrong [laughs]. I don't remember, really. I REMEMBER I6 moaning and expressing her disbelief of this way of British people would have the basin and just mixing it all together and leaving it in all this dirty water. So, that was something she had been in houses with British families before we were together... she already had a strong view on that... to how bad and how strange. So I would have been aware of her views on it and I think it would've been a very natural thing that... probably, if I hadn't already started doing it myself, because I don't think I would ever be a heavy washing up liquid person, you know, who put the dishes out with loads of washing up liquid on them. So, I probably would have preferred to have the dishes rinsed anyway. So... she

was preachy and converted, it was probably quite an easy transition, if there was any transition to be made. So, I didn't find strange at all.

Q: Uhum. Besides washing the dishes, you had also transitioned to the dishwasher. I don't know if you already had this moment of start thinking in different ways of doing other activities... like doing cleanings, washing clothes?).

A: Involving water use?

Q: I would narrow it down to water, but if you feel more comfortable thinking in general things and narrow down to water, it is up to you.

A: I would say, probably, one of the biggest evolutions of the time has been recycling. See how much we had improved, from not recycling anything to now trying to recycle as much as we can. In times of how we do things... I would probably say our main concern would be about "how can we manage to do these things whereas we feel that we got less time to allocate to them?". Just, you know, buy when we prioritise doing things more efficiently. Impacts on water use I can't really think we trying to find different solutions to the activities.

Q: When you changed to dishwashers... why did you change to dishwashers, actually? Was it something that you have looked it would save water? Energy? Why did you change to this?

A: Well... a friend of ours, who is Portuguese, in fact. So, we saw them using theirs and... I think the motivation to get one... if I'm honest about it... PROBABLY, at the time, the PRIMARY motivation would've been that it would be quicker. We were spending so much time doing dishes. And it would've been HELPFUL to know that, in fact, is more environmentally efficient as well. But, if I'm honest with you, I think the primary motivation would not have been the environment at the time (I10, English local, male, 48 years old, capitals indicate emphasis).

Differently from story 2, Brazilians in cross-national couples kept their way of washing dishes. As the materials they had access to did not require them to adapt their practices, these migrants were not forced to follow the new structure they moved in.

Q: Uhum. And how was it for you, at the beginning, when you discovered that Brazilians and English wash dishes differently? Did you find this out WITH I9 or had you figured it out before?

A: I don't know how I found this. No, I had found out before… now… I don't remember. I do remember I always… I would always remove that bowl and I would wash Brazilian way [laughs]… living in with other people, sharing a place and so. Seeing people washing in this way. I wouldn't confront them but, when I washed the dishes, I washed them my way [laughs] (I7, Brazilian migrant, female, 45 years old, capitals indicate emphasis).

In Brazil, English migrants would also wash the dishes Brazilian way. I11's family has a dishwasher but, when washing by hand, all of them do it like Brazilians. I12, on the other hand, seems aligned to Shove's approach, as she followed the new environment she started living in.

Q: Yeah. Here, in Brazil, we don't have the two bowls to wash dishes. Last week, you said you changed your way of doing it. Is that something that your husband required you to do or how have you change it?

A: No, I think, again, it is just... I think it was the people around me. I see them doing it and I adapt. But, thankfully, he's never said: "this is how we do it in Brazil, you need to do it this way". No. It's different (I12, English migrant, female, 25 years old).

Last, it seems undeniable that culture influences practices, as people actively identify their standards of cleanliness (meanings) and the necessity of using more resources (materials) in order to achieve an outcome (competence). As we will see in the conclusions,

all of this ties together in a discussion about the way Brazilians and English household water consuming practices, in these different environments, reflect singularities of their cultural backgrounds, where their original cultural background may surpass the current cultural background in the performance of household water consuming practices, which is something that pushes the boundaries of Shove's approach.

4.4. SUMMARY

Before starting the last chapter of this thesis (conclusions), let me first summarise the discussions of the three stories I told you. All of them sums together into a greater narrative recalling my research question: "how do Brazilians and English household water consuming practices, in these different environments, reflect singularities of their cultural backgrounds?", which can be summarised as follows.

First, we saw that the economic reality people live in has influence in the way a practice is performed. People living in a country where they have broader access to household appliances (as washing machines) in their upbringing may consider different things as necessary, which impacts even in the layout of the households. This story also reinforced the discussion of proto-practices, practices and ex-practices, as the presence of washboard sinks and washing machines along with the other elements showed different trajectories of the same practice.

Later, considering the different layouts of the households, in some cultures we may find differences even in the way some rooms are built, as we saw with the bathrooms. This layout affects the way some practices are performed, which is something Shove's approach proved partially sufficient in the discussion: her view considers that the structure drives people's practices; however, my discussion offered a different possibility – one that says people may perform a practice in a particular way because they are compelled to such specific way, whereas they would like to perform this practice differently if they could.

Last, when analysing the practice of washing dishes, I intended to analyse a situation where people from different cultural backgrounds could perform a practice in the way they would like, and my results indicated that, considering a scenario where the practitioner could freely choose the way of performing a practice, the original cultural background could surpass the current cultural background due to stronger influence of elements of meanings, which is something Daniel Miller's discussions on culture and consumption contributes to proves

themselves as compatible to practices. This is something novel, as this goes beyond what Shove writes about practices, incorporating people's subjectivities to them.

5. A FINAL STORY: MY CLOSING THOUGHTS

Earlier, my analysis followed a chronological approach, first presenting the context of the country and region where I did the interviews, then I offered an overview of each interviewee, and I finally explored each of the three stories cross-culturally. Here, as I assume the reader is already familiarised with the results, I focused the conclusions on the highlights.

In this last chapter, I would like to report some contributions this thesis has made me think while writing it during these (almost) last four years. I believe my search for an answer to this thesis research question and my discussion of its specific objectives were fruitful in the pursuit of the general objective, so I expect the following pages demonstrate some contributions of my research. In the end, I present some limitations, finishing with suggestions for the future research agenda.

5.1. THEORETICAL AND METHODOLOGICAL CONTRIBUTION

Earlier, we saw that the value of using oral history consists of identifying the existence of a story that needs to be told due to its practical and theoretical value. I told you three stories, and I hope I can put all of them together to an additional step.

First, it is important to remember that Shove's practice theory combines the social world into the material world, resulting in a context that involves the integration of multiple practices, but this approach excludes people's individualities by considering the practices as the locus of the social, which is something I positioned myself against. What people think should not be excluded from consumption studies involving practices. By empirically considering this in Shove's approach, changing her perspective from a sociology of consumption to an applied environmental social science, this is my first contribution.

Second, we can see that people's upbringing, expectations of cleanliness and their social and material environment influence how they perform household water consuming practices, all elements that are familiar to those studying practices. However, when people's context change (for instance in the second story, when they migrated to another cultural context) we can see people 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. The third story discussed how other common household practices are

strongly influenced by culture when material infrastructure and competencies are kept constant. This directly relates social conventions of how cleanliness is achieved and sustainability, as the practices discussed here involve a higher use of a natural resource.

Consider again the second story. If the bathroom does not have plugholes in the floor, it is not possible to deep clean the room by throwing water, as some Brazilian migrants wanted to. However, the presence of plugholes does not imply the deep clean, as the English migrants in Brazil showed us earlier. This represents that, for Brazilians migrants in England, the structure temporarily limits the performance, but they would like to do it differently. Therefore, the structure may restrict the way a practice is performed, but it may not determine it.

Third, by adopting the 3As (Warde, 2005) and 3Ds (Evans, 2019) understanding of consumption, and based on the results I reported in the previous chapter, I see that Brazilians and English definitely have distinctive understandings of cleanliness (which impacts in a sustainable consumption, as people will use more or fewer resources in order to achieve this socially shared standard) that affect the way that sustainability is performed, based on their household water consuming practices and on their culturally shared meanings.

Brazilians seem to rely on procedures they first experienced, although they are open to trying new things that can make them feel more comfortable (not necessarily more convenient though). They like things shining, and they would prefer to keep things segregated until they get purified, being the presence of water very connected in this process of achieving cleanliness. Everything needs to have its own place, and people do not like to mix elements from different practices (exception for cleaning products). Brazilians first save money, seeing waste as use without purpose: if the person identifies the water is helping him/her to perform the practice, it is seen as something acceptable. Considering Brazilians' expectations involving cleanliness, these expectations can even be related to status, as people seem proud to have their household environment deep cleaned.

English, on the other hand, seem more prone to try new ways of performing their household water consuming practices if they feel this new way will be more convenient by saving them time. Their practices seem related to an undesired consumption, as English may feel they are forced to do these household activities; therefore, they try to keep the level of cleanliness as a maintenance. They usually do superficial (at least for us Brazilians) cleanings, relying more on specific products than on clean water. Appliances are widely present in their households, and this has contributed to a particular layout in people's homes. English first

save time than money, considering they are the main responsible for their household practices, and they see waste as using more than your necessity and not considering other people's necessities.

Fourth, given the extension of a doctoral thesis, this document also offers a research protocol for using practice theory and oral history in a cross-cultural perspective. It is expected that academics interested in this overlap could benefit from the procedures reported here.

Last, I would like to add that it was not my intention to communicate a discourse that English are superior people than Brazilians, even though I recognise my previous pages might say otherwise. I tried to point remarkable things in both ends for both countries, however, we live in a society that usually demerits our country, poisoning our people against our own country. If some of this poison got into these pages, I tried my best keep it at a minimum level. Living in a different country opened my eyes to the fact that there is no perfect society, and this is something this thesis contributed to me.

5.2. MANAGERIAL AND SOCIOPOLITICAL CONTRIBUTION

In addition to the theoretical and methodological contributions I presented above, this thesis also offers contributions to areas other than the academic environment. In the following pages, I offer insights on managerial and sociopolitical contributions. First, it was common to hear words as "normal" (e.g. I6, I9, I12), "nothing particularly special" (e.g. I2, I7, I11) when people talked about their practices.

Another thing that was frequent is the fact that, after the first interview, in one of the following days people would say things like this:

Q: Have you changed anything in your behaviour after our first interview?
A: Not CHANGE, no. But I became more aware of the fact I… when I am showering and I don't turn it off, I leave the water running while I am showering. And I know this is waste, that people, the government, they tell us don't do this. To turn it off while soaping yourself and so. And I didn't change this, and I felt guilty about this [laughs] (I7, Brazilian migrant, female, 45 years old, capitals indicate emphasis)

Q: Ok. Have you noticed anything since our last conversation? Have you noticed anything different in the way you do what you do?
A: No, maybe I am thinking more about this. Like… when I have more than one shower in the day. "I could have been showering just once" and so, "I could have been saving". I think it was more in this sense, of not wasting so much (I2, Brazilian local, male, 23 years old).

As these excerpts show, people usually do not realise their practices, something expected in their everyday lives, which turns into a problem with campaigns that only brings

our attention to the necessity of a sustainable consumption and do not make people think about what they do. Figure 16 provides two examples of similar campaigns that refer to this situation. Even though only part of the interviewees was asked about environmental campaigns (considering each script was individually tailored according to the path of the conversations), their answers expressed these campaigns should address "how-to"s (e.g. I2, I6, I9).

Figure 16. Water saving campaigns (Brazilian and British websites). *Note.* Source: Google Images.

Considering the excerpts from I2 and I7, it is expected that when people stop to realise their practices, this can lead them towards change more easily, considering a scenario where they continue living in the same environment. Proof of this occurred with I9, as he said he was used to leave the tap running water continuously while brushing his teeth, but now "[laughs] I made a conscious effort... I see it, and I 'oh, no. No, no.', you know? [laughs]. Even I7 comes and say 'oh, you are now closing the tap'. So, you have made a positive impact on water usage around the world, there you go.". This is something I am very proud of, although I recognise having these multiple interviews is something difficult to operationalise nationwide, so I would like to suggest other possibilities to establish changes in water consuming practices.

As my second story demonstrated (bathrooms), 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 to or have previously learned. This is based on Brazilian migrants' interviews. 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 high use of water 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 this "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 cleaning.

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 I told her Brazilians deep clean their bathrooms by throwing water). Real estate companies could offer trainings considering environmentally friendly procedures, and green products brands could offer free samples and explanations to the new tenants (so they could try them out), for example. Also, future research could also investigate 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 be more environmentally friendly. Considering that people tend to reproduce a practice in the way they initially learned (thinking of it as the proper way), we think that efforts like the ones mentioned above can be primed in people's mind when moving in to a new place.

A more radical suggestions would be building bathrooms which people could not deep clean by throwing water as they currently do. As people already expect to find plugholes in their bathrooms, this would involve marketing efforts to gradually change such perception (see Brei, 2007), which could involve multiple players (e.g. government, real estate companies, NGOs, cleaning products companies).

Also, it could be fruitful to develop efforts focused on making people more aware of their realities; that they are privileged in having access to that amount of water; and provide information that makes them question their standards of cleanliness and if relying so much on water (communicating this in mass media, as morning shows and news, for example). These efforts can contribute in resignifying what people consider as waste and unnecessary.

Additionally, considering the fact the market still does not widely adopt green labelled products, probably a good way the government could communicate with consumers is advocating that people should use less of regular products in the first instance. I suggest the government makes the first move because this would go against companies' interests, as this involves people buying fewer products. Later, the communications (now both from the

government and from the companies) could focus on making people aware that the outcomes provided by green labelled are similar.

Also, as the third story demonstrated, in Brazil dishwashers still have a negative image among people, part of this due to a lack of elements of competencies (English also do not widely know that dishwashers might be better for water and energy use, but they are more receptive to having one of these in their homes). But, as Brazilians seem more receptive to saving appeals, campaigns as the one from the Brazilian YouTube channel "Manual do Mundo" (Figure 17), comparing the advantages and resource consumption of a dishwasher versus the manual wash (traditional Brazilian way) might be a good effort to make people aware. The problem with videos like this is the fact that people deliberately need to search for them or consume videos with close appeals (so the algorithm can list them as a suggestion to watch later).

Figure 17. YouTube video "How to save a water pipe truck by stopping washing dishes #WorldWaterDay". *Note*. Source: YouTube[27].

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[27]Available at https://www.youtube.com/watch?v=aPGUG3D7A3M.

I believe that both nations have unique characteristics that should be addressed when discussing sustainability issues. Besides the managerial suggestions presented earlier, my 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 (and also communicating messages to improve people's awareness about what they consume and the way they are consuming), in England the communications should combine these aspects with "convenience". Also, we imagine that such meanings could also 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).

5.3. LIMITATIONS

Even though I tried to prove all you have read until here is something worthy of the title of Doctor, I recognise I should address some flaws that following researchers could avoid in order to take these discussions further.

First, the groups I interviewed were not balanced. Brazilians and English residents had different numbers of locals and migrants. Even though I was not looking for generalisations, I assume that interviewing three Brazilians locals, two Brazilians migrants, two cross-national couples (in England), one English local, and two English migrants offered different amounts of information for each group. Additionally, the Brazilians locals I interviewed were all men, and I consider having the viewpoint of at least one woman could provide unexplored information, such as machismo in performing some household activities. Another problem is the fact that I ended up not asking for interviewing the partners of the English migrants here in Maringá, as I already had interviewed Brazilians locals, which could have offered another household dynamic to look at (cross-national couples in both Brazil and England).

Second, as you can see from the overview I provided from my interviewees (4.1.3. and 4.3.3.), most of them are part of a well-instructed social bubble. I am sure the absence of low literate people narrowed the different possibilities and elements involved in the water consuming practices I discussed. However, my interviewees' trajectories revealed that most of them came from families where they had regular contact with people who used to use water in ways they considered as irresponsible. I recognise it is not the same as interviewing these

other people, but deeply discussing such practices with the people I had access to also offered me complementary looks to these situations.

Last, the methodology I used to construct my data (oral history) relies on interviewees' memories, which can mislead information as some events might have occurred decades ago. On the other hand, my analysis was not based solely on these reports, as I tried to support each affirmation with previous research. Finally, Thompson and Bornat (2017) also say that oral history has many works in psychoanalysis: considering this is not my academic background, I believe that academics from psychology could offer an additional level of analysis (as they have the training to go deeper in the connections between memories and behaviours), which leads us to future research.

5.4. FUTURE RESEARCH

This final section outlines potential paths that other academics can follow. First, as said in the limitations, I believe it could be fruitful to develop a more balanced field research, offering new combinations in the analysis besides the ones I did here (i.e. Brazilians x English, locals x migrants). Further analysis could add layers such as gender and different genders in cross-national couples in the comparison. Also, wealth should be considered as well, as Alves et al. (2018) discussed that measures such as punitive control (e.g. fines) tend to be less effective for high income families (i.e. they can easily pay the fines and sustain a high water consuming lifestyle with swimming pools and time consuming showers, for example).

Second, different geographical regions inside the country could reveal new trajectories the practices had and new cultural elements as well. By considering regions where water availability is not abundant, people might live in a constant saving mindset that requires from them a different combination of elements that could lead to performances that were not covered here.

Third, quantitative analysis could be used to establish new trends in household water consuming practices, checking if background story (e.g. being raised in households with specific material elements, currently living in one with many rooms, being a single child, high/low income families) leads to some specific outcome of water consuming practices.

Fourth, further research could explore if the professional career people have influence in different ways their sustainable consumptions in different cultures, considering

that Sargant (2014) already pointed out that the sustainable consumption of something does not guarantee the sustainable consumption of everything. Maybe professionals from a country more concerned with safety in work are more aware of environmental problems than professionals from countries with loose safety regulations are.

Fifth, as it was suggested that people should consider using dishwashers, we still need research exploring potential environmental impacts of their production, considering carbon footprint and other environmental costs.

Sixth, considering Brei's (2007, p. 76) affirmation that Brazilian tap water "lacks the confidence of the population in much of the country", it could be interesting to check in other regions where people do not trust in the quality of water if they consider they should use more water in their cleanings, as this research did not confirm this scenario (see in page 69 that the interviewees I had access to were divided about this).

Seventh, considering Paraná's reality, where water demands are different than the national average, further research could investigate water consuming practices in different sectors (e.g. agricultural, livestock, industrial) and in different regions (both nationally and cross-nationally).

Finally, further research could also explore how "returners" (e.g. Brazilians who migrated to England, lived there for some years and then returned to live in Brazil) end up performing household water consuming practices. Do they perform these practices as their current social environment does or as their previous one? Do they follow a particular mix of practices considering both cultures? Why do they choose this mix? These are questions I do not have answers for now, but who knows what my next steps will be?

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APPENDIX A – SCRIPT FOR THE INTERVIEWS

Note 1: Moments 1 and 2 could have occurred in the same day or in different days. Although, moment 3 necessarily needed to occur in a different day, so both the interviewee could access memories that did not appear during the first interview and I could transcribe and preliminary analyse topics to be explored or clarified.

Note 2: This is just the script that guided me through topics to discuss without necessarily following the sequence of questions, only the sequence of the moments. Questions were added according to the route of each interview. Also, some questions were repeated/adapted to explore different situations.

Moment 1
Introduction.
Ensure confidentiality.
Explain what the research is about.
Answer any question the participant may have.
Ask if he/she authorises me to record the interview.

1. Tell me about your routine. From the moment you wake up until you go to bed again.

Explore the water in categories like: hygiene, food, household cleaning, weekends, special/commemorative occasions, and seasons of the year.

Moment 2
Deliver last interview transcription.
Recall the topics from last interview.
Ask if the person remembered anything new.
Ask if the person would like to add anything else.
Ask if the person noticed anything different since the last interview.

2. How it was when you moved out your parent's home? Did you already know how to do everything? How did you learn to […]? When you were living with your parents, were you

responsible for any of the household activities? Which one(s)? How these activities were performed?

3. Did you looked for different ways of performing […]? Throughout the years, did anything change your way of doing/performing […]? What changed? Why this changed? [Here, I need to explore things like personal and household cleaning, food preparation and cleaning, etc.].

4. Is there anything (like a utensil, equipment, or other stuff) that you would like to buy for your house/apartment? Is this the first house/apartment that you lived after you leave your parent's house? Is there anything that you didn't buy immediately after moving here? And how did you […] before having it?

Moment 3
Deliver last interview transcription.
Recall the topics from last interview.
Ask if the person remembered anything new.
Ask if the person would like to add anything else.
Ask if the person noticed anything different since the last interview.

5. On the other day, you told me that you usually do […]. Since when do you remember doing this? Do you think this is something important? Did anyone teach you or required from you this way of doing/performing? It was always you the responsible for doing this task or you share(d) it with anyone else? [If divided] How do you see the way that this other person does this?

6. And what about […]? What makes you want to do this?

7. How do you see who wastes water? When people talk about wastage, which image of people comes to your mind? Which characteristics do you relate to people who has environmentally responsible behaviours? Do you consider yourself environmentally aware? What a sustainable consumption necessarily needs to be?

APPENDIX B – CONSENT FORM

STATE UNIVERSITY OF MARINGÁ (UEM – BRAZIL)
BUSINESS SCHOOL – POSTGRADUATE PROGRAM IN BUSINESS
PhD IN BUSINESS
VISITING STUDENT: UNIVERSITY OF LEEDS – SCHOOL OF EARTH AND
ENVIRONMENT

PARTICIPANT CONSENT FORM

I agree to take part in the GABRIEL HENRIQUE PIMENTA ISBOLI's thesis about URBAN HOUSEHOLD WATER CONSUMING PRACTICES.

I confirm that I was informed that the research intends to comprehend how Brazilians and English perform household water consuming practices.

As a participant in this research, I declare that I agree in being interviewed once or more times by the researcher, in place and time previously accorded, (   ) agreeing / (   ) not agreeing with the recording of the interviews.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, if I do not wish to answer any particular question or questions, I am free to decline.

I understand that my responses will be kept strictly confidential.

_____
Interviewee's signature

[CITY], ___ [MONTH] 2019.

Interviewee's name: _____

Telephone: _____

_____
Gabriel Henrique Pimenta Isboli
UEM ID: [number]
UNIVERSITY OF LEEDS ID: [number]