

SUSTAINABILITY IDENTITY MANAGEMENT – A CASE STUDY OF CURITIBA

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Abstract

This study is an in-depth case analysis of Curitiba, Brazil, that describes the city's efforts in maintaining an identity centered around sustainability on social media. I use Multimodal Discourse Analysis to gather and interpret data from the city's Facebook fanpage for 30 days. As a theoretical framework I utilized Social Identity Theory and concepts derived from Place Identity. The data showed that the city's novel and deliberate communication strategy is successful in engaging with users and maintains the idea of the "Sustainable City" in 4 ways: Creation of a cohesive ingroup; alignment between resident expectation and image being portrayed on social media; creation of an open forum and encouragement of participation; and indication of desired behaviours. In addition, this study identified and addressed current gaps in the literature such as the importance of modern typologies for governmental communication strategies and the necessity of qualitative analysis in studying social media engagement.

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Chapter 1: Introduction

1.1 Background on Curitiba and Sustainability

I have been fortunate enough to live in several cities in different countries. As a researcher interested in sustainability, I have paid close attention to the different ways in which municipalities raise awareness about sustainable practices and challenges shared by urban centers when it comes to sustainable development. Exposure to different strategies allowed me to compare the varying levels of perceived success these municipalities had and the impact they generated in residents' lives.

This research is a way to delve deeper into the field of sustainable development and help answer some of the questions my experience living in these different cities has raised. The focus will be on the city of Curitiba, where I initiated my undergraduate studies and lived in for several years. Curitiba was the city that initially peaked my interest in this topic and exposed me to a different way of thinking about sustainable living.

Sustainable development can be defined as development that delivers basic environmental, social, and economic services without compromising natural and social systems (ICLEI, 1993). Municipalities are an integral part of the process; local governments are no longer seeing sustainable development as a farfetched vision, but rather as something that can be implemented (Saha & Paterson, 2008).

Curitiba is one of the municipalities making an effort in this area. The city is located in Southern Brazil, where it is known as the ecological capital of the country (Del Rio, 1992) and it gained international recognition by receiving international awards in sustainable development. One of these awards was the Global Sustainable City Award, received by the city in 2010. Curitiba was

presented this award for showing “maturity in their understanding of sustainable city development – both regarding policy and implementation.” (Globe Award, 2010). The city was also named one of the world’s Smartest Cities by Forbes in 2009 for its green initiatives, economic progress, upward mobility, and livability (Forbes, 2009).

Curitiba is the capital of the state of Paraná and, according to the Brazilian Institute of Geography and Statistics, the metropolitan region of the city has approximately 3.26 million people (Instituto Brasileiro de Geografia e Estatística, 2008), making it the eighth largest city in Brazil. The United Nations’ Human Development Index rates Curitiba’s level of development as “very high” and lists the city as the tenth best city to live in the country according to level of development, the index is measured by indicators in economics, health care, and education (PNUD, 2010).

The city is known nationally and internationally for being green and sustainable, investing in efficient and clean public transportation, focusing on residents’ quality of life as well as creative long-term solutions to common large city problems. The measures taken by the city government have served as inspiration for several other large urban centres around the world, such as Los Angeles, Paris, Seoul, and Vancouver (A convenient truth: Urban solutions from Curitiba, 2014).

1.2 Curitiba’s social media engagement

Curitiba is also known for having an active and engaging social media activity, especially their Facebook fanpage. The city uses their social media platform to communicate with residents through humor, references to popular culture, video games, and memes. Their communications department is able to convey important messages with a light and playful tone. Unlike many

other municipalities who use a traditional and formal language, Curitiba's innovative approach has been successful with the general public and has generated many positive reactions.

The city's strategy has shown positive results in levels of engagement. The table below shows a comparison between the number of followers per inhabitant of large cities in Brazil, including Curitiba:

Table 1 - List of Brazilian capitals by followers/inhabitant

City	Followers/inhabitant
Curitiba	0.453
Belo Horizonte	0.089
Salvador	0.084
Rio de Janeiro	0.079
Sao Paulo	0.029
Fortaleza	0.087
Manaus	0.130

The table above compares Curitiba to six large Brazilian capitals and shows that Curitiba reaches a significantly higher volume of people on Facebook than other capitals in the country. I believe this is mostly because of the way they engage with residents. The page is very responsive and often responds to users directly; they also make use of humor and a casual tone that has set the

municipality apart from others. While other official municipalities fanpages could be perceived as distant and formal, Curitiba stands out for being approachable, responsive and fun.

When engaging with Curitiba's fanpage as a resident of the city, I began to notice that several of the other residents responded well to posts that brought up the city's culture and history. These posts were met with general approval, high engagement (in the form of reactions and comments), and often shared by users to their own personal Facebook page. Moreover, the discussion in the comment section was indicative of a high level of pride associated with being from Curitiba. Users seemed to be happy in sharing their perspective of the city's history and culture. This observation led me to reflect on my own "Curitibano" (a person from Curitiba) identity and my sense of belonging to the city.

1.3 Goal of the Study

I had initially guided this study with the idea that strict municipal legislation influenced people's creativity to overcome urban planning challenges and, therefore, resulted on a community centered around sustainability. I discovered, however, that several other municipalities have stricter environmental regulations and even provide a more comprehensive waste management systems than Curitiba without enjoying the same reputation. These cities were not known for being sustainable nor had received any awards or mentions for their efforts. This made me rethink my strategy and shift my focus to what other factors could potentially contribute to Curitiba's perceived success in sustainable development.

My observation of users' interaction with the city on social media and an in-depth study of the city's efforts to construct the image of a Green City made me realize some particularities regarding the sustainability discourse on social media. My observation made me decide to look

at Social Identity Theory as a factor that influenced people's perception of their own identity and the identity of their city. I related this thought to my impressions of people's interactions on social media and delved deeper into the subject of how people's identities can affect their behaviours.

My initial observation indicated that users on social media reacted very strongly and positively to the "Curitibano" identity presented to them by the city's Facebook fanpage; residents showed positive reactions to the distinctiveness of their identity being portrayed on social media. I also observed that the city's activity online was carefully constructed to highlight its uniqueness and to foster an online public forum where users could interact with the city and with each other. According to the literature review, the perspective that social media could play an important part on the city's identity was a novel one.

It is important to analyze not only the discourse constructed by the city but how this discourse is being received by users - both residents and non-residents. As evidenced by Table 1 displayed earlier, the city has a large support as far as number of followers and reaches a broad audience online, it is important to know how the city engages with that audience and in which ways users respond to it.

The literature review on Curitiba's efforts in becoming a sustainable city is extensive. Many researchers have documented the city's actions in transforming its identity; there are no studies, however, that address the efforts Curitiba makes to maintain this discourse. My observation indicates that the social media strategy could potentially offer interesting insights of how this process currently takes place. These insights come from the unusual communication strategies Curitiba uses to engage with residents and their high number of followers in their Facebook

fanpage; the analysis of their communication strategy could reveal innovative ways municipalities can engage with residents and contribute to the current research regarding social media engagement between users and their municipalities as well as how the message about sustainability is delivered through municipalities' online discourse.

This study, therefore, answers the question of *how does Curitiba use social media to maintain their identity of a sustainable city?* This question highlights the role the city plays in identity management and how residents respond to the actions initiated by the city online in that regard.

Facebook is the medium in which Curitiba's identity management will be analysed in this study; this choice was made based on my initial observation of interactions between the city and users. I noticed that the city's way of using popular culture, movie and videogame references, and informal language with residents was unique and well received. The city was also the first to use this strategy and there could be a connection between their style of communication and their ability to foster a community around sustainability.

1.4 Structure

Literature Review - This study starts with a comprehensive literature review of the theories used: Social Identity Theory (SIT), Self-Categorization Theory (one of SIT's sub-categories) and Place Identity. These theories have been used to analyze people's behaviours and desired behaviours towards sustainability with varying results. Also, I will base my ideas regarding governmental use of social media on the current literature in the area. In addition, the literature review will offer an analysis of the history and culture of Curitiba, its uniqueness, and how the city fits in the larger fabric of Brazilian society.

Methodology and Data Analysis - This research is framed as a Case Study, a Multimodal Discourse Analysis (MDA) is conducted to study the different meanings of the city's social media engagement with residents. This analysis is conducted for thirty days on Curitiba's Facebook activity. The MDA is conducted on the posts generated by the city as well as on comments and interactions in those posts. Once the MDA is done, I look at reoccurring themes to make sense out of Curitiba's social media strategy as well as residents' response.

Discussion of Results and Conclusion - Once the data has been analyzed and themes have been inferred from the data, I address the research question and contextualize the themes based on the literature review to answer the research question proposed. In answering the research question, I summarize the findings, establish practical and theoretical implications, and state limitations.

Chapter 2: Literature Review

2.1 Social Identity Theory

History and Definition of Social Identity Theory

The study of Social Identity as a theory stems from the research of Henri Tajfel and John Turner, who studied the effects of intergroup behaviour, belonging, and sense of identity (Tajfel, 1982). Their most famous experiment involved dividing young boys into two groups: those who liked the art works of Klee and the ones who preferred Kandinsky (Turner, Brown, and Tajfel, 1979). Once the boys had stated their preferred artist, they were individually asked to distribute financial rewards amongst their own group members and those who preferred the other artist. Each choice for reward had two components: one amount for an anonymous member of their own group and an amount for a member of the other group. Both components needed to be selected together.

Their findings specified three possible behaviours from the boys: Fairness, Maximum in-group profit, and Maximum joint profit. The first two behaviours were the most recurrent and most relevant ones to the theory. “Fairness” would require the boys to choose the same amount of reward for both groups and “Maximum In-group Profit” is the behaviour in which the boys choose to allocate rewards in a way to maximize the difference between the groups in favour of their own. The latter behaviour was the most common (Tajfel, 1982).

Tajfel argued that once the boys were divided in their groups, they would, in theory, not have any reason to favour their own group since the experiment was not based in competition. In fact, the “Maximum in-group profit” strategy cuts part of the total rewards the boys could potentially

earn for their entire group. The boys, however, would rather receive less money all together to ensure their group controlled the most resources.

Tajfel and his co-author Turner explained that once the groups were established, members of a group tended to underestimate differences between individuals of the same group while overestimating differences between themselves and members of the other group (Tajfel and Turner, 1979); they would also overestimate in-group similarities and underestimate them with members of the out-group. It is this idea that encouraged Turner to expand the theory to include the notion of Self-Categorization (Turner, Hogg, Oakes, Reicher and Wetherell, 1987).

Self-categorization Theory

Self-categorization theory holds that when people perceive themselves to be part of a certain group, they will conform to opinions and positions they believe are held by other group members to align themselves with the beliefs of the group. Turner and Reynolds (2011) identified that the process of categorization happens in four steps: individuals define themselves as members of the group; they analyze what are the rules, values, and expected behaviours of that group; they internalize those behaviours, norms, and values; and lastly, they normalize those behaviours, norms and values.

Turner (2011) explains that people look for differences and similarities between each other based on stimuli. These stimuli provide grounds for comparison and vary according to the membership being emphasized (Hogg et al, 1990). For example, a random group of individuals might divide themselves between meat-eaters and vegetarians if the stimulus is a conversation about eating habits; the same group might organize themselves differently between liberals and conservatives if the stimulus changes to political views. This means that a membership to a certain group and

its configuration is contingent on the nature of the stimulus at hand; and these stimuli will, then, categorize the nature and values of each group. In referring to these stimuli, “when a category becomes salient, people come to see themselves and other category members less as individuals and more as interchangeable exemplars of the group prototype.” (Hornsey, 2008, p. 208). This means that once the in-group is created, members tend to see each other as an extension of the identity held by the group; individuals assume the behaviour of other in-group members to reflect the norms and values of the group. It also means that, at times, the process of establishing in-group norms and attainment of in-group membership could also potentially lead to perception of in-group homogeneity and stereotyping of group members (Brown, 2000).

Hogg et al (1990) also explains that the consensus of the groups’ ideas (in-group norm) can oscillate from one extreme to the other when an intergroup comparison happens; the author exemplifies that the same group of vegetarians would behave differently when compared to extreme vegans or meat-eaters, the in-group behaviour would tend to be more strict vegetarian when compared to the former and more relaxed when compared to the latter.

The process of overestimating in-group similarities and out-group differences is a central pillar of Self-Categorization Theory; it requires individuals to analyze social groups and select which group they want to be part of. The selection process is based on which group the individual perceives will enhance outcomes of social belonging for the self (Stets and Burke, 2000). Once a group is selected and membership is acquired, the accentuation of internal characteristics based on group beliefs and values takes place. “This accentuation occurs for all the attitudes, beliefs and values, affective reactions, behavioral norms, styles of speech, and other properties that are believed to be correlated with the relevant intergroup categorization.” (Stets and Burke, 2000, p. 225). One of the motivators of the differentiation process is a potential increase in self-esteem,

intergroup differentiation helps group members feel better about themselves through their in-group membership (Brown, 2000).

Since the early works of Tajfel and Turner, Social Identity Theory has been used in many different contexts such as media and entertainment preferences (Trepte, 2006), leadership (Hogg and Reid, 2001), cultural inter-region comparisons (Yuki, 2003. Lantz and Loeb, 1996) and nostalgia induced consumer behaviour (Sierra and McQuitty, 2007). The theory has become common when analyzing groups and intergroup behaviour in social sciences and some of its critics say that this is one of its weaknesses: “(Social Identity) theory has become so broad and powerful that it ceases to be falsifiable, as virtually any experimental outcome can be interpreted within its overarching framework” (Hogg and Williams cited in Hornsey, 2008, p. 217).

2.2 Place Identity

Definition of Place Identity

While Social Identity Theory offers a great theoretical background to this research and is very useful in providing explanations to some of the phenomena observed in the data collection and analysis, it is not sufficient in supporting all aspects of this study and the research question proposed. Studies that used Social Identity Theory to explain sustainable behaviors were few and were not useful in offering a theoretical background to this specific research.

To bridge the gap and properly address the sustainability aspect of this study, I have included Place Identity Theory in this literature review. Social Identity Theory has been well documented, has a clear foundation and is used intentionally in the literature; Place Identity's use, however, is more muddled and confusing. Throughout the theory building process of this research I have

seen the term “Place Identity” being used without proper explanation or a clear definition across many disciplines. “Place (identity) is clearly an important concept in environmental psychology, but its theoretical formulation has been varied and problematic.” (Uzzell, Pol, and Badenas, 2002, p. 28).

Proshansky, Fabian and Kaminoff (1983) have, in fact, dedicated an entire paper to analyzing what Place Identity actually means. The authors have identified that Place Identity derives from Self Theory but has found notable contributors in the field of humanistic geography. The authors do give a proper definition of the term: a “sub-structure of the self-identity of the person consisting of, broadly conceived, cognitions about the physical world in which the individual lives.” (Proshansky, Fabian and Kaminoff, 1983, p. 59). But it is clear that different researchers can take on different interpretations of what Place Identity means, and the authors argue that “it is best thought of as a potpourri of memories, conceptions, interpretations, ideas, and related feelings about specific physical settings as well as types of settings” (Proshansky, Fabian and Kaminoff, 1983, p. 60).

As the paragraphs above stated, the definitions and uses of Place Identity can vary, I will contextualize the use of the term and the studies presented in a way to better understand what the authors intend to present. Most of the studies were reached by researching sustainable engagement related to place and belonging, and they represent findings regarding how and why people engage in sustainable behaviors.

Analyzing Place Identity is especially hard because similar concepts exist with different names. Municipal Identity has been defined by Bühlmann (2012) as “an individual’s attachment to his or her municipality of residence and his or her social integration into the municipal environment”.

Bühlmann (2012, p. 150) conducted a multi-level analysis of municipalities in Switzerland to study determinants of municipal identity. The author measured how several variables impact residents' sense of belonging to their own municipality and found strong relationships between Municipal Identity and several variables. Some of the variables that showed to correlate positively for high sense of Municipal Identity are: less commuting time, openness of the political system, low unemployment rate, and more cultural diversity; the latter is of special importance for this study as will be discussed in the following section. The author also observed a strong dependency of context; "to explain individual municipal identity, one should not only look at individual factors, but also at contextual ones. Men are not hermits, but they do live in social contexts that differ in terms of cultural, political, or economic circumstances." (Bühlmann, 2012, p. 169).

Making sense of the different definitions and uses of Place Identity and similar concepts – such as Municipal Identity – was complicated at times as different studies used the term according to their own definition. I have decided to henceforth use term "Place Identity" for clarity but acknowledging the contributions of studies that used different nomenclature. I will define Place Identity for this specific study as a resident's sense of attachment to place, including tangible aspects such as the geographical space it occupies and intangible resources such as culture; the specific variables and determinants of what "attachment" means will be explored in further chapters.

Place Identity and Sustainable Behaviours

Forsyth et al (2015) identified that people tend to be more willing to engage in sustainable behaviours (such as maintaining water resources and protecting watershed) when they have a

higher localized sense of community; in other words, if being part of a local community is important and central to a person's identity, they are more willing to engage in sustainable behaviours that will benefit their community as a whole.

Forsyth and his co-authors (2015) reached that conclusion by conducting two studies: the first asked residents to self-report their level of place identity and then measured their pro-environmental behaviour intentions; the second study also measured the residents' level of pro-environmental behaviour, but it primed some of the residents' sense of community in advance by stating questions that reminded residents of their community. The studies showed that, when reminded of their communities prior to answering questions, people with a high sense of place identity were more likely to report engaging in sustainable behaviours (Forsyth et al, 2015).

The study also noted that "a sense of community is not just a correlate of environmentally responsible behaviours (EBR) but a cause of it" (Forsyth et al, 2015, p. 14). The authors suggest that a strong sense of belonging and identity to a place may have a positive impact on the environment if residents will take more responsibility for taking good care of it.

There are studies, however, that found contrasting results. Uzzell, Pol, & Badenas (2002) compared two neighbourhoods of the same British town and concluded that a strong place identity does not necessarily lead to more sustainable behaviours. In this case, the authors gave emphasis to the reasons why place of residence becomes a salient part of people's idea of belonging and self-consciousness. I especially like this study because the authors embedded sustainability in their definition of place identity and operationalized it by attributing variables that could be measured empirically.

The authors used a questionnaire to survey 180 residents from the two neighbourhoods and used a structural equation model to assess the relationship between four variables: place identification (different than Place Identity) which was measured by asking respondents to name their neighbourhood or draw it in a map; social cohesion, measured by participation in civic associations, perception of homogeneity of residents and time spent in leisure activities in the neighbourhood; residential satisfaction, measured by asking open ended questions about the environmental status of their neighbourhood; and attitudes/behaviour in respect of environmental sustainability, measured by a set of indicators regarding environmental knowledge and residents' sense of responsibility and involvement towards the environment. These four variables, together, were used to measure how Place Identity related to Sustainability.

Out of the two neighbourhoods analyzed, the one with the lower level of Place Identity had, in fact, a higher level of environmental attitudes and more support of sustainable behaviours; the other - more affluent - neighbourhood had higher levels of social cohesion and resident satisfaction but a lower interest in engaging in sustainable behaviours, these two variables had, in fact, a negative relationship. Their conclusion is that "sustainability cannot be considered in isolation from either its social or its environmental- or place-related context" (Uzzell et al., 2002, p. 13).

The negative relationship between Place Identity and pro-environmental behaviors mentioned above was later explained by Pol and Castrechini (2002) as the result of a high level of individuality. According to the authors, this high level of individuality could create an identity centered on issues other than sustainability; in this case, Pol and Castrechini (2002) suggested the NIMBY (Not In My Backyard) effect, which defends specific interests of a community with high levels of individualism, could have affected the way residents feel about their community.

Uzzell et al's (2002) indication that socioeconomic levels influence the direction of the relationship between Place Identity and sustainable behaviours was also addressed by Pol et al (2002). The authors note that in low socioeconomic levels, sustainability is linked to "the collective search for urban improvements" and social identity is based on "common history of participation, association, and social action seeking improvements in the neighbourhood" (2002, p. 152).

It is appropriate to point out that individualism and higher socioeconomic levels are factors that differentiate Curitiba from the rest of Brazil, the city is in a region that is more individualistic and more affluent than the rest of the country (Hofstede et al, 2010). The studies cited above bring attention to the fact that the relationship between these two variables could play an important part in this study.

According to Uzzell et al (2002) and Pol et al (2002) they should correlate negatively with engagement in sustainable behaviours. At first this seems to contradict the general notion that Curitiba is a sustainable place; being a more affluent and individualistic city when compared to others in the country, it seems counterintuitive that Curitiba accomplished what they have in the field of sustainable development.

Also, Uzzell et al (2002) and Forsyth et al (2015) deal with probing different aspects of people's identities. The authors use different cues and reminders to bring out different aspects of the identities of the people that participated in their studies; however, this is just a piece of the larger picture, it leaves out other important variables that could have an impact on residents' place identity such as the role government plays in connecting with residents.

Uzzell et al's (2002) indication of negative relationship between social cohesion and engagement in sustainable behaviour, for example, assessed social cohesion by measuring the following variables: participation in civic associations, actions to promote social and urban improvement, perceived homogeneity, extent and quality of social relationships, and leisure time spent in the neighbourhood (Uzzell et al 2002). The author measured these variables to determine values that residents thought characterized their community; in a way, the researchers asked residents to give their community a "personality", including the perception they thought outsiders had of their community. One community, for example, was described as quiet and peaceful, while the other was friendly but not quiet. They were also able to assess people's relationship with their direct environment, their ownership of their surroundings and feeling of freedom to make it their own.

While these variables mostly rely on residents themselves and their feelings towards their community, they could also be initiated or facilitated by governmental programs. Measuring these variables only based on residents' perception leaves out potential efforts being led by governments to encourage social cohesion. A municipality, for example, could take the initiative to invest in parks and events to celebrate local culture. Measuring only residents' perceptions potentially neglects the role governments take towards building programs that increase social cohesion and, therefore, does not provide a full perspective of factors responsible for Place Identity.

Another important aspect of Social Identity Theory is that people tend to look for cues from in-group members in order to identify desired behaviours. Cialdini (2003) noted that, when given the chance to litter, people looked for cues both from the environment and from others around them; people were more likely to litter when looking at other people doing the same in an

already polluted environment and less likely to do so in a clean environment where people did not engage in polluting behaviours. In the case of Curitiba, it may be that the local pressure of living in a green city plays a part in dissuading people from engaging in behaviours that are damaging to the environment and internalize values rooted in sustainability.

The Tragedy of the Commons (Hardin, 2009) is often used to illustrate the idea that conserving the environment is a trade-off with individual gains. The tale goes that upon realizing they could benefit from grazing extra cattle for themselves, farmers depleted the environment for their personal gain and ended up ruining the land for all. This idea motivated Van Vugt (2009) to research potential strategies of intervention for successful resource management. Though field data and experimental games literature, Van Vugt (2009) was able to identify four distinct core components in a successful resource management strategy: information, identity, institution, and incentives. Institutions play a significant role in managing the resources and building trust with the population; incentives need to accurately reflect the wants and needs of different stakeholders to effectively encourage their participation in sustainable resource consumption.

The author argues that people need access to reliable information about resources to have the correct incentive to conserve; and this incentive needs to come in the correct form to be effective. Having information reduces uncertainty and encourages individuals to engage in sustainable practices; and information provided in a simple manner could work more effectively when people are already contemplating a change in behaviour (Van Vugt, 2009).

Regarding the identity component, Van Vugt (2001) noted that people's willingness to help their community in times of need varies according to their sense of belonging to the group. According to the author, people tended to regulate their consumption of natural resources to ensure the

whole group would benefit from these resources for longer. The author concluded this by conducting both a field study and an experimentation study. In the field study, 278 questionnaires regarding resource crisis were answered by residents of Hampshire county, United Kingdom; the experimentation study consisted of a computer-generated simulation regarding resource crisis and was answered by students from Southampton University as part of their course requirement. The behaviour observed in this study strongly resembles the one observed by Tajfel and Turner in their original experiment to develop Social Identity Theory (Tajfel & Turner, 1979); both groups observed in these studies chose to forgo individual gains in hopes of benefiting the group they belonged to.

In some instances, the reason individuals abdicate personal gains in favor of group gains was shown to be positively affected by their perception of belonging within the group. De Cremer and Van Vugt (1999) conducted experiments where university students were divided in two categories (prosocial or proself) according to their Social Value Orientation - tendency to be more or less prone to allocate resources to themselves or to invest it in a common good (De Cremer and Van Vugt, 1999). These two groups were then subjected to different types of group identity probing and the results show that “social identification positively affected group members' contributions to a common good. Both studies revealed evidence that social identification more strongly influenced the decisions of individuals with proself orientations than prosocial orientations” (De Cremer and Van Vugt, 1999, p. 886). This could mean that even people who are more individualistic could contribute to a common good in a context where social identification is high; the right incentive and identity probe might, in fact, generate more significant results in this group of individuals.

Even though researchers have tried to analyze the relationship between place identity and sustainability, the literature review shows diverging results; it is important, then, for research in this area to take context into account. (Pol et al, 2002). This paper builds on that notion by analyzing the case of Curitiba and building on the discussion by adding a perspective of Social Identity and sustainability in a Green City, as well as the identity management process that it goes through.

2.3 The Construction of Cultural Identity in Southern Brazil

As is the case with many large countries, Brazil has several regional differences. A 2010 study applied Hofstede's famous national cultural measurement methodology to a within country comparison of different Brazilian regions. The authors found that the Southern region (where Curitiba is located) differs from the rest of the country and defined it as "European and prosperous, is more hierarchical, less formal, more individualist, and more masculine (achievement-oriented)" (Hofstede, Hilal, Malvezzi, Tanure & Vinken, 2010, p. 347).

The difference in behaviour and culture could be explained by contrasting waves of immigration to different areas of the country. Seyferth (1986) identified that while other regions of Brazil – especially Sao Paulo – received immigrants primarily for work, the Southern region of Brazil, including Curitiba, received settler immigrants. According to the author, these immigrants arrived primarily from Germany, Italy, and Poland at the end of World War II to escape political turmoil and persecution in the 20th century. Though they came from different countries, once in Southern Brazil, their individual ethnic identities shifted to a different type of *ethos*; they were collectively seen as pioneers, the ones who came to "transform the jungles of the South of Brazil into islands of civilization" (Seyferth, 1986, p. 66).

European immigration to the region, however, started prior to the World Wars. By the 1870s, the city already had a significant population of French, Swiss, Polish, Italians, Ukrainians, and Germans; the latter group started the industrialization process of the city and brought over the concept of voluntary associations, which continues to be part of the city's business culture today (Portal da Prefeitura de Curitiba, 2018). Seyferth (2000) also points out that the emigration of Europeans from their former land, in some cases, precedes the unification of their own countries of origin. Italy and Germany became unified nations in the 1870s while Poland only became an independent country after the first World War; this means that their sense of identity is vastly different from their original homeland and rest of Brazil, and it relies on their shared historical process of immigration and colonization (Seyferth, 2000).

The Japanese immigration to Brazil also took place around the same time. The first boat with Japanese immigrants arrived in the coast of Sao Paulo in 1908 as a result of several factors such as the overpopulation, increase of life expectancy, unemployment and bankruptcy in Japan, as well as increasing barriers to Japanese immigration to the United States (Woortmann, 1995). Curitiba, however, only saw a major influx of people of Japanese descent in the 1960s due to the desire of Japanese immigrants to provide access to post-secondary education to their first-generation children; to do so, families had to move from rural communities into larger urban centres, such as Curitiba (Kojima, 2010). The author also notes that while there are differences between generations of Japanese-Brazilians – with younger generations integrating completely - their unique culture is still pronounced, especially amongst those that grow up in the countryside and moved to Curitiba later in life in pursuit of higher education and better jobs.

The late 1800s also marked the arrival of Arab Muslims to the city. After the Brazilian Emperor Dom Pedro II's visits to the Middle East between 1871 and 1879, the migration of Arab Muslims

to the country intensified; these immigrants came mostly from the region that today are Syria and Lebanon (Nasser Filho, 2006). According to Nasser Filho (2006), different motivations led Arabs to move from their original land to Brazil, more recently – from the 1970s to the 2000s – armed conflicts in the Middle East are the main cause of the influx, that saw its peak after World War II. The author conducted semi-structured interviews with older Arab Muslim immigrants in Curitiba to get a perspective of their collective memory as well as the perspective of younger members of their family to assess how that memory was transferred over. Based on the interviews, the author concluded that “In a multiethnic environment like Curitiba, a city marked by the plurality of phenotypes, beliefs, languages, skin colours, constructs of a diversity resulted from the wide range of immigrant peoples that populated it; sharing a space means also sharing values, cultural symbols, identities. The sharing of concepts and meanings point to the possibility of permanent transformation of the individual, the person that walks in the space, the migrant; the person that interacts with others has, in this otherness, a dimension of the numerous possibilities of living their own particular identity” (Nasser Filho, 2006, p 78).

The study highlighted that this transformation led Arab immigrants, now in a more liberal and secular State, to negotiate their identity and decide what values to keep and which to let go. The older generation stated that they were very well received and faced no difficulties in adapting to life in a new country; however, issues of access to Halal foods, different ideas on women’s rights, and internal conflicts between distinct Muslim groups led to conflicts between the Arab community and other residents as well as within the community itself. This resulted in a strong Arab identity in Curitiba, one that is distinct from any other; their culture is a unique blend of Southern Brazilian habits and Arab Muslim customs and traditions: “Muslims in Curitiba,

immigrants or descendants, are not Muslims like they would have been in Hermel, Khirbat Roha, Rammalah, Cairo. They are different Muslims.” (Nasser Filho, 2006, p 139).

Contrast between Curitiba’s cultural identity and the rest of Brazil

The settlement and development pattern described in the previous section contrasts greatly from the one experienced in the rest of the country, where immigration and cultural heritage dates back to the 16th century. It has its beginnings in Colonial Brazil, where the Portuguese brought over slaves from Africa and established a slave-based, plantation style economy that permeated the culture and racial relations in the country.

Much of Brazilian history and culture had already been developed when European, Arab and Japanese immigrants arrived in Southern Brazil. De Oliveira (2007) wrote a paper unpacking the racial relations and perspectives from the point of view of Parana (the state where Curitiba is located), the focus was on the construction of the discourse of a “Different Brazil” – something other than what was happening north of Parana.

The author identifies the main differences between Parana’s history and the rest of the country (in this case, the non-Southern states): Parana was a late settlement area and its demographic expansion also happened quite late when compared to other states. The region did not follow the traditional Portuguese style of colonization and its social and economic ramifications, such as large estates, monoculture, problematic racial relations between white Portuguese and African slaves. Parana’s economy also had capitalist principles, unlike the rest of the country; the state’s economy was focused on paid labour, it was structured in a technological and competitive manner. Lastly, the strong presence of European immigration shaped the state, from its culture to its social relations (de Oliveira, 2007).

In the 1950s, scholars, artists, and historians from the state constructed a narrative that Parana was a “Different Brazil” (de Oliveira, 2007). The historical differences listed above, the low population of African-Brazilians, the cultural legacy of the immigrants (in food, daily habits, festivals, language, etc.) and the cold weather were used as support for this narrative.

The “Different Brazil” narrative leaves out the influence of Brazilians of African descent. Every Brazilian state has invariably dealt with slavery, Parana - and consequently Curitiba - to a lesser extent (Ianni, 1962), but the city’s official identity discourse has historically failed to include Africans. This exclusion was noticed by De Oliveira (2007) who identified that from 1993 to 1997 none of the parks built celebrating immigrants and ethnic groups were built for people of African ancestry; when questioned about it, the city’s unofficial response was that the black population had not been important to the city’s history (de Oliveira, 2007).

Throughout Brazilian history, there have been attempts to minimize these differences. Ribeiro (2015) explains in his book, “The Brazilian People - The formation and Meaning of Brazil”, that during World War II, Brazil and many of the immigrant groups that had arrived in Curitiba (Italians, German, and Japanese), found themselves in opposite sides of the war. The Brazilian government officially sided with the Allies, thus declaring war on the Axis countries; and while Brazil did not play a major role during World War II, the symbolism of this act was enough to culturally alienate Japanese, German, and Italian Brazilians from the rest of the country. The country where they were currently living had declared war on the countries where their heritage had come from.

Ribeiro (2015) described this as a traumatic experience for all involved; a central nationalizing action left even more trauma and aggravated the internal conflict (Ribeiro, 2015). Asian and

European immigrants (and descendants) were forced into the Brazilian army, the isolation of their local communities was broken, and Portuguese began being taught in schools instead of their own language (Ribeiro, 2015).

These measures were taken by the Brazilian government as a way of forced assimilation. Immigrant colonies that used to be from a single country of origin were forced to mix with others of different languages to enforce the use Portuguese, the national language, to communicate. In 1938 the Brazilian government outlawed immigrant languages from being spoken in fear of the establishment of a German State in Southern Brazil (Altenhofen, 2004). A resident described this period of time: “It was terrifying. No one had the courage to speak in public for fear of going to jail. In this nationalizing thing they wanted us all to speak Portuguese all of a sudden. They even arrested old people who wanted nothing to do with politics just because they were speaking German in public” (Altenhofen, 2004, p. 83).

This was naturally more common in rural areas than in larger centres such as Curitiba; the city, however, is a major urban centre in the region and the populational growth it has experience was largely due to the migration of people from rural areas to the city. These rural residents were greatly affected by the measures described above.

My objective in this section was to clarify the differences between Southern Brazil, focusing on Curitiba, to the rest of the country; I believe this will be helpful not only to contextualize my research but also to explain the complexities of the Brazilian identity to those readers who are not familiar with the country’s history and culture. Summarizing centuries of complex historical and cultural differences is a hard task, but a necessary one for this research.

While the Brazilian identity was being formed throughout the country, residents from the Southern region – especially rural areas - had some degree of freedom to organize their own life according to their traditions (Ribeiro, 2015). Contact with the rest of the country was complicated by language and cultural barriers that were not conquered until much later in Brazil's history, when the country's national identity was far along in its process. The region was forcibly thrust into the national scenario without care for proper assimilation and development of a collective identity in a national context.

Curitiba today

The research presented above indicates that the different people groups that moved to Curitiba have developed a different identity, one that is different from their home land and from the rest of Brazil. This unique identity of residents was also highlighted by Hitoshi Nakamura, Curitiba's former Secretary of the Environment. Mr. Nakamura, in the documentary "A convenient truth: Urban solutions from Curitiba, Brazil", stated that he participated in the launch of one of the first recycling campaigns of the city called "Trash That Is Not Trash". The campaign had the objective of encouraging residents to sort their own garbage at home and dispose it separately and correctly. Nakamura faced negative feedback at first, critics would say "Do you think Brazilians will sort garbage? If it was in Japan, maybe, but not here" (A Convenient Truth, 014), to which his response was: "We believed that Curitiba is different because our people will help us develop our city together, united" (A Convenient Truth, 2014). Note he did not say "Brazilians are different", but "Curitiba is different". His speech essentially acknowledges that Brazilians might be resistant to such change in behaviour; Curitiba, however, is different, it is not like the rest of Brazil.

Curitiba's success in marketing itself as a green city relies on innovative decisions made over its history. The city's sustainability history began with the first true urban plan in 1943, the Agache Plan, followed by the 1966 Master Plan (Macedo, 2013). The main legacy from this era was the IPPUC (Instituto de Pesquisa e Planejamento Urbano de Curitiba) – or Institute of Research and Urban Planning of Curitiba. IPPUC can be described as a breeding ground and synergy hub for the city (Macedo, 2013). IPPUC still exists to this day and is a vital component of the city's environmental planning.

The research organization served as both the breeding ground for ideas and a source of mayors; the city elected mayors from the IPPUC team sequentially which resulted in a cohesive succession in the municipal administration, each mayor adhered and built on the plans of the previous administration (de Oliveira, 2001).

Rabinovitch (1992) noted that the city took advantage of its programs to address problems creatively. The author believes that improvements in the quality of life of the city was due to the “innovative public transport system, the preservation of the city's cultural heritage, the large expansion in the number of parks and green areas, the integration of social programmes and environmental education” (Rabinovitch, 1992, p. 62). Rabinovich suggests that these last two aspects were key in getting the city to where they are today, arguing that Curitiba's government was able to successfully see social programs and environmental education as solutions rather than problems.

The position of Curitiba as being a sustainable city and a model for development is part merit and part convenience. De Oliveira (2001) points out that the discourse of environmental sustainability was developed in the 1990s, long after the construction of city parks in the 1970s.

The environmental discourse gained strength as the city received international prizes for its initiatives and environmental programs; this was followed by more investment in programs, most notably the widely successful “Cambio Verde” (Green Exchange), where residents exchanged recyclable materials for bus tokens. De Oliveira (2001) concludes that Curitiba’s “discourse does not lead to practice, but the opposite” (de Oliveira, 2002, p. 103); this means the author believes that, in a way, the city took advantage of sustainable practices already happening to build a discourse around it; the city was not necessarily inspired by the global sustainable development agenda, but by creating their own sustainable history based on actions taken in the city’s past. This process has not only embedded Curitiba’s history in sustainability but also positioned the city well in terms of pursuing further accolades.

2.4 Literature on Social Media

Social Media engagement today

Since the inception of Social Media, the different platforms have gained popularity and acted as an important tool for many offline movements such as the Arab Spring (Howard et al, 2011. Khondker, 2011) and the arrest of a former Guatemalan president (Harlow, 2012).

The latter study, in fact, focused on how Social Media activity can result in change in the real world. The authors analyzed the online repercussion of the assassination of Guatemalan lawyer Rodrigo Rosenberg and the impact it had on citizens of the country. Guatemalan Facebook articulated a protest online that resulted in real world changes; the “research shows how the internet was used to create offline activism” (Harlow, 2012, p. 15).

This vision directly contrasts the way certain individuals may think of Social Media engagement. Lack of offline mobilization behind a Social Media campaign could be seen as a form of Slacktivism. The term can be defined as a “feel-good” way to seem engaged in a subject without any actions, usually by “liking” posts on Social Media (Knibbs, 2013). The infamous Kony 2012 campaign could be used as an example of Slacktivism. The Invisible Children foundation launched a viral video to bring attention to the atrocities being committed by Joseph Kony in Uganda and had a call to action to initiate an offline effort to stop him. However, “its lack of clarity and organizational learning both before and during the worldwide discussion of their Kony 2012 video lead them to experience an organizational crisis while trying to raise awareness of a humanitarian crises.” (Madden et al, 2016, p. 46).

Most of the literature on the role of Social Media on people’s political engagement, however, points to a change in the lives of younger users. This change happened because “traditional news media are becoming less important in the political lives of young adults” (Kushin and Yamamoto, 2010, p. 622). Kushin and Yamamoto (2010) argue that the new interactive and media-rich websites have facilitated the growth of online political behavior. When analyzing the American political environment of 2008, the authors identified that the internet serves as a democratizing medium where users are engaged with politics in a more intimate and interpersonal way.

How municipal engagement is currently being measured

There is much research done on specific elements of e-government, such as social media and transparency (Bertolt et al, 2010. Bertolt et al, 2012. Bonson et al, 2012. Welch et al, 2005), management of natural disasters (Sutton et al, 2008. Gao et al, 2011. Kim et al 2012), and the impact of public movements and protests (Tufekci, 2012. Lim, 2012). These studies, however, do not focus on social media regular activities, nor its functions as a communication tool between municipalities and residents.

Bonson et al (2012) developed a model that measures social media engagement and Welch et al (2005) developed models that measures prediction of experience, satisfaction and trust. These two quantitative models contribute to the discussion of engagement in governmental social media, but they leave out important aspects of social media engagement that could be better explained by qualitative methods. They use measures such as number of likes and comments to interpret social media engagement, these methods are valid when analyzing growth or comparing social media activities of different municipalities; they are, however, not effective in interpreting how engagement happens. These measures leave out details about the communication between municipalities and residents, and it fails to analyze which aspects of social media are more or less successful in creating a community online.

Bonson et al (2012) describes that qualitative methods are great ways to describe what is happening with social media engagement, and more is needed to understand the reasons, motivations, and intricacies of online interactions. An analysis of the methods used by Bonson et al (2012) and Welch et al (2005) indicates that the numbers they measure lack context to explain

potential failures and successes of distinct types of social media content produced by municipalities.

Authors that focused on the impact of social media on protests and natural disasters chose to focus on actionable steps and suggestions that were directly applicable to the topics they were discussing. These studies certainly have their merit; during times of emergency, governments need to communicate with residents in a quick and effective way; they, however, do not contribute to the discussion of how governments should interact with citizens and harness the power of social media on their regular activities.

These studies describe extraordinary circumstances, they point out strategies for governments to use when something unusual happens. The assumption is that governments already know how to manage their social media content on a daily basis. Given the diverse ways in which communication happens online and the varying levels of engagement observed by different municipalities (Bonson et al, 2012), that is not the case.

Local culture could also play a part in how citizens engage with their local governments online. There are studies that look at specific places such as Japan (Kaigo et al, 2012), Israel (Lev-On et al, 2015) and Western Europe (Bonson et al, 2014). The notion of culture, however, is not deeply explored. These studies usually measure the level engagement of the local population with the official social media page of their municipality; their focus is whether there is engagement and not on how this engagement happens.

For example, Kaigo et al (2012) analyzed and compared the social media activity of different municipalities in the prefecture of Ibaraki in Japan, the prefecture started a “cyber-plaza” where residents could gather online, interact with their municipality and with each other. The authors

measure this interaction by doing a quantitative analysis of the number of likes and comments each post from the different municipalities got. Based on that analysis the authors were able to draw conclusions on what kind of posts were more popular, their methodology is similar to the one used by Bonson et al (2014). They also conducted a morphological analysis of the content of the posts to derive common concepts related to the social capital being built online, this analysis happened through a computer software that found frequently-used words and grouped them together to form categories; the authors, then, discussed these categories briefly.

This type of analysis is a good start to the discussion of how online content is built; the prefecture of Ibaraki appears to be making a conscious effort to build a community online and it would have been interesting to understand how this process is being done collectively by government and residents. The study, however, dedicates only a small section to the content analysis and just succinctly describes each post category, it also offers no context or examples of the different categories mentioned or how they might be more or less efficient in fostering and encouraging community.

Strategies of communication and engagement

While studies show that local governments are making an effort to connect and interact with residents, there is little indication of how that interaction should take place (Mergel, 2013. Mossberger, Wu, & Crawford, 2013). Like the studies of Kaigo et al (2012) and Bonson et al (2014), they only state whether there is engagement based on the number of likes and comments each post has, there is no discussion about the content of these posts.

There are no clear standard practices or strategies that should be taken to maximize the possibility of positive interactions, as Mergel (2013. Page 331) summarized “So far there is

limited reflection to strategically plan out engagement activities beyond pushing government information out through social media channels.”

Mergel (2010) developed a typology that categorizes social media posts as “push”, “pull”, or “network”. Push strategy happens when governments send information to the general population, pull happens when governments solicit information and feedback from residents, and network creates interaction between citizens themselves and the government.

While valid, this typology does not encompass all the possible communication strategies that could exist between governments and residents. Curitiba’s social media presence is a notable example of going beyond networking and possibly overlapping individual and social identities by creating interactive posts where users can reflect about their own identities, the city’s history, and their culture. In addition, the city counts on residents for a significant part of their content through the submission pictures and videos by users.

The city has created a unique strategy that not only informs its residents about several events and services provided but also creates community and entertains residents. More detailed analysis needs to take place in order to develop a typology that is comprehensive and reflects the social media activity of municipalities today. None of the literature researched presented a framework that would encompass the type of engagement used by Curitiba; while there is research about effectiveness of social media use by government agencies, it does not adequately describe the city’s unusual approach.

Research on Curitiba’s social media strategy

Luz (2014) wrote a case study on Curitiba's Facebook activity, they collected posts for 5 days and conducted a content analysis to assess the city's communication with users online. They concluded that the political and economical changes experienced by the city in the 1990s contributed to a similar change in the symbolic level. This change resulted in the strengthening of the emotional bond between residents and the city itself.

The city's Facebook fanpage is an example of that. Users engage in a positive way in the city's page, respond well to the city's humor, replicate their tone in their messages, and share the city's content to their own personal page by tagging friends (Luz, 2014). More importantly, the author argues that the users' posts are supported by an emotional attachment constructed a priori based on their experiences in the virtual, online sphere and in real experience of the city (Luz, 2014). This means that residents could see the city's fanpage as an extension of their real-world citizenship and, thus, express online their feelings of being "Curitibano" with other residents and users from other cities.

Identity Management

Just as Curitiba is known as the Green Capital of Brazil, other municipalities have their own distinction and accolades. Known as "Track Town" in the 1970s (Howard-Grenville, Metzger and Meyer, 2013), the city of Eugene, Oregon, saw a decline in its reputation. The community, then, was able to successfully resurrect their former identity. Howard-Grenville et al (2013) analyzed the process and concluded that community leaders play a major role in constructing experiences for community members, once members authenticate these experiences they become symbols of the city.

The study of Howard-Grenville et al (2017) is important in identifying aspects that play a significant role in the management of municipal identity management; unfortunately, “little is known about how community identities arise and evolve.” (Howard-Grenville, Metzger and Meyer, 2013, p. 115). The literature regarding Place Identity discussed above offer a complimentary analysis to Identity Management in the sense that it analyzes how residents understand and interpret their belonging; it does not, however, take the point of view of municipal management in consideration.

Cities are unique because of their inherent multimodality and roles played by institutional actors, this multimodality comes from the city’s geographical location, distinct architecture, and rhetorical depictions in culture. In addition, municipal management is in charge of regulating and building the identity of a city, these actors play a direct role in building the identity of a place (Jones and Svejenova, 2017). Curitiba has taken an active role in constructing a narrative that retroactively embeds its history in sustainability (De Oliveira, 2011) and currently has the most popular social media activity of all Brazilian cities as can be seen in Table 1.

2.5 Literature Conclusion

The literature review of Social Identity Theory and Place Identity have great significance to this research in many ways. At first, the stimulus that creates the in-group and out-group in this study might be clear: residency in Curitiba. It would be simple to assume that if someone is from Curitiba or live in the city, they are part of the in-group; otherwise you are part of the outgroup. It is not that simple, however. As stated by Luz (2014), the online platform created by the city explores an emotional attachment that users have with the city and, thus, represents a different

sense of belonging that encompasses more than simply residing in Curitiba. I will go in more detail regarding the creation of the in-group in Chapter 5.

Also, by creating content in their fanpage online, the city can expand the idea of what it means to be part of the in-group. The city's social media team could, for example, build upon some of the characteristics of being "Curitibano" and demonstrate what are the desired behaviours and shared values expected from members of the in-group. Luz (2014) already explored the relationship residents' have with Curitiba's fanpage; for this study, I am interested in analysing how sustainability is explored as one of the core values for the city on its social media discourse and how, or if, the identity management process happens around it.

Uzzell, Pol, & Badenas (2002) suggested that the relationship between place identity and sustainable behaviours can be positive or negative; a strong place identity, therefore, does not always lead to sustainable behaviours. Context plays a significant role in this relationship and researchers need to be aware of this fact when analysing the relationship. This paper is, therefore, important in adding more context to the discussion and making explicit how Social Identity, Place Identity and sustainable behaviour engagement interact. This relationship is especially interesting in the case of Curitiba since the city's recent history has been embedded in a discourse of sustainability.

The literature review explained above reveals that, while current studies have been able to identify some relationships between Place Identity and sustainable behaviour, governmental activity still has not been analyzed as a variable. The current literature is also not clear about what actions a municipal government can take to encourage its residents to engage in sustainable behaviours. In addition, engagement between residents and governments on social media is being

measured by the amount of likes and comments each post has; while this indicates engagement level as far as numbers, it does not explain how the relationship between government and residents is created, the type of language or images used, and the different types of resident engagement based on these variables. .

Communication strategies used by municipalities also have changed; Mergel's (2010) push, pull, and networking typology no longer encompasses all possibilities of social media communication between local government and residents. Mergel's "networking" tactic encourages active participation of all stakeholders and leaves it up to the public to pass the content forward and take part in sharing information with each other (Mergel, 2013). At first, Curitiba's social media strategy seems to fall in this category; a closer analysis, however, reveals that the city goes beyond encouraging participation of its residents; the city requests active participation from residents and partially relies on them for content.

This study looks at the gaps discussed above and addresses them by analyzing the way the government of Curitiba interacts with its residents via their official Facebook page; it does so by answering the question: *how does Curitiba use social media to maintain their identity of a sustainable city?* The question assumes that the city of Curitiba is already seen as a sustainable place to live, the literature review and an initial analysis of Facebook interaction between city and residents (which will be discussed below) indicated that this assumption is correct. The question addresses gaps in Social Identity Theory and Place Identity by looking at how the city probes the residents' sense of belonging online as well as their response to it. Also, the question is concerned with novel ways of communication between a municipality and residents online, which addresses the gaps in current literature regarding communication strategies in public management.

Moreover, through a case study, the question furthers the conversation about how municipalities can understand and harness social media; the literature review has indicated that this phenomenon needs more attention, current studies are not using appropriate qualitative methods to analyse engagement between municipalities and residents. Without an understanding of how and why engagement happens it is not possible to fully comprehend how municipalities can manage their online presence and take full advantage of the benefits it could potentially generate.

My personal experience in Curitiba and its Facebook fanpage indicates that there is a strong cultural element playing a part in the city's environmental efforts; I have lived in other municipalities that had stricter environmental regulations without the same social consciousness and identity around sustainability. My initial assumption was that rigorous environmental regulations had a strong relationship with residents' perceptions of their own place identity regarding sustainability; further research indicated that people's understanding about their own identity could have more of an impact in this case than legislation. This realization sparked my curiosity to analyze sustainability through the lenses of identity.

Chapter 3: Methodology

3.1 Purpose

The review explained above identified gaps in the current literature as far as Place Identity, Social Identity Theory, and governmental communication online. These gaps overlap in one area that this study explores: The relationship between municipalities and peoples' sense of identity to their direct place of residence. Curitiba's environmental discourse has been well documented and the city's reputation as the ecological capital of the country offers an interesting scenario for this study. Based on the literature review and my experience in the city, this study addresses the question: *how does Curitiba use social media to maintain their identity of a sustainable city?*

3.2 Research Design

The choice to do a case study makes sense for a few reasons. Firstly, due to the importance of context; Pol (2002) identified that context is crucial when analyzing the relationship between social identity and sustainable behaviours, Bühlmann (2012) also concluded that context is important when analysing residents' sense of Municipal Identity. An in-depth case analysis not only takes context in consideration, but it also allows for the researcher to highlight it as a relevant part of the study (Yin, 2003. Bexter and Jack, 2008. Edwards, 1998).

A case study is helpful when a phenomenon has already been analyzed but some details are missing (Edwards, 1998). This study fills in some of those details by exploring gaps such as the lack discourse analysis on social media and sustainability, outdated governmental communication strategies and typologies, and to further understand context regarding the relationship between Place Identity and sustainable engagement behaviour. Furthermore, the

origin of the discourse of Curitiba as a sustainable city have been analyzed previously, but the maintenance of that discourse has not.

Eisenhardt (1989) also highlights the importance of such case studies in developing theories for social science research. The author focuses on the role case studies have in generating novel theory and lays out a comprehensive process for doing so. During the early stages of this study and data collection, the iteration process described by Eisenhardt (1989), in fact, proved to be of great value when readdressing the research question and defining constructs.

Studies on government social media activity focus on measuring whether there is engagement between governments and residents online, the lack of qualitative data about this engagement prevents researchers from understanding that relationship; Eisenhardt (1989) explains that “the qualitative data are useful for understanding the rationale or theory underlining relationships revealed in the quantitative data”.

Moreover, Yin (2003) affirms that a case study is necessary when researchers wish to describe a scenario in depth. Also, the author believes that a case study should be used when “you deliberately wanted to cover contextual conditions” (Yin, 2003, p. 13), which is the case of this study. The city of Curitiba has created a unique scenario in which a city utilizes social media to communicate with users in way that is different than other municipalities as well as create content in the form of entertainment and potential identity building, thus a case study is the most appropriate way to conduct this analysis.

3.3 Case Selection and overview

Now that the context has been explained in detail, I would like to explore the actors in this scenario:

The *city of Curitiba* takes an active role in this case. As the creator and curator of content, the city not only provides a channel for users to interact but also mediates and is directly responsible for encouraging interaction. The city's communications department sets the tone and guides the conversations that happen on their fanpage. In addition, they give the city a personality through discourse – in writing, oral, or pictures; they are responsible for bringing the city to life online.

Users are the ones who interact with the city online regardless of their place of residency. Many of the comments I observed were from residents of the city, by birth or by moving. These “Curitibanos” represent people who have an attachment to the city and to its online presence through their fanpage. They experience the city in their everyday lives as well as online.

My initial analysis indicated that there is also a significant number of users who are not from Curitiba but follow the fanpage because they admire the city. These users wish to visit the city in the future or are simply curious to know what life in Curitiba is like. In the analysis section I will make the distinction between “*residents*”, “*non-residents*” and “*users*” (both residents and non-residents) when appropriate.

Curitiba's distinction as the Green Capital of Brazil and the prizes it has won have given the city a reputation for being sustainable and having residents that care about the environment, the literature review detailed how this process happened and the effort it required from the city's management team to embed the notion of sustainability into the city's history. This, combined with my own personal experience living in the city, has given me the notion that instead of identity building, this study should focus on identity management. The work has already been

done in the sense of attaching sustainability to Curitiba's identity, the question now becomes how the city manages that identity.

I have chosen to look at social media as an important medium in which the process of identity maintenance taken place because of its fast communication style, wide approach, chance for content going viral, and most importantly the success experienced by Curitiba with their fanpage.

The city set itself apart from others with their novel style of social media content and I find it important to analyze its impact. Also, through social media I would be able to not only analyze the official discourse of the city but also personal accounts from users, this facilitates my understanding and analysis of the data.

3.4 Data Collection

Timeframe

I collected data from the city's Facebook activity for 30 days, I saved each post and comment from residents. I chose the period of 30 days because my initial analysis of the posts indicated that the city runs campaigns that generally last a month, this time period could be seen as a "cycle" for the city's communication team.

I reached this conclusion by observing the way the city takes advantage of campaigns, environmental actions, or celebrations to contextualize their posts and engage with users. City management uses current events and special dates of the month to contextualize posts and better engage with residents. During the month analyzed, for example, the city had an environmental campaign called "Jardins de Mel" (Honey Gardens, in English), and took advantage of the National Tree Day to talk about the lifecycle and importance of trees. The city also raised

awareness of breast cancer during the month – the Pink October Campaign. The month-long analysis, therefore, offers the perspective of a “full cycle” of the city’s Facebook activity and stands as one cohesive unit of analysis.

In addition, both Bonson et al (2014) and Kaigo et al (2012) worked with the time period of one month; Bonson et al (2014) did a monthly quantitative analysis two times and Kaigo et al (2012) five times. Both studies did this analysis more than once because they needed to compare the changes in engagement of one Facebook page through time, this is not the case in my study. The previous studies relied on quantitative methods for their research while I use a qualitative analysis. Luz (2014) conducted a discourse analysis of the city’s Facebook activity and they used a time-frame of 5 days. I believe the timeframe of one month ensures my analysis is comparable to others in the current body of literature.

Refining search parameters

I realized I had a significantly large amount of data, analyzing the entirety of posts would be exhausting and ineffective in addressing key aspects of the study. Conducting a case analysis is beneficial in this instance. A case analysis format gives the researcher the ability to focus on specific and relevant aspects of a phenomenon (Yin, 2003. Bexter and Jack, 2008. Edwards, 1998), narrowing down the types of posts allows me to focus only on data that pertains to this research and are useful in answering the research question.

The city generates posts that range from daily routine, general announcements, weather, and traffic conditions. I observed that some posts about the city’s daily activities like healthcare (hour of operations of hospitals and locations of mobile clinics) and traffic (road closures and

special public transit lines for events) did not offer relevant information about the research question. They served the function of informing residents regarding city programs, but

3.5 Sorting posts

The sorting process happened through the month of October, I looked at all the posts generated by the city and analyzed whether its content identified specific characteristics of Curitiba. I asked myself questions such as “Is there something in this post that is unique to Curitiba?”, “Could this post be from any other city?”, “Is this post related to environmental issues in the city?”. As the data was being refined, I could observe the emergence of two types of posts, the exact categories as well as their scope were defined through iteration and the refining of the research question. This process allowed me to reflect on what information was needed as far as validity and resulted in two categories: **Place Identity** and **Sustainability** posts.

Place Identity posts remind citizens of traits and characteristics that are unique to the city: their history, culture, landmarks, and climate. These posts differentiate the city from others in the country and the world, they remind people that Curitiba is a place with a distinct identity. This comes in many forms, such as the city’s famous landmarks, culture and heritage, weather, and geographical features. Here is an example of a Place Identity post where the city delivers a message by highlighting a landmark and using words specific to the local variety of speech:



Figure 1 – Season of Japonas

(The season of “Japonas” is here. Cold has its beauty, but don’t forget that many suffer with the arrival of Winter. If you find someone in the street that is in danger call 156. Besides that, you can also donate jackets and blankets to our campaign Donate Heat www.doecalor.com.br)

In this post, the city uses three fictional characters related to winter and cold weather to announce that the season is changing, they use a play on the expression “Winter is Coming” made famous by the *Game of Thrones* book and television series; they substitute the term “winter” by “japona” (a word for “winter jacket” characteristic of the “Curitibano” vernacular and virtually unknown to anyone that is not from the city) and the characters are standing in the front of the Botanical Garden, one of the most well-known symbols of the city. They make use of elements unique to the city to bring awareness of the low temperatures and to encourage residents to donate used coats (or “japonas”) to those in need; winter is also something that differentiates Curitiba from the rest of the major Brazilian cities that enjoy tropical or mildly temperate climates. In selecting Identity Building posts, I made sure to look for indicators of uniqueness, meaning elements (in speech, text, visuals, etc.) that would characterize the post as being distinguishably from Curitiba

Sustainability posts had a clear message about conservation, they explicitly informed residents about measures taken by the city to educate residents and detailed actions taken to protect the environment; they also celebrated the city's natural flora and fauna with pictures and interviews with specialists. The following example shows the general structure of a Sustainability Post



Figure 2 – Toxic Home Waste

(Do you know how to throw away toxic waste at home? It's easy! 😊 Just take it to the Bus station! The collecting trucks are available at the station from 7:30 am to 3:00 pm. Check out the closets Station to your home in our calendar) The image that follows exemplifies the toxic waste the city was referring to and shows batteries, tonners, expired medication, bug spray, paint, animal and vegetal oils, and fluorescent lamps.

A resident asks about the appropriate way to discard electronics to which the city responds “Hi, (name of resident)! This type of material could be deposited to the recyclable material station – Trash that is not trash program, in up to two units. There is also a special program of electronic

waste with IPUCC and Sescap (Labour Union of Accounting and businesses in Assistance, Expertise, Information and Research of the State of Parana). The next session will be July 10th in Barigui Park”. Posts in this category show a direct connection to issues of sustainability, recycling, and the environment.

3.6 Analysis of posts

Once filtered, I had 44 posts to analyze: 7 Sustainability posts and 37 Identity Building posts. I had the comments listed in the “top comments” option to display the more popular comments first to ensure that I captured the most important conversations and interactions.

Besides the function (Identity Building or Sustainability), data could also be divided according to their origin: whether they came from the city or from users. The visual description and an example of the possible origin of posts can be found below:

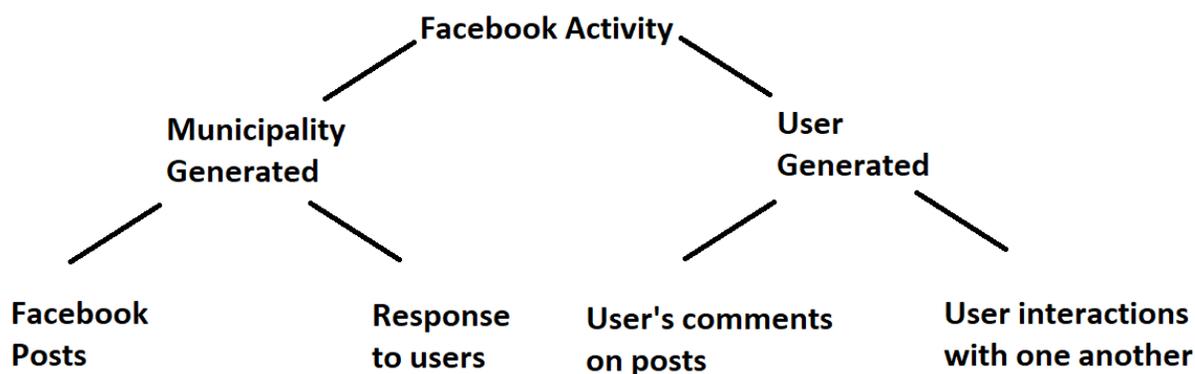


Figure 3 – Facebook Activity Analysis

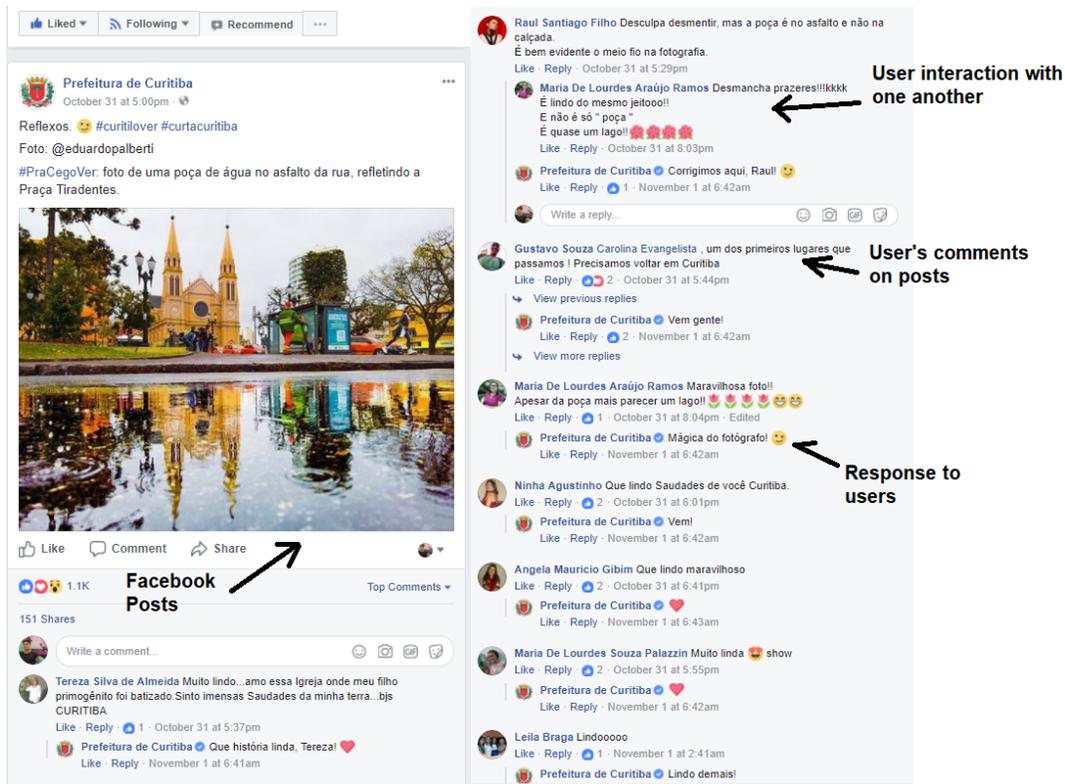


Figure 4 - Reflexes

(Reflexes 🤔 #curitilover #enjoycuritiba

Photo: @eduardopalberti

#PraCegoVer: picture of a puddle on the city's street, reflecting Tiradentes square)

The example above shows that the city and residents use more than words to communicate. The data gathering stage of this research revealed that these interactions can happen via text, images, gifs, videos, and emoticons. As Eisenhardt stated (1989), once the data gathering starts it is important to pay close attention to patterns that stand out and adapt the research to better analyse the data.

This has been an integral aspect of this research and the process of coding. Analyzing the posts brought to my attention aspects that I had not considered at first, such as the role of history and cultural heritage of the city's residents. Gathering the data allowed me to see patterns emerging, group certain types of posts into categories, and then try to look for common threads in the

discourse of both the city and residents. This process will be explained in more detail in the Results section. The variety in communication mentioned above requires an inclusive methodology that will encompass all the modes in the posts, for that reason I have chosen to use a Multimodal Discourse Analysis.

3.7 Multimodal Discourse Analysis

Multimodal Discourse Analysis (MDA) is a “paradigm in discourse studies which extends the study of language per se to the study of language in combination with other resources, such as images, scientific symbolism, gesture, action, music and sound” (O’Halloran, 2011, p. 120). MDA assumes that “making meaning” happens not only in language (Kress, 2011) but in other ways of communication. Moreover, MDA pushes research to understand that meaning happens outside of what is being explicitly said, it is not attached to the idea that linguistics take priority over other more implicit types of meaning, it acknowledges the multiplicity of semiotic resources in social scenarios where people search for meaning and interpretation (Kress, 2011).

This type of analysis is important because Curitiba uses images, texts, gifs and videos in their communication, and these different modalities deliver a message to residents. Multimodality is important for this research; however, a methodology that provides the researcher with the ability to delve deeper into the meaning of the message beyond the linguistic sign. This type of methodology allows me to look beyond what is written and look for meaning in various aspects of communication.

Another important aspect of MDA is the emphasis it has on context; “multimodal framework for discourse analysis that moves toward an explication of the multiplicity of (inter)actions that a social actor engages in simultaneously, allowing for the analysis of large parts of what has been

termed context in traditional discourse analysis” (LeVine and Scollon, 2004, p.101). This means that the numerous ways in which people communicate (text, images, body language of actors in videos, and sounds) interact together and with the context to convey a message. Each video, gif, image - or any other type of communication - will be analysed as a piece of their entire communication strategy.

According to Kress (2009), MDA goes beyond analyzing the different modes by which a message is delivered, multimodal discourse analysis should be concerned with the “why” of the message as well as the “how” or “what”. This is important because, as the literature review indicated, studies such as Kaigo et al (2012) and Bonson et al (2014) used quantitative methods that were not able to correctly qualify and indicate the relationship between municipality and residents online. Cities and their residents build their identity together, working to mutually make sense of who they are and how they fit in their environment;

MDA will, therefore, help elucidate the relationship being built by the city of Curitiba’s fanpage and users who follow it by allowing for contextualization as well as the ability to analyse the meaning and intent behind the words and images being expressed by both parties.

In this case study, the city and users communicated through video (in both image, collage and footage with sounds and voiceover), image, emoticons, and words. These modalities denote different types of communication that range in depth and function. Videos, for example, offer narration and visual cues that deliver a message differently than a written post, which usually are more direct to the point and are crafted in a way to be clear and avoid ambiguity. The combination of these different modes will aid in gaining a holistic knowledge of the page’s communication as their entire discourse is analyzed as a cohesive strategy. The MDA allows me

to infer meaning not only from written words but from the way the videos are composed, from speech, from non-verbal types of communications such as memes and emoticons. Analyzing only written words fails to take into account the online discourse of Curitiba in its entirety, MDA is, therefore, very beneficial in this case analysis.

Chapter 4: Analysis

In this chapter I will initiate the analysis process and go over the codes and general discourse observed. I will divide this chapter in 2: **General Analysis** and **Code Analysis**. The General Analysis will serve as an overview of the common themes of the posts and will contextualize the online environment in which the identity maintenance process takes place. Once that is done, the Code Analysis will go more in-depth to explore the intricacies and details of how the process happens.

The General Analysis will follow the pattern described in the previous section of “User Generated” and “Municipality Generated” content. It is important to differentiate between the actors in this study. Both the municipality and users contribute to the communication, but they play different roles.

In addition, both categories will be explored according to the two types of posts: **Identity Building** and **Sustainability**. This distinction also is important given the different intentions behind each post; as described earlier, they serve different purposes and require separate analysis. In the following sections I will describe the general context and functions of these posts.

4.1 General Analysis

Municipality Generated Posts

- *Identity Building*

Most of the content in this category consists of photos and videos of the city’s landmarks such as parks, iconic structures, and cultural buildings. The photos posted are taken by residents and

submitted under the hashtag “#curitilover” (a neologism made from the junction of the words “Curitiba” and “lover” – a lover of the city of Curitiba); the city, then, credits the photographer and talks about the symbol itself. An example can be found below:



Figure 5 – Trees in Japan Square

*(“How gorgeous, folks! <3 #curitilover #enjoycuritiba
Picture: @curitibanosolitario*

<3

<3

<3

#fortheblindtosee: Picture showing several trees on Japan Square, one being a Cherry Tree. In the background, some buildings are contrasting with the green leaves from the trees and the pink Cherry Tree. In the lower right corner there’s a woman with a pink shirt sitting down”)

This process ensures that residents engage with the city online in two ways: firstly, it encourages residents to look for spots they consider photo-worthy and that are representative of the city; in choosing to participate, residents actively search for beauty around them and engage with their

immediate surroundings on their commute to work, school, or simply during a walk. This allows residents to reflect on their own place in the city and to consciously search interesting places in their environment. Secondly, it provides users with a platform to discuss these pictures online with the city and each other; users comment on the beauty of the place and share memories they have of these spots. By engaging online, users share part of their identity in pointing out their relationship with the place being featured.

This dual type of engagement potentially increases residents' Place Identity by giving them the opportunity to build their identity themselves with their direct physical environment and by sharing about these places with other residents and the city itself online. The process of identity building can easily be seen in the comment section.

The example below shows an interaction between the city and a resident. The city's responses are not generic, they interact with many users through individualized and specific comments, often responding in the same tone of the user and addressing them by name. One resident commented "Curitiba, my smiley city, gorgeous!" to which the city responds "Thanks, (name of person)".



Figure 6 – Resident Comment 1

In the interaction above, the resident informally addresses the city highlighting its beauty. The resident also addresses the city on Facebook directly, as though the page represents the city as an entity. The resident knows that a city employee is at the computer managing their social media

presence, still they are addressed as the city of Curitiba itself. The city addresses the resident back by name and uses a kissing emoji in the reply; the informality initiated by the resident was followed by the city.

By encouraging people to look for beauty around them the city also shares the responsibility of content creation with residents and, in fact, it shifts from the role of creator to one of curator. I argue that this shift to content curation is a key factor in identity building because it places part of the responsibility of the content onto the residents, thus contributing to Place Identification.

Another important aspect and indicator of the sense of identity is the way the resident addressed the city: “my smiley city”. She used the possessive pronoun “my” to refer to Curitiba, indicating that there is a sense of ownership and belonging, this is indicative of someone who has a strong sense of identity to the place they live. The comment demonstrates that they reflected on the photo and on their own sense of belonging to the city before writing on the page.

The city also shows that it is inclusive by using the hashtag “#pracegover” (the literal meaning would be “for the blind to see”, a play on a Brazilian linguistic expression), this hashtag works with programs used by people who are visually impaired to describe images through audio, the uploader uses the hashtag and immediately includes a verbal description of the picture with details about colour, composition, shapes and other elements that ensure users with reduced vision can understand the post better. Through these image posts the city appears inclusive, interactive, and presents itself as space where residents build content and participate in celebration of the city.

Part of the identity building process also focuses on the cultural heritage of the city. The city has several landmarks that celebrate the culture, history and religion of the people who immigrated

there, some of these landmarks also celebrate the indigenous people who were there before. During the month analyzed, the city posted a video with 10 of these cultural landmarks and used the hashtag #enjoycuritiba. The cultural element was also present in other posts throughout the month, such as the celebration of the Jewish New Year and the celebration of China for its 24th biennale; even though these two groups of people are not regarded as “founding” groups of Curitiba (Europeans, Japanese, and Middle Eastern) they are still being celebrated, this builds on the idea of Curitiba being a diverse and welcoming place to all.

In its Identity Building posts, the city portrays the image of a place that is open and welcoming to all. In the video regarding the 10 cultural landmarks of the city, Curitiba included the “Zumbi dos Palmares” Square; this is a square named after a famous African-Brazilian warrior who is one of the main faces of black resistance in the country. Even though the city, historically speaking, does not have a significant African-Brazilian influence, the showcase of this square amongst ones from Europeans, Japanese and Middle Eastern people – especially under the category of “forming people” – gives the city a more “Brazilian” status. This means that by celebrating and showcasing African-Brazilian culture, the city is including itself in the cultural fabric of the rest of the country.

The “Different Brazil” mentioned in the literature review (de Oliveira, 2007) relied heavily on the distinctiveness of the state (and of Curitiba as the capital) to set it apart from the rest of the country and explain the economical success of the region. The current discourse from the city still relies on its distinctiveness, but instead of alienating other regions of the country, it appears to have the intent of inserting the city as a welcoming and respectful place into the paradigm of the Brazilian identity.

- *Sustainability*

Posts about the environment fall into two categories: *Educational* and *Advertising*. *Educational* posts inform residents about current environmental plans for the city, they educate users by providing data about the environment and prompt for desired behaviours; *Advertising* posts inform residents of measures currently taken by municipal management to make the city more sustainable, they do not offer opportunities for interaction as much as Education posts do and fall under Mergel's push strategy where information is presented to the audience with the sole intention of informing (Mergel, 2010). *Educational* posts are more engaging and encourage discussion and participation from members of the community while *Advertising* posts mainly just present information that does not require participation from users.

Educational and *Advertising* posts were done in video and picture formats. Both mediums incorporated symbols of the city, including the distinct accent of the residents for the video voiceovers and the use of natural elements unique to the city like types of trees and animals. The people featured in the videos were often explicitly identified as being from the city; when that was not the case, enough information was given through the actor's accent and the videos' background. The content was designed in a way that, even out of context, a resident would be able to identify it being from Curitiba due to enough elements unique to the city.

Here is an example of an educational post:

Prefeitura de Curitiba
September 21 at 11:03am · 🌐

🌱 Sabia que uma Araucária demora 20 anos para começar a produzir pinhão? 🤔
Cuidado, amor e paciência são essenciais para o cultivo da espécie. ❤️



68K Views

👍 Like 💬 Comment ➦ Share

👍❤️😱 2.1K Top Comments ▾

498 Shares

Write a comment... 🗨️ 📷 GIF 🗑️

Figure 7 – Araucaria life cycle

“Did you know that an Araucaria takes 20 years to start producing pine nuts? Care, love, and patience are essential in cultivating the species”.

The post is followed by a video where a resident from the city, identified by name and speaking with the city’s accent, explains how to plant an Araucaria tree. In the process of explaining how to plant the tree and its lifecycle, the narrator is sharing with the general population how to take

proper care of a symbol of the city; an Araucaria tree is in the city flag as well as in the middle of the city's coat of arms used as their Facebook profile picture. In addition to being about sustainability, the video serves as a way to educate the general population about a symbol of the city that is easily recognizable to its residents.

User Generated

- ***Identity Building***

Residents had a very high involvement in Identity Building posts; these types of posts had mostly positive responses and engagement from users. Residents showed pride not only for the city but for their local communities and different neighbourhoods within Curitiba. This was evident in one particular post: For World Tourism day (September 27), the city posted a video showing the main attractions of Curitiba through aerial views and panoramic shots with background music; the video had an overwhelmingly positive response. Residents tagged people from other cities and even other countries to show Curitiba to the rest of Brazil and the world. It was interesting to notice that residents of other Brazilian municipalities were also commenting on the video wishing their city and their local government was more similar to Curitiba:

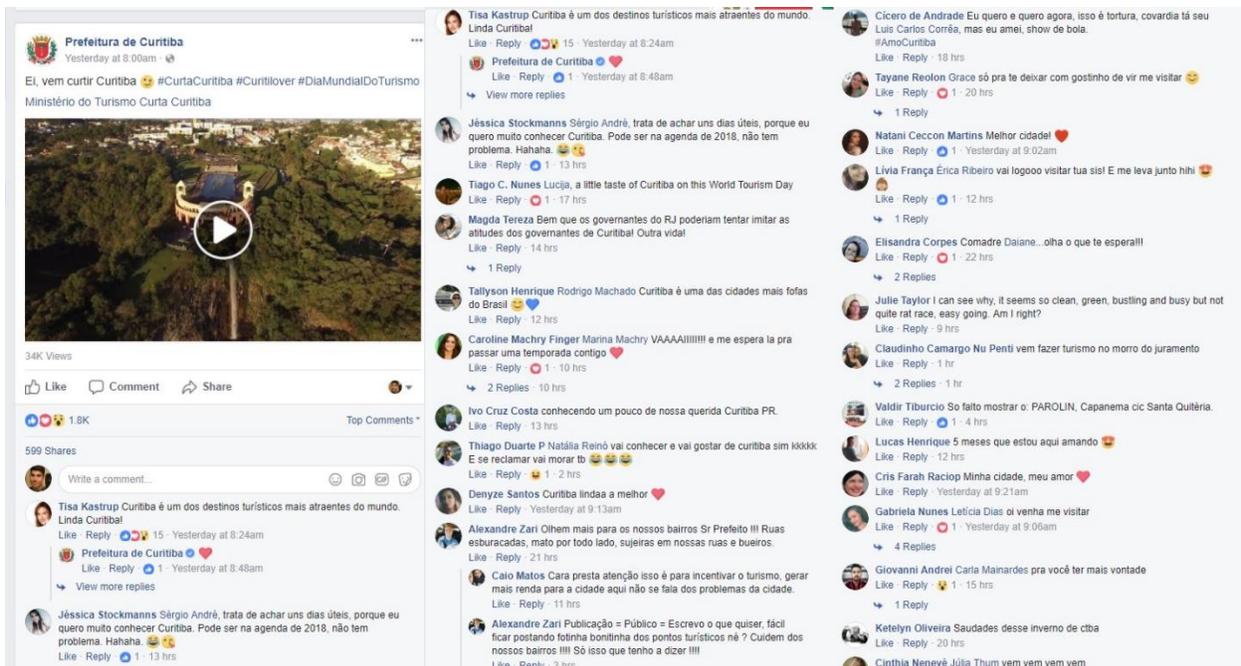


Figure 8 – Come Enjoy Curitiba

“Hey, come enjoy Curitiba 🤔 #enjoyCuritiba #Curtilover #WorldTourismDay”

The video had only one negative comment from a local resident; that resident, however, was reprimanded by another user who pointed out that this video was a reason for celebration, not criticism.

I will get into more details in the Codes session of this study, however, it is important to make it explicit that this specific thread of comments indicates a high level of Place Identity and social cohesion; it is possible to identify a high sense of pride combined with a low tolerance for deviation from the group behaviour; in this case, that Curitiba is a beautiful city and that residents should be proud of it.

Sustainability posts

During the month analysed, the city had 2 campaigns regarding the environment, one celebratory (celebrating National Tree Day) and one educational (“Jardins de Mel” – Honey Gardens in English). For the National Tree Day celebration, the city posted pictures of trees that were taken by residents and submitted under the hashtag #Curitilover; the campaign also had one video celebrating the Araucaria. The “Jardins de Mel” posts were in celebration of the National Bee Day; the pictures and videos, however, were to promote the new city program that reintroduced honey bees into the local fauna to pollinate flowers during Spring. The city also had one post about a program being developed to clean a river with the help of young students from 18 different primary schools in the region.

The comments in these posts were mostly positive responses to the city’s posts, residents commended the city in its efforts to create a more sustainable place. These types of responses took two distinct ways: praise and comparison. Some residents focused on simply praising the city and sharing their opinion on the initiative being proposed by the post. Here is an example:

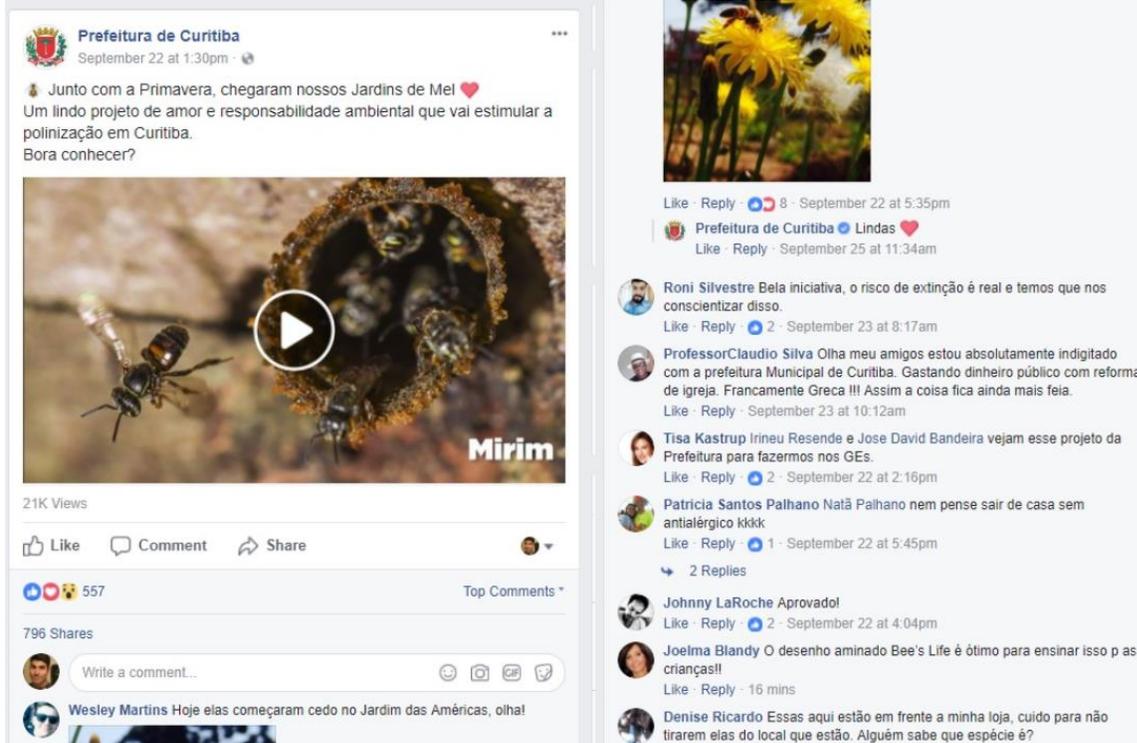


Figure 9 – Honey Gardens

“It’s Spring, our honey gardens have arrived <3 A beautiful project with love and environmental responsibility that will increase pollination in Curitiba. Let’s find out more?” The second top comment reads “Great initiative. The risk of extinction is real and we need to be conscious of that.”

Comparison responses focused not only on the topic of the post, but they also compared Curitiba to other cities in a way of framing Curitiba as most sustainable; on another video about Jardins de Mel the top comment was:

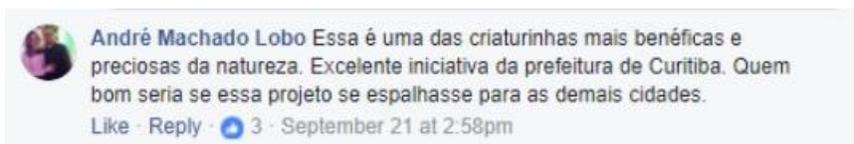


Figure 10 – Resident Comment 2

“It is one of the most beneficial and precious little creatures in nature. Congratulations to the City of Curitiba. It would be great for this program to go out to other cities.”

The following post is about a river cleaning project, the only comment was “That’s right Curitiba, let’s clean our rivers, it’s time to give a good example to our kids and to other states.”



Figure 11 – River, I want you smiling

“River, I want you smiling. Around 5 thousand students from public schools will help revitalizing rivers. The project “River, I want you smiling” will count with 16 schools from the Santa Felicidade region. Our young residents will observe the condition of the river and will develop activities from this learning experience”

These two examples show that residents wish for Curitiba to serve as a model to other cities; they not only take pride in living in a city that is sustainable, but they want it to be more sustainable than others.

There were also comments expressing criticism of the cleanliness of local lakes and parks, several of the comments showed pictures taken by residents of what they were unhappy with and

they asked for explanation regarding the problem and even offered solutions; this shows that residents have a high involvement with their community and are active in requesting a solution to problems they see.

4.2 Code Analysis

The goal of the previous section was to give an overview of Curitiba's social media activity and to contextualize the general discourse that was observed through the data analysis process. This section will go in-depth and start to derive specific codes from the discourse observed.

Coding process

When analyzing each post, I assigned codes that I could associate with what MDA revealed. I went through each individual post, video content, image, comment, and wrote down the general idea that I could infer from it. For example, the comment from figure 7 used above that reads: "It is one of the most beneficial and precious little creatures in nature. Congratulations to the City of Curitiba. It would be great for this program to go out to other cities." Was assigned the following codes

- Residents expressing pride of being from the city
- Users posting about the importance of preserving the environment
- Users differentiating Curitiba as an example to other cities

After assigning codes to all the data, I grouped them together and looked for similarities between them. This process resulted in 33 individual codes for the entire data. These codes derived directly from my initial observation and represent specific posts and behaviours. Upon further

analysis, I realized some of these codes also had similarities between themselves; while not similar enough to be grouped together, they had the same underlying themes.

This led to the creation of two types of codes: **Level 1 Codes** were observations derived directly from the posts themselves, they represented ideas taken from the posts directly and from interactions between users and the city. These codes are representative of specific and tangible posts, they can be traced back directly to the data. **Level 2 Codes** were derived from similarities between some Level 1 codes and represent an overarching theme from which I could derive meaning. In the example used above, the codes “Users posting about the importance of preserving the environment” and “Users differentiating Curitiba as an example to other cities” - both **Level 1** codes - could be grouped together under “Pride for Local Sustainability”, a **Level 2** code.

It is important to make the distinction between these two types of codes because analyzing Level 1 codes alone would be exhaustive and redundant at times. While different enough to be separate codes, they represent similar motivations behind each post; these motivations – both from the city and from users – are better represented by an overarching code that characterizes the intentions of the actors; this process facilitates the analysis and the process of answering the research question. The table below divides the codes by level, origin (municipality and user generated) as well as their function (Identity building or Sustainability)

Table 2 – Level 2 Codes

Identity Building

	Level 1 codes	Level 2 codes

City Generated	Posts celebrating landmarks and tourism attractions of the city	Celebration of uniqueness and/or cultural heritage
	Video celebrating landmarks of the people that formed the city	
	Interviews with locals highlighting unique elements of the city - parks	
	Using pop culture symbols to promote activities	
	Voice-over and language used in videos use the characteristic Curitiba accent	
	Use of the hashtag #curitilover to post	High level of engagement

	<p>pictures taken by residents</p> <p>Asking for public participation in identifying city's landmarks</p> <p>Use of emoticon and symbols to make posts and conversation with users less formal</p> <p>Use of the hashtag #pracegover to bring inclusion to posts</p>	
User Generated	<p>Users tagging each other to reminisce personal memories relating to the subject of the post</p> <p>Users tagging each other to make plans about</p>	High level of engagement

future events posted by the city	
Residents expressing concern about city management	Online forum for communication
Residents expressing pride of being from the city	Praise for the city
Non-residents expressing desire to move to or visit Curitiba	
Users celebrating the city's ethnic and cultural diversity	

Sustainability

	Level 1 codes	Level 2 codes
City Generated	Use of the hashtag #curitilover to post	

pictures taken by residents	Celebration of uniqueness and/or cultural heritage
Posts celebrating natural landmarks and symbols of the city	
Video celebrating plants of the regions and a symbol of the city	
Posts celebrating seasons changing	
Coat of arms and official symbols of the city used in videos and some pictures	
Voice-over and language used in videos use the characteristic Curitiba accent	

	Videos informing residents of sustainability actions being taken	Local Sustainability
	Use of emoticon and symbols to make posts and conversation with users less formal	High level of engagement
	Use of the hashtag #pracegover to bring inclusion to posts	
User Generated	Users posting to ask each other questions about how to plant certain types of trees	High level of engagement
	Users posting images of areas of parks that need maintenance	
	Residents expressing concern about city management	

Residents expressing pride of being from the city	Praise for the city
Non-residents expressing desire to move to or visit Curitiba	
Users celebrating the city's sustainable measures	Pride for Local sustainability
Users posting about the importance of preserving the environment	
Users differentiating Curitiba as an example to other cities	

The process of looking for themes proved beneficial in better understanding the different motivations from Curitiba and residents online. In developing Level 2 codes I was able to look at the city's social media activity as a whole, start making sense of how I could address the research question proposed and answer how the city of Curitiba maintains its identity as a sustainable city.

4.3 Interpretation of data

Revisiting Level 2 codes:

I am going to start the analysis process with an in-depth explanation of Level 2 codes; these codes describe reoccurring topics in Curitiba's social media strategy at a higher abstract level, they provide a starting point - as far as themes - to iterate back to specific posts and derive meaning from them. In the following sections I conduct an in-depth analysis of Level 2 codes to initiate the process of analysis of Curitiba's social media, I also relate these codes back to the literature review and prepare to answer the research question.

Celebration of Uniqueness and/or Cultural Heritage

The city was populated mostly by European, Japanese, and Middle Eastern immigrants during the late XIX and early XX centuries, these immigrants served the purpose of diversifying the local economy as well as contributing to the image of the region being a cultural mosaic of different ethnicities and in the process creating a "different Parana", a white and blonde Parana that romanticized the perception of the region (De Boni). I argue that this "romanticising" of the region carried through today and is still a strong element of residents' identity. This narrative was originally constructed to explain the region's prosperity when compared to the rest of the country (de Oliveira, 2007). Today, the discourse still stands albeit with different motivations; it is not used to justify the region's perceived success in the Brazilian context, but rather to celebrate its distinctiveness from the rest of the country.

The national census indicates that 49% of the country's population self-identifies as being white, that number climbs to 78.9% in Curitiba, where only 3.1% of the city's population self-identifies

as a visible ethnic minority (Instituto Brasileiro de Geografia e Estatística, 2010) I excluded self-declared Asians – mostly Japanese descendants – from the visible minority category since Japan is seen as one of the forming people of the city.

This data shows that Curitiba, when compared to the rest of the country, is a relatively homogenous city in terms of ethnic diversity. Geography also contributes to the city's distinctiveness from others in the country; at 935 metres high and separated from the ocean by a hill range, the city has a temperate climate and residents must deal with harsh winters, frost, hail and occasional snow – issues completely foreign to most Brazilians.

Curitiba stands out for being a mostly white city in a mixed-race country. The city's history has made it a place that is different from the rest of Brazil, and residents see this as a reason to be proud and celebrate their uniqueness. Residents responded favorably to mentions of their culture online and engaged with the city on social media to highlight “diversity” is a positive factor of their culture.

The following post, for example, shows a Brazilian group performing an Okinawan folk dance:

Prefeitura de Curitiba
October 12 at 11:00am · 🌐

🎌 Conheça todo o esplendor da cultura japonesa através da dança com os tambores festivos de Okinawa!
Esse vídeo lindo é do RyukyuKoku Matsuri Daiko - Filial Curitiba, filial curitibana do grupo japonês RyukyuKoku Matsuri Daiko. Há alguns meses, registramos um trechinho da gravação e agora, com o vídeo pronto, estamos ajudando na divulgação deste bellissimo espetáculo que promove a cultura em nossa cidade. ❤️
Saiba mais, aqui: goo.gl/53jD2J

10K Views

👍 Like 💬 Comment ➦ Share

👍❤️👍 478 Top Comments ▾

187 Shares

Write a comment...

Mitsue Yamashiro Que emoção e honra poder participar deste show...muita gratidão 🙏
Like · Reply · 1 · October 13 at 5:58am

Prefeitura de Curitiba ❤️
Like · Reply · October 16 at 10:32am

Ricardo Ikematu Orgulho de fazer parte
Like · Reply · 8 · October 12 at 3:13pm

Prefeitura de Curitiba 😊
Like · Reply · 1 · October 16 at 10:32am

Solange Amaral Lindooo! 🙌🙌🙌
Like · Reply · 2 · October 13 at 12:19pm

Prefeitura de Curitiba ❤️
Like · Reply · October 16 at 10:32am

RyukyuKoku Matsuri Daiko - Filial Curitiba Prefeitura de Curitiba nos vemos sábado, às 19h, no Teatro Positivo!
❤️👍🇺🇵

Like · Reply · 13 · October 12 at 12:23pm

Dayane Borges Felipe Isabel isso aqui que chamei vocês pra irem no sábado!
Like · Reply · 3 · October 13 at 7:55am

↳ 2 Replies

Ito Sandro
😊

Like · Reply · 3 · October 12 at 6:02pm

Eddie Branco Victor Wall, lembra daí? Hehe
Like · Reply · 3 · October 12 at 7:46pm

↳ 1 Reply

Osmar Linzmeyer O Greca esta querendo aumentar o IPTU novamente?
Like · Reply · October 13 at 2:35pm

↳ 1 Reply

Wal Pal 🍷
Like · Reply · October 14 at 12:30pm

Maria Lucia Duarte Lindooooo !!!
Like · Reply · October 16 at 2:06pm

Baterias Mais

Figure 12 – Okinawa Drums

“Get to know all the grandeur of the Japanese Culture through dance with the festive Okinawan drums!

This beautiful video is from RyukyuKoku Matsuri Daiko - Curitiba, the Curitiba branch of the Japanese group RyukyuKoku Matsuri Daiko. A few months ago, we captured a little snippet of their recording and now, with the project finalized, we are helping to spread the word of this beautiful show that promotes culture in our city <3”

The video was viewed over 10 thousand times and received positively. The city considers the Japanese festival as a part of the cultural scene and residents agree:



Figure 13 – Resident Comment 3

“Proud of being part of it”

The city has built parks and memorials to celebrate the history and culture of those people who have immigrated to there or have been an important part of the city’s cultural heritage; these places were showcased in a video posted by the city titled “Get to know 10 places that celebrate the history of the city’s forming people”:



Figure 14 – Curitiba’s Forming People

I would like to highlight the use of the word “forming” in the video; this word gives the idea that a select group of people – the ones featured in the video: Japanese, Polish, Ukrainian, German, Portuguese, Italian, African, Arab, Spanish, And Indigenous Brazilians – have a special importance to the city. It gives the idea that the city could not have existed without these groups of people; most of the people living in Curitiba today are descendants of these first settlers and

can identify themselves and their families as being part of the city's history. This process is the start of the in-group differentiation that happens in the city's social media today, it sets Curitiba apart from other cities in the country.

The video finishes with the text “Celebrate cultural diversity” and the logo of the city floating on the last scene; this message about inclusion expands the concept of the “forming” people, it leaves the door open for others to come by stating that cultural diversity is an aspect that should be celebrated. This is further clarified by some the comments left in the video:

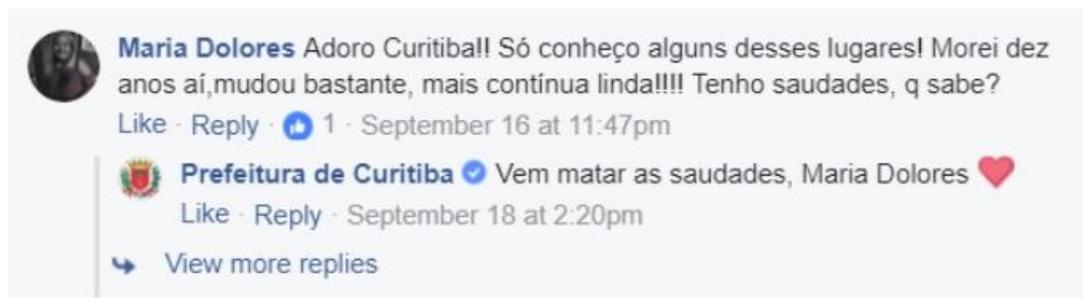


Figure 15 – Resident Comment 4

Former resident: “I love Curitiba, I only know some of those places! I lived there for 10 years and it has changed a lot but it remains beautiful! I miss it so much, you know?”.

City's response: “Come back to visit, (Resident's name)”

It is interesting to point out that the video included a mention to Brazilians of African descent.

The discourse regarding the city's identity in the past has largely neglected this people group, the construction of Parana as a “different Brazil” at times even denied the existence of slavery in the region and focused only in the narrative of the European immigrant (Moraes and Souza, 1999).

Diversity is one point that Curitiba uses to differentiate itself from other cities in the country, which is interesting since it is a city with an overwhelmingly white majority, other cities in the

country are far more ethnically diverse; that, however, does not matter since the perception of diversity is what is important in this context. My analysis proposes that the word “diversity”, used extensively by both the city and residents, denotes “distinctiveness” rather than “ethnic diversity”.

The city is distinct because, unlike most of the country, it received mostly European and Asian settler immigrants. It was only after the closing of the Atlantic slave trade in 1850 that the Brazilian government started to look at European and Asian immigration as viable forms of labour (Klein, 1995). By then, the three Southern States already had practices promoting European immigration for settlement and small-scale farming (Seyferth, 1986). This means that while the rest of the country was looking for European and Asian immigrants to replace slave labour, the area where Curitiba is located looked at these people as settlers.

Curitiba is not as ethnically diverse as other Brazilian cities; some of the different waves of immigration, however, are recent and have been well documented. This, combined with the discourse of a “Different Brazil”, has made Curitiba a unique city in Brazilian culture. In a way, the city’s ethnic homogeneity and “pioneer mentality” described by Seyferth (1986) stands out as distinct in a racially complex Brazil, therefore, making it diverse – as is distinct. As the eight largest city of the country, Curitiba’s European influenced culture appears to be – on social media discourse – an outlier for a nation that received the most African slaves out of any country in the Americas (Skidmore, 1990). This is, in my analysis, perhaps analogous to the feeling of distinctiveness French Canadians have from Anglo Canadians, Francophones living in homogenous communities might have a feeling of distinctiveness on a national level regardless of living amongst people who share their identity.

What Curitiba does well is capitalizing on that idea of diversity; the video and comments help to illustrate a few of the core values in Curitiba's identity: We are a diverse, tolerant and respectful group of people. This is summarized by a comment left in the video about the 10 forming groups of the city:



Figure 16 – Resident Comment 5

“My city... my pride! Cultural diversity, welcoming, and respectful.”

The diversity and heritage of the city serve as a unifying factor and integral characteristics of the in-group. At first, it would seem like membership to the in-group could be difficult to attain since ancestry and family history cannot be modified or simply acquired and moving to Curitiba can be an impossibility for some people with jobs and families in other cities. The city and residents, however, are careful not to frame in-group membership as an unattainable, as stated in the comment: “My city... my pride... cultural diversity, welcoming, and respectful”, “welcoming” and “respectful” remain important characteristics of the city. It clarifies that while the city is rooted in a strong sense of history and culture, it is welcoming and open to new residents. The new membership, then, becomes something that can be achieved by anyone.

High Level of Engagement

At first, it is possible to think that a quantitative analysis might be a good way to measure engagement; in the introduction of this study I included a table that shows Curitiba has the most

followers than other Brazilian cities, but it is important to know why this happens and what makes Curitiba's fanpage such an engaging platform. I believe that quantitative methods can be a good method to analyze growth or measure the magnitude of social media activity, not to analyse one point in time like this study.

It is important to know how and why engagement happens and the role each actor plays. Jones and Svejenova (2017) identified that "A city's identity is constructed and stabilized through material, visual, and rhetorical sign systems by different institutional actors: professionals and politicians who build or regulate the built environment, as well as critics who interpret it." (Jones and Svejenova, 2017, p. 5). The literature review made clear the role played by government officials and politicians in the creation of the discourse of Curitiba as a sustainable city; this maintenance process would not have been successful without support from residents - or critics according to Jones and Svejenova (2017).

This support is indicated by the elevated level of positive engagement present on social media. The analysis indicated that both residents and non-residents engage in positive ways with each other and with the city; they display a high level of trust and do not appear to sense a distance between themselves and city management. Discussions encouraged by the city are met mostly with open mindedness by residents, who are willing to create an informal community and brainstorm ideas and share opinions around the different scenarios facilitated by the city. The following post is an example of how engagement is facilitated by the city and residents:

Prefeitura de Curitiba
September 19 at 3:00pm · 🌐

Sabe quem está voltando aí?

A feirinha que todos pedem no inverno, agora também vem para agitar a primavera curitibana! ❤️ SIIIIIIIM, a Feirinha da Osório. Seja bem-vinda de novo, sua linda!!! É nesta sexta-feira, dia 22!!!

#PraCegoVer: foto da Feirinha na Praça Osório mostrando, na parte inferior da imagem, as barraquinhas juntamente com várias pessoas circulando. Na parte superior, várias árvores ao redor e um texto "A Feirinha da Osório voltou!".



Like · Comment · Share

👍❤️👍 Cezar Schadeck, Surian Guerios Faria and 8.5K others · Top Comments ·

Maickol Kukolj Junior Gazola Olha amor! Já podemos ir lá de novo!
Like · Reply · 1 · September 19 at 9:41pm

1 Reply

Patrick Muchinski 🇧🇷🇧🇷 Poderiam fazer uma propaganda das feiras noturnas pra gente ficar por dentro tem todos os dias 🇧🇷🇧🇷
Like · Reply · 🗣️👍👍 20 · September 19 at 6:05pm

Prefeitura de Curitiba 🇧🇷 Vamos fazer postagens sobre as feirinhas noturnas também, Patrick. Pode deixar! ❤️
Like · Reply · 18 · September 20 at 7:27am

View more replies

Thalita Dal Santo É só no dia 22 ou a feira ficará por mais dias?
Like · Reply · 1 · September 19 at 3:18pm

Prefeitura de Curitiba 🇧🇷 Ficar até o dia 11 de outubro. 😊
Like · Reply · 🗣️👍 25 · September 19 at 3:25pm · Edited

View more replies

Thais Sponholz Scheidt Só sábado? Que horas?
Like · Reply · September 19 at 3:12pm

Prefeitura de Curitiba 🇧🇷 Thais, a feirinha segue até o dia 11 de outubro 😊
Like · Reply · 2 · September 19 at 3:25pm

View more replies

Hamine Gariba Noli Adriel Guebert amor, pronto pra falir novamente ???
Haushaushshus
Like · Reply · 🗣️👍👍 6 · September 19 at 3:11pm

Prefeitura de Curitiba 🇧🇷 😊😊❤️
Like · Reply · 2 · September 19 at 3:23pm

View more replies

Beatriz Monteiro Galhard Adoro feirinhas! Adoro Curitiba! 😊😊😊😊
Like · Reply · 🗣️👍 4 · September 19 at 3:19pm

Nathália Alana Dias Adoro a feirinha, uma pena q a cada ano suba 3 reais cada rango 🙄 tem um prato de pierogi, batata, frango e charuto q é um tesão, mas agora tá o olho da cara. Ai pessoal da barraca, colabora com os humildes hahaha

Figure 17 – City Market is back

“Do you know who is coming back?”

The city market that everyone waits for every Winter comes back to brighten up your Spring in Curitiba! <3 YEEEEEEES, the Osorio Market. Welcome back, you gorgeous!!! It’s this Friday the 22!!!

#Forthetblindtosee: Picture of the Osorio Market showing, in the bottom of the image, tents and people walking around. At the top, several trees and a text “The Osorio Market is back!”

I would like to highlight two interactions between the city and residents in this post:

Patrick Muchinski 🇧🇷🇧🇷 Poderiam fazer uma propaganda das feiras noturnas pra gente ficar por dentro tem todos os dias 🇧🇷🇧🇷
Like · Reply · 🗣️👍👍 20 · September 19 at 6:05pm

Prefeitura de Curitiba 🇧🇷 Vamos fazer postagens sobre as feirinhas noturnas também, Patrick. Pode deixar! ❤️
Like · Reply · 18 · September 20 at 7:27am

View more replies

Figure 18 – Resident Comment 6

Resident: “You could advertise the night markets as well so we could know the days it happens”

City: “We will post about the night markets as well, (name of resident). We got this <3”



Figure 19 – Resident Comment 7

Resident 1: “Only Saturday? What time?”

City: “Thais, the market goes until October 11 :D”

Resident 1: 😊

Resident 2: “Saturday from 10 to 21 hours”

The example above shows that residents see the city’s Facebook profile as a place where they can interact with the city and each other by asking questions, give suggestions, and celebrate what they like about the city. Curitiba has built an environment in their fanpage where residents

feel comfortable answering each other's questions and suggesting posts and content. The result of this is that the page functions as an online meeting place for the exchange of information

Online forum to exchange information

Residents' responses to environmental posts also had the effect of building community.

Curitiba's fanpage served as a platform for users to connect with other regarding practical solutions to common environmental problems and showing interest in taking part on environmental programs.

On a video about the life-cycle of Araucaria trees, one resident raised questions about the proper care of an Araucaria tree they were planting. Like in the example above, another resident interjected and promptly answered his question without the city's intervention; this shows that residents see the city's page as a forum where they could help each other and exchange information about the environment. This is indicative of an online platform with a high level of trust amongst users, a place where people feel comfortable and safe to ask questions and share their points of view.

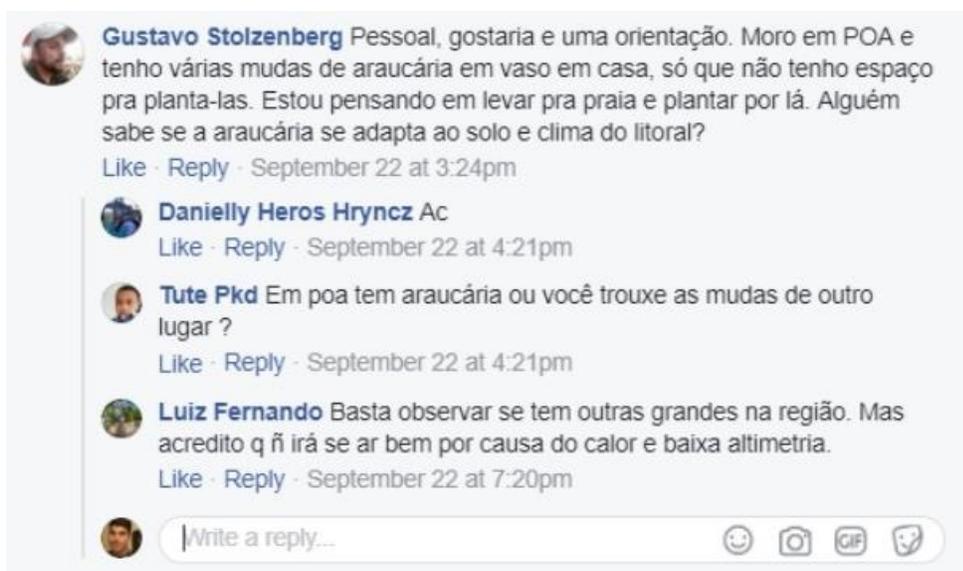


Figure 20 – Resident Comment 8

User 1: “Guys, I would like to ask for advice. I live in Porto Alegre and I have several small seedlings of Araucaria but I don’t have enough room to plant them. I am thinking of taking them to the beach and planting them there. Does anybody know if Araucarias can adapt to the soil and climate of the shore”

User 3: “Are there Araucarias in Porto Alegre or did you take the seedling from somewhere else?”

User 4: “Just observe if there are other big trees in the region. But I don’t believe it will work well because of the heat and low altitude”

Some residents also used these environmental posts to express concern for the proper care and maintenance of the city’s parks and green areas. Even though there is a phone number that residents could call to inform the city about places needing maintenance, some residents prefer to express their concern by taking a picture and reaching the city via Facebook.



Figure 21 – Resident Comment 9

Resident 1: “Japan Square – The fish are dying and hungry, there is no oxygen because of the muddy water. One dies every day. Japan Square is beautiful. That’s sad!”

Resident 2: “Wow that’s true”

The examples shown above indicate that the city’s fanpage acts as a community where users can voice their concern and connect with the city and each other regarding environmental issues they might face. Moreover, it acts as an extension of users’ citizenship; by reporting areas of improvement and discussing current environmental issues, residents engage in behaviours that transcend daily recycling practices and general care for the environment.

Praise for the city on Identity Building Posts

When the city posted a tourism promotional video, the response was overwhelmingly positive. Residents were celebrating the city, claiming it as one of the most beautiful in the country, tagging friends from other cities and countries, non-residents were also praising Curitiba and wishing their city was more like it. There was only one negative comment to the video:

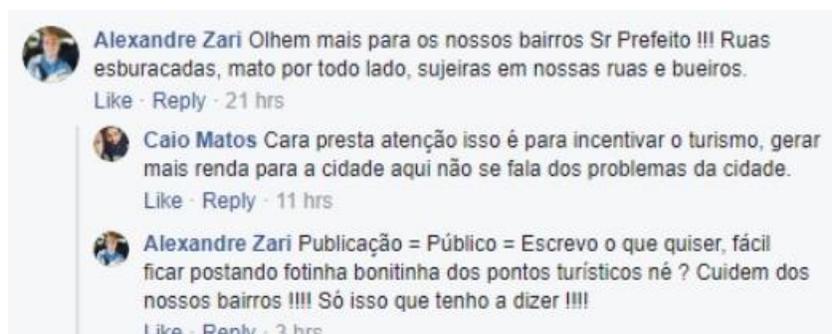


Figure 22 – Resident Comment 10

Resident 1: “Take a good look at our neighbourhoods, Mr. Mayor! Potholes in our streets, weeds everywhere, garbage in our streets and culverts.”

Resident 2: “Dude, listen up, this is to incentivize tourism and generate more revenue to the city. This (post) is not to talk about the city’s problems.”

Resident 3: “Publication = public = I write what I want. It’s easy to post pretty pictures of tourist spots, isn’t it? Take care of our neighbourhoods!! That’s what I have to say!!”

There are some interesting points in this exchange that characterize the residents’ sense of identity. One of the characteristics of Social Identity Theory is that “people may simultaneously engage in ingroup bias towards socially desirable group members and ingroup derogation towards socially undesirable ones” (Marques and Paez. 1994, p. 38). The authors called this phenomenon the “black Sheep” effect and it explains why residents that deviate from the norm of praising Curitiba are harshly criticized.

There is not to say that there was no criticism of the city on Facebook, residents still complained and identified aspects the city could improve on; this type of engagement, however, was reserved to specific topics and is always framed in a way of suggesting improvements rather than displaying disapproval such as the example of the fish at Japan square shown in the previous section.

Social Identity, in the form of identifiable in-group behaviours, took two forms in these posts: Curitiba's unique cultural heritage and the idea of Curitiba being a model city in Brazil. These two ideas form important pillars in the way the city builds its image online as well as the way users respond to it and contribute to that image. The first aspect was already discussed in length in previous sections, the second one stems from the efforts from city management and was evident through the data analysis – especially in the way non-residents engaged in the page. The post below, for example, exemplifies this engagement:

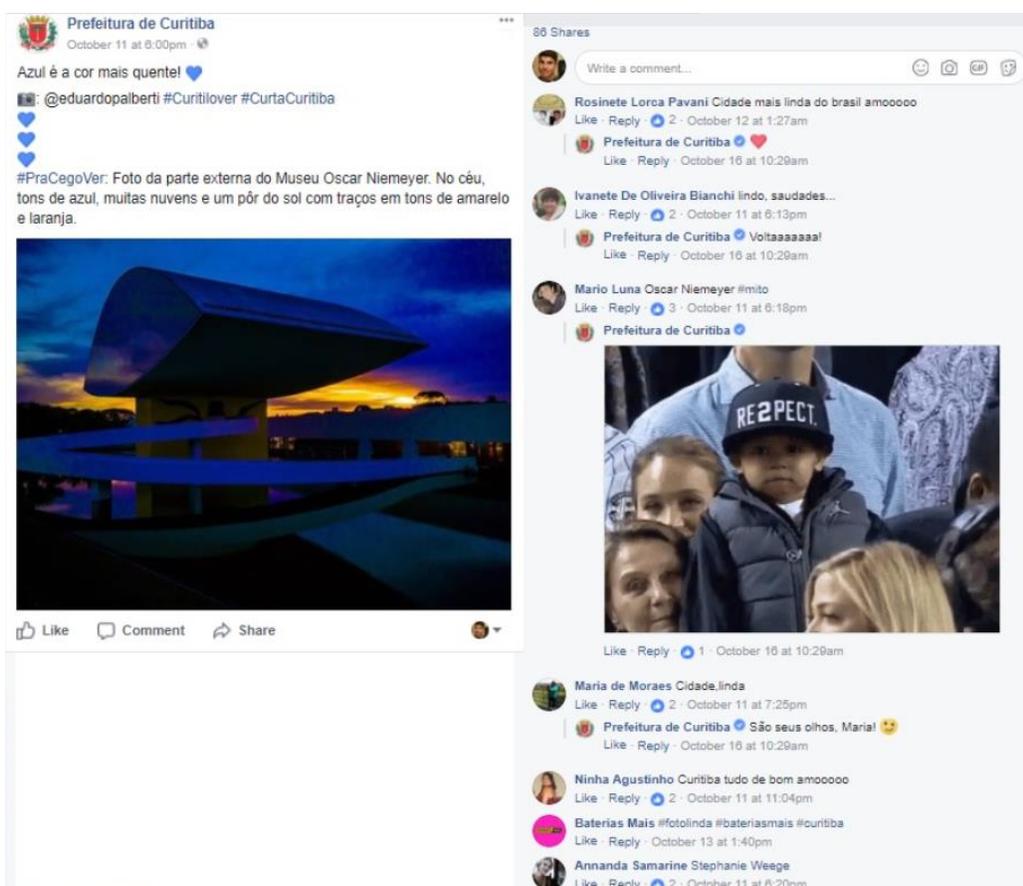


Figure 23 – Blue is the warmest colour

*“Blue is the warmest colour! <3
@eduardopalberti #curtilover #curtacuritiba
<3
<3*

<3

#forthelblindtosee: Picture of the exterior of Oscar Niemeyer Museum. In the sky, shades of blue, lots of clouds and a sunset with shades of yellow and orange”

I would like to highlight the following comments:



Figure 24 – Resident Comment 11

“Resident: The most beautiful city in Brazil. Looooove it.

Curitiba: <3”



Figure 25 – Resident Comment 12

“Resident: Gorgeous, I miss it

Curitiba: Come baaaaaack!”

When the city showcased the Oscar Niemeyer Museum, one of the most iconic symbols of the city, users – residents and non-residents – shared positive messages about it. The non-resident’s response was common throughout the data analysis, potential tourists expressed interest in visiting the city while former residents stated they missed their time in Curitiba. These interactions indicate that Curitiba enjoys a good reputation and evokes positive feelings from people in general, not only from people who currently live in the city.

Praise for the city and Local Sustainability

The codes “Praise for the city” and “Local Sustainability” appeared together many times and are, in many ways, connected to one another. Praise for the city came in the form of comparison and

celebration of the city's initiatives – often related to sustainability. For this reason, I am analysing these two codes together.

Another important pillar of Curitiba's identity and cohesion is the idea that the city is a model to others. The previous section initiated the discussion of Curitiba's positive reputation amongst Brazilians, this is one aspect of the praise the city gets. In the following paragraphs I will relate the city's reputation to the idea of sustainability and how the city builds the discourse around it and users' responses.

The idea that Curitiba should serve as an example to other cities is not new; referred to as the "Model City" and a model of urban ecology planning (Pedreira and Goodstein, 1992), residents today appear to enjoy this reputation and want to keep it alive on social media. As discussed in the literature review, the municipality has been working retroactively to ensure that this reputation matches and justifies their history as well as their future.

The comments analysed throughout the study show that residents from Curitiba have a significant level of pride that derives from the belief that their city is special. They hold it high regard, especially when comparing it – directly or indirectly – to other Brazilian cities. One comment reveals this sentiment; when responding to a post about the city's initiative to include young students from 18 schools into their river cleaning program, a user posted the following comment:

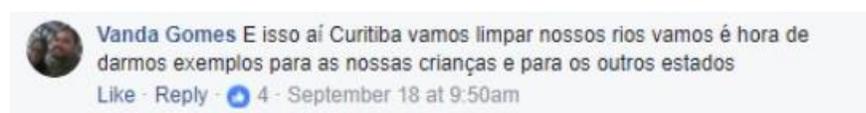


Figure 26 – Resident Comment 13

“That’s it Curitiba! let’s clean our rivers. It’s time to set example to our kids and to other states”.

The mention to “kids” is warranted since the city made it clear in the post that children’s participation was an integral part of the program; the second part of the user’s comment, however, was not prompted by the city, it was entirely brought up by the user. The city has not brought up any other municipalities or states, there was no reason for the resident make the comparison other than they felt the city is – or can be – a model to others.

This indicates that Curitiba’s residents believe sustainability is a factor that serves as a differential between their city and others; more importantly, it is a factor that should give Curitiba an edge over other cities. Environmental responsibility is one of the cornerstones of this reputation; for this reason, people’s behaviour towards sustainability could gain a distinctive elitism. Residents appear to not only want to live in a city that is known to be sustainable, they want to live in a city that is more sustainable than others and serves as an example to be followed.

When looking at how identity is built online, people’s comments and the city’s posts - whether they reflect reality or not - are fundamental in creating an identity for themselves. The message is that Curitiba is different because it takes care of the environment at a municipal level and people do the same at a personal level. This is further identified in the way users that are not from Curitiba react to the city’s posts, they praise the city and explicitly wish their own city was more like Curitiba. In the post about the World Tourism Day one resident from Rio commented:



Figure 27 – Resident Comment 14

“Politicians from RJ (Rio de Janeiro) could try to emulate the attitudes from politicians from Curitiba. It’s a different life”

At least as far as the scope of this research is concerned, the idea of Curitiba being a “Model City” is reflected online, it is brought forward by their own residents and is also reinforced by users from other places.

Conclusion on Level 2 Codes

Once Level 2 codes have been developed and discussed, I related them back to the research question and was able to analyze how the city of Curitiba has been able to maintain its reputation as a sustainable city. The analysis above was helpful in building a context where I could understand the different elements Curitiba’s social media plays in maintaining the identity of a city rooted in sustainability.

In the following sections I will discuss the identity maintenance process; more specifically, what are the steps taken by the city in order to maintain their identity.

Chapter 5: Discussion

I start this chapter by contextualizing the results explained above in the literature review. I'll follow with highlight important elements of the results (such as the role of the city and of different users) and analyzing how they relate to previous research. Then, I will answer the research question and outline the steps taken by the city to maintain their identity online. Finally, I will end the chapter with stating implications and limitations.

Contextualizing Results

5.1 Place Identity

According to my analysis, since the inception of the idea of Curitiba as a sustainable city and the Green Capital of Brazil, the city has actively engaged in ways to maintain their reputation. As discussed by de Oliveira (2011), the city worked retroactively to embed their history in sustainability. Later, members of city management - former mayor Jaime Lerner and former minister of the environment Hitoshi Nakamura - went on to be part of a documentary (A Convenient Truth, 2011) talking about their roles in changing the course of the city's history, discussing how Curitiba changed its course to avoid common problems faced by other large urban centers and in the process becoming a model city in sustainable urban development.

Their interview revealed a conscious thought process in transforming Curitiba into a city that serves as a model to others, fosters a culture pillared around sustainability, and provides residents with the right tools – practically and intellectually – to properly engage in sustainable behaviours (A Convenient Truth, 2011). The exploration of codes above was able to exemplify some of the ways in which the city does that today. Educational actions taken by city management dating

back the early 1990s, like the introduction of the “Familia Folha” (Leaf Family), to teach children about recycling initiated this process (A Convenient Truth, 2011). The same generation that was exposed to these actions is now the generation active on social media; the medium, therefore, is the most effective way to engage with residents that have grown up exposed to the idea of Curitiba being a sustainable city. The city’s social media discourse today is a continuation of the discourse initiated in the 1990s.

The analysis of codes indicated that the previous actions taken to make Curitiba a more sustainable place have impacted residents’ sense of place identity. It has instilled in them a sense of pride of being from the city. The role of identity management for municipalities has been studied before. When analysing the process of collective identity resurrection that Eugene, Oregon, went through to reclaim the status of Track Town, authors developed a model for identity resurrection that relies on the participation of members of the community, shared experiences and management of resources. (Howard-Grenville, Metzger, and Meyer, 2013).

While Curitiba is not going through a reclamation process or identity resurrection, certain aspects of the model suggested by the authors can be borrowed for this study.

Eugene went through a decline in popularity and loss of their core identity; Curitiba, however, is going through a different change, its population is getting older and the efforts in embedding its history in sustainability must continue in a different way. The city’s older residents have experienced the change of the city’s reputation first hand; the younger residents, however, have not. Initiatives from the early stages of the sustainability movement in the city targeted mainly school aged children (A Convenient Truth, 2011), these young residents grew up in a city without realizing much of the changes happening around them, to them growing up in a sustainable city was a reality and they did not know any different.

Older residents experienced the city gaining the title of Sustainable Capital of Brazil and enjoy the rising of its popularity. The maintenance process, therefore, is an important one to ensure Curitiba has a positive reputation and that younger residents feel connected to the city's tradition in sustainability.

5.2 Roles of Actors

The MDA indicates that the maintenance of Curitiba's identity online is carried through by users and well as city management. Users engaging in the posts enjoy and believe in this reputation as much as city management does. In creating and curating content on Facebook, city management finds an audience that is willing to engage and preserve the idea that Curitiba is the environmental capital of Brazil and a model city.

To residents, this process has both intrinsic and extrinsic motivation. Residents want to live in a city that is known as green as much as they want people from other cities to know it. This can be explained by Hornsey's (2018) idea that members from the in-group tend to see each other as an extension of the identity held by that group. In the case of Curitiba, the city's positive reputation extends to members; it is, therefore, in the best interest of residents to reinforce that view.

Their high level of pride is also one that is partially rooted in comparison. To residents, Curitiba must do the best it can while also positioning itself ahead of other cities. Non-residents are just as important for this process and contribute by comparing their cities to Curitiba in a way that emphasizes Curitiba's positive aspects. The high engagement of non-residents in the city's fanpage is indicative of an environment where Brazilians across the country can interact with the city and are exposed to images and discussions of its symbols.

Non-residents, therefore, have an equal role in shaping Curitiba's identity. They are, in fact, in an interesting position to do so. Without having the opportunity to experience the city first hand, these users rely primarily in the city's online content and interactions with residents to form their opinion about the city.

The different actors and their functions explained above play a significant role in the forming of Curitiba's identity online. Curitiba differentiates itself from other cities through its distinct culture and history, focus on sustainability and the environment, and celebration of diversity. Current residents who engage in the city's fanpage create the in-group, while the city of communications management act as creator and curator of content. Membership to the in-group is acquired by residing in the city and liking, commenting positively, or sharing the content produced by the fanpage; it consists of praise for the diversity of the city and sustainability efforts.

According to Tajfel's idea of Maximum Ingroup Profit (Tajfel, 1982), people tend to maximize differences in favour of their own group; in this case, sustainability is being used for comparison. A model city needs model citizens, residents engage in sustainability posts as conscious actors towards the image of an environmentally sustainable city online. The result is that posts regarding sustainability consist of praise for the city and participation in the form of engagement in discussions and congratulating the city for environmental actions. When engagement happens in a negative way, residents frame complaints as suggestions for improvement.

This leaves the other actors - current non-residents - as the out-group. Their role is, however, just as important for identity maintenance as the in-group's. The term "out-group" can have a negative connotation, but that is not the case in this study. Members of the out-group are not

outsides or excluded, they also praise Curitiba. They simply do not live in the city. By highlighting the city's positive aspects and wishing their own place of residence was more like Curitiba, non-residents support the idea of Curitiba as a model city and reinforce the identity of those who live there. This bridges the gap between residents and non-residents and validates the city's reputation online. By engaging in these behaviours, non-residents strengthen the position of the in-group.

Even though residents and non-residents engage in similar behaviours (positively engaging with the city) and serve similar functions (establishing Curitiba's reputation as a sustainable and diverse place), the distinction is necessary because non-residents might not be entirely aware of the signs and symbols of the city. When presented with such symbols, be it physical landmarks or cultural expressions, residents see a reflection of themselves and their immediate surroundings. The fanpage is a reflection of the "Curitibano" identity and has a different meaning to those who live in the city. The imagery and language used by the city online shows that identity.

The reputation of the city and their unique approach to social media engagement generated recognition across the country, which caused curiosity among many non-residents about life in Curitiba. The city's online discourse supports many of the non-residents' preconceived ideas, strengthening the position of the in-group (residents).

5.3 Interaction between Curitiba and residents

Interactivity is one of the important aspects of the identity maintenance process. One of the most powerful ways in which this occurs is when the city asks residents to submit photos of the city.

These types of posts happen almost once daily during weekdays and always features a local amateur photographer.

Asking residents to provide their own content bridges the gap between city management and residents; more importantly, it increases residents' sense of local identity since they are encouraged to look for beautiful and photo-worthy spots in their neighbourhood, commute, or weekend activities. It encourages residents to go outside and experience the city through their own eyes and share it with others.

Interaction also happens between the city and residents directly in the comment section. The city responds to some comments and their response varies in tone to match the tone of the message. Comments made in forms of memes or images are answered in the same way. Serious, formally worded concerns are met with similar responses. This gives the page personality, it shows that they can be approachable and encourages residents to do the same. More importantly, they break down barriers to participation.

It was using memes, videogames, popular culture references, and a relaxed tone that the city differentiated itself from others online; their novel approach to public service broke a paradigm and reinvented the idea of how municipalities engage with the general public. While they have adapted through time, the sense of fun and wit is still very much a part of their communications strategy.

This goes beyond the "Networking" strategy suggested by Mergel (2010). While there is no consensus on how governments should use social media to engage with residents (Mergel, 2013. Mossberger, Wu, & Crawford, 2013), Curitiba's social media activity certainly does not follow the formal and distant tone observed from other municipalities. Mergel observed, in fact, that the

“Push” strategy is the most common one, governments focus on providing information recycled from other sources – often their own website (Mergel, 2010). By showing that they can engage with residents in interactive and informal ways the city establishes their presence online as a public forum where people exchange information.

5.4 Designing a public forum

This idea of a public forum would not have been achieved if the city had not built enough of a cohesive identity to begin with, residents need to have some form of common ground and connect with each other to share content online; in other words, the city needs to establish the characteristics of the in-group.

In the case of Curitiba, the Identity Building posts indicated that the city’s history and cultural heritage are key components to the identity of Curitiba. This makes sense since these are factors that differentiate the city from others in Brazil. Another differentiating factor is that the city already enjoys the reputation of being sustainable, it does not have to construct this image online, they can simply take advantage of the work done in the past and build on it.

This is a key process in the success of Curitiba’s social media strategy; as Turner (2011) proposed, once people see themselves as part of a group they are more likely to engage in behaviours they believe are held by the group. In other words, city of Curitiba benefits from creating an in-group and their core beliefs, such as sustainable behaviour engagement, are more likely to be followed due to the high level of identity garnered by the Facebook page.

5.5 Reconciling Place Identity and Sustainability

The idea of Place Identity and how it relates to sustainability and sustainable behavior engagement has been at the centre of this study. I can now address how they are related. Once I concluded the data gathering process, I was surprised by the low amount of “Sustainability” posts; my assumption was that they city would generate many more posts in that category. I recognized, however, that a significant part of the “Identity Building” posts had elements of sustainability and the environment embedded in them.

This is indicative of how the city maintains their identity and how the concepts of Identity Building and Sustainability connect. By defining the in-group and establishing its core values (of diversity, celebration of culture and respect for the environment); the city stands by sustainability and encourages members of the in-group to do the same. Hogg et al (1990) and Turner and Reynolds (2011) identified that once individuals perceive themselves as members of the in-group, they tend to internalize norms and values held by the group. The city is, as the curator of content, responsible for guiding the discussion towards those values; and it finds in residents a strong support for the message of sustainability as a core identity of the city.

The city’s Facebook fanpage is a place where residents seek information about the city, share their identity as residents, inform the city of their concerns, and voice their opinions. As such, the page acts as an extension of their citizenship. By attaching the idea of sustainability to its core identity online, the city ensures users are exposed to the measures taken by city management to maintain the Curitiba’s identity of a Green City. The discourse becomes one of Curitiba as a city that is proud of its heritage, the unique place it occupies in the general Brazilian culture, is welcoming and diverse, and is committed to sustainable development. This encourages members of the in-group (residents) to develop the same behaviours.

The data also generated interesting results regarding the idea of Slacktivism. As mentioned in the literature review, this concept relates to users' engagement online without any offline follow through. My analysis indicates that city management is able to engage with residents online in a way that encourages them to take real world actions towards a more sustainable city. This happens in two ways: identifying areas for improvement of their direct physical environment and showing offline engagement in the city's fanpage.

Residents were active on social media communicating with the city when parks needed maintenance and areas needed to be cleaned. The picture below reads "Japan Square – The fish are hungry and there's no oxygen because of the dirty water. Everyday one dies. Japan Square is beautiful. That's sad"



Figure 28 – Japan Square

Residents also responded favorably when city management presented environmental campaigns and invited residents to participate. The example below shows residents taking pictures of bees that were released by the city for the Honey Gardens initiative. Residents are posting these pictures to show support for the campaign and to let the city's administration know that it has been well received:

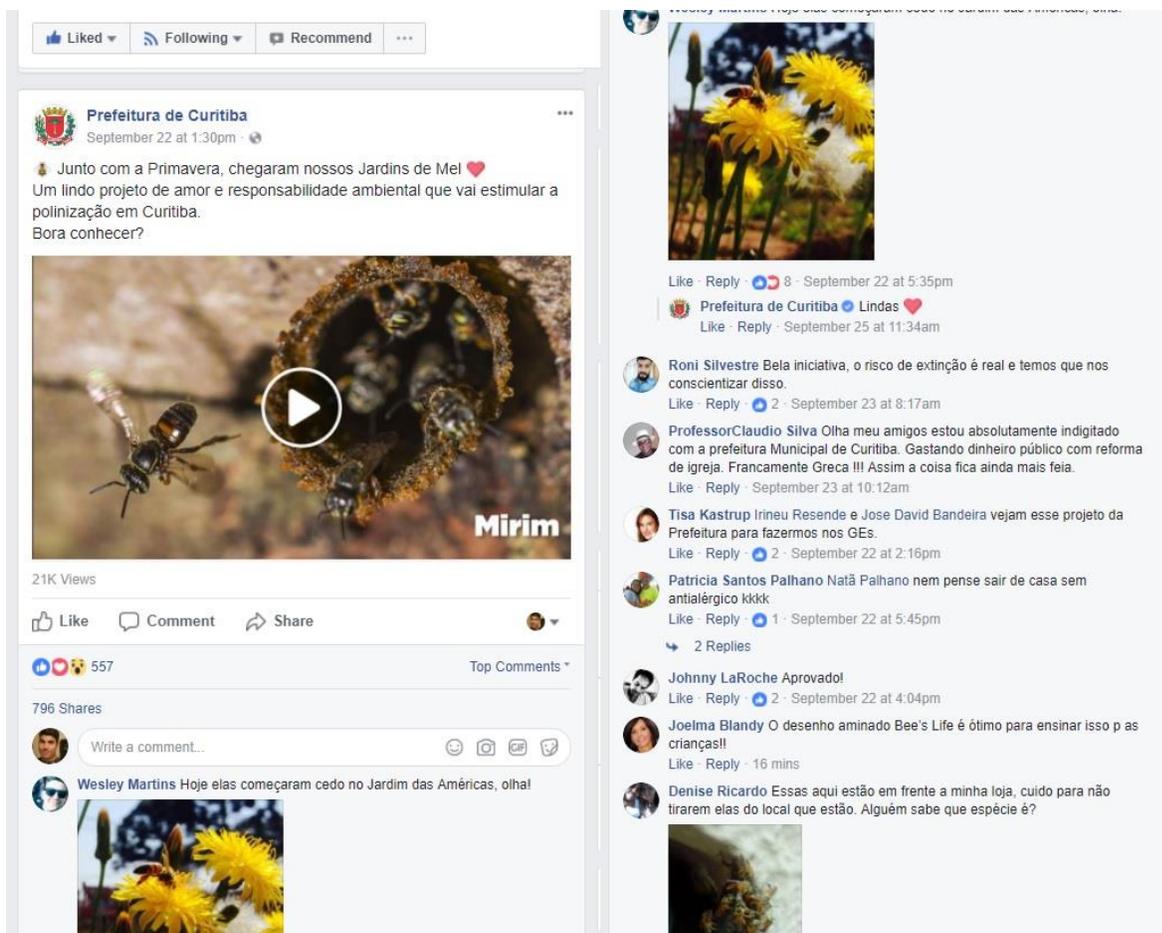


Figure 29 - Honey Gardens Initiative

The two examples above show that the relationship between users and the city goes beyond online engagement and does reflect some real-world engagement. This strengthens the idea that members of the in-group assume the core values held collectively and are more likely to engage in sustainable behaviors based on a strong sense of Place Identity.

5.6 The Maintenance of an Identity

In the paragraphs below, I will outline steps taken by the city of Curitiba as well as users that address the research question and identify the processes that take place in maintaining the city's identity on Facebook. The following section is a result of the interpretation of the codes, their

contextualization in literature review, and answers answer the question of this study: *how does Curitiba use social media to maintain their identity of a sustainable city?*

1. ***Creation of a cohesive in-group*** – The city has identified their target audience and what is important to them. The city is successful in posting elements of what it means to be from Curitiba and, in doing so, they expand the membership of being from the city as more to just living there.

Through revisiting its history and culture, the city makes their online presence unique. The page clearly defines who they are and what is important to them. Residents from Curitiba are able to see themselves represented online through posts celebrating their unique culture and heritage.

This, however, happens without ostracizing and excluding the out-group. As explained above, the out-group is just as important to the reinforcement of the idea of Curitiba as Model City. As Curitiba embedded their history in sustainability, the city changed the discourse of a “Different Brazil” to one of an “Inclusive Brazil”. This can be seen through the use of words such as “diverse”, “respectful”, “welcoming” and “inclusive” used both by the city and by members of the in-group.

2. ***Alignment between resident expectation and image being portrayed on social media*** –

Without resident support the city would not have the traction to build a social media following as devoted as they have. Residents believe in the idea of Curitiba as a sustainable city and are in support of that idea being presented online.

This happens in two ways: Firstly, residents want to live in a sustainable city, this was evidenced by their participation in sustainability posts, giving the city suggestions and answering each others' questions.

Secondly, residents also want to live in a city that is more sustainable than others, they explicitly posted that they wish Curitiba to become an example to other cities and non-residents commented they wish their city was more like Curitiba. This comparison is initiated by all users, members of both out-group and in-group.

3. ***Creation of an open forum and encouragement of participation*** – The city acts both as a content curator and creator. With their language and content, the city creates the idea that the page – as well as the city – belongs to users.

The use of plural pronouns (“us”, “we” and “they”) when talking about elements of the city. This gives the idea of multiple ownership; the city belongs to everyone.

Also, a lot of the content on the page is generated by users, the city asks for residents to submit pictures of places around them or places they go to during their outings. They also ask direct questions in their posts and engage with residents in the comment section.

When asked about current measures being taken to ensure better care of the environment, the city responds to users individually by tagging them and matching their tone. They also follow up on requests to clean areas of parks and public spaces. Together, these actions give the perception that the city is dynamic and responsive, thus creating an environment that encourages people to participate.

4. ***Indication of desired behaviours*** – Through the measures above, the city has clearly established an in-group, parameters of membership, added value, and a dynamic

environment; this process ensures that users trust the city and listen to what they have to say.

Once this has taken place, the city is able to indicate desired behaviours. In the case of this study, the maintenance of the city's reputation as a green and sustainable. The city posts about their sustainability programs and services, it also encourages residents to engage in sustainable behaviours themselves.

Through these steps the city reaffirms its place in the national context and engages users to be part of the process. By forming the in-group and then indicating desired behaviours, city management clearly identifies what characteristics make up the Curitiba identity and shows how it differs from the rest of the country without alienating non-residents. The stages above should not be seen as sequence of steps, but rather as a process that happens simultaneously. The city, likely, arrived at this strategy by adjusting their initial strategy. My observation is that their strategy has changed in the past 2 years since the election of a new management. Their discourse assumed a more serious tone when compared to the inception of the page, but it is still rooted in informality, approachability and fun.

5.7 General implications and results

The analysis process, in addition to answering the question proposed, helped clarify certain aspects of the literature review. In the following paragraphs I will outline my study's contributions to the gaps identified in the current body of literature.

Place Identity

My study clarified some of the relationships analyzed before. In the work of Uzzell, Pol, & Badenas (2002) and Forsyth et al (2015), the relationship between Place Identity and environmental behavior engagement is not clear. A strong place identity does not always lead to more engagement in sustainable behaviour (Uzzell, Pol, & Badenas, 2002). Pol et al (2002) indicated that this relationship is context dependent; this study, therefore, looked at the city of Curitiba's social media activity as a whole to ensure the analysis was strongly rooted in context. The choice to do an in-depth case study analysis helped in that regard as well. To do so, I conducted an in-depth Multimodal Discourse Analysis of the online discourse in the city's Facebook fanpage for 30 days.

Bühlmann (2012) identified "cultural diversity" as a variable that has a positive relationship with Place Identity. My study confirms that idea. The notion of diversity is important to the city and residents; Curitiba reminds residents of their heritage, culture, and uniqueness as a way of creating the in-group as well as establishing the norm of an accepting and welcoming place.

Pol and Castrechini (2002) explained that a high level of individuality correlates negatively with sustainable behavior engagement, while De Cremer and Van Vugt (1999) noted that the proself orientation could correlate positively with sustainable behavior engagement in a context where social identification is high. My research corroborates the findings of De Cremer and Van Vugt (1999); while Curitiba is more individualistic than other cities of the country (Hofstede, Hilal, Malvezzi, Tanure & Vinken, 2010) it is known as the environmental capital of Brazil. Social identification is the important differential in this aspect; Curitiba has been able to develop a high level of Place Identity on social media. Residents display pride and belonging to the city; it is possible to conclude, therefore, that social identification is high.

The literature regarding the relationship between Place Identity and Sustainability can be confusing at times, and it is in that area my study offers substantial contribution. I was able to link the two variables in the context of Curitiba and identify the ways in which the city builds a strong sense of Place Identity. The city's identity is centered around their cultural heritage and their reputation as a sustainable city; by building the in-group around these ideas, the city highlights their importance to residents.

In this process, city management embeds the "Curitibano" identity in sustainability and indirectly informs users that engaging in sustainable behaviors is something that is expected of them. In Sustainability posts, the city directly informs users of campaigns and programs initiated by government to ensure the city maintains that identity. Residents do the same by posting pictures of them incurring on the behaviours suggested and engaging in conversation about the environment with the city and each other.

The results above contribute to the current body of literature and expands the theory on Place Identity by indicating a specific strategy used by a municipality to engage with residents that positively correlates Place Identity and Sustainability.

Social Media

The literature review indicated that the role of local governments has been largely neglected in Place Identity. I could not find any study that considered the role of municipalities on Place Identity; most studies focused on residents' perceptions of their belonging but fail to account for governmental actions that could have an impact on that sense of belonging. My initial perception when analyzing Curitiba's social media discourse was that the city takes an active role in increasing residents' belonging. Jones and Svejenova (2017) argue that municipal management contributes to building the identity of a city; only focusing only on residents' perceptions of identity fails to consider relevant efforts by local governments. My study brings attention to the necessity of a more holistic analysis of Place Identity.

Research on social media engagement between governments and residents often did not conduct a thorough qualitative analysis; there was a reliance on quantitative methods over qualitative ones to explore resident engagement (Bonson et al, 2012). This type of analysis missed important aspects of how cities communicate with their residents. Simply measuring the number of likes and comments on Facebook posts does not explain the intricacies of the relationship people have with their municipalities online. Studies that measured only these variables (Bonson et al, 2012. Kaigo et al, 2012), in fact, missed an opportunity to provide the correct contextualization and indicate how or why engagement happens in the first place. This means that while the reactions measured by authors showed a certain level of engagement, they cannot explain any more than that.

The results show that Curitiba maintains its identity centered around sustainability by creating a cohesive in-group that is proud of living in the city, actively participates in the content creation online, and identifies with the city's history and culture.

In the early stages of this research, I had the assumption that Curitiba's sense of identity was rooted solely in the city's reputation as a sustainable city. My idea was that the work done by previous managements to ensure the city gained such reputation was the central aspect that formed residents' sense of Place Identity, that the city's efforts to becoming a sustainable place would alone be a source of pride and differentiation to other Brazilian cities.

During the data collection process, however, I realized that the city's history, culture, and ethnic background of residents played a larger role than I had initially considered. Residents showed great pride in sharing aspects of their culture and engaged positively with each other and with the city in these posts. As noted by Eisenhardt (1989), the iteration process is an integral part of a case study, including the development of the research question; for this reason, I changed the research question in this study to reflect my observations.

In addressing the research question, this study contributed to the body of literature on Place Identity, Social Identity Theory, and governmental engagement with residents. The literature review on the engagement between governments and residents on social media indicated a lack understanding of how dynamic online communication can be. Previous studies used typologies to categorize different levels of engagement and information flow that were not enough in fully encompassing the complexity of Curitiba's social media discourse.

Strategies suggested by the literature do not describe the current types of posts the City of Curitiba uses to engage with users. While broadening the typology of governmental social media goes beyond the scope of this case study, this study contributes by indicating the necessity of

readdressing this topic and developing a framework that more inclusive and reflective of current governmental social media strategies.

Curitiba's efforts to build an identity centered around sustainability have been well documented, the city's intentionality in retroactively embedding its history in sustainability has been identified in the literature review (De Oliveira, 2001. Rabinovitch, 1992). This study extends current knowledge by analysing how the city maintains these efforts online through social media. This is important because it shows the impact that participation in an online forum with city management could impact residents' sense of identity. Kaigo et al (2012) wrote a paper with similar intentions but the authors were not successful in indicating how or why the engagement observed took place. My study takes these questions in considerations and answers them in a way that is contextualized in the experience of users.

Overall, these contributions help to further the understanding of municipal governance and Place Identity while making use of concepts derived from Social Identity Theory. Naturally, further research is necessary to make sense of these phenomena and this case study only highlights the efforts on Curitiba, however, it opens the door for other researchers to continue the discussion.

5.8 Implications for practice

While governments understand the importance of communicating with residents online, they do not have a clear understanding of how to do so (Mergel, 2013. Mossberger, Wu, & Crawford, 2013). My research shows how one local government was able to understand what is important to their residents and what aspects are responsible for a strong sense of Place Identity. This has practical implications for other governments.

While this case study is unique to Curitiba and the stages outlined as the conclusion of the data analysis reflect only the specific case of the city, the general idea of Place Identity and how it relates to Sustainability can be borrowed and applied to other places. This will not look the same across different municipalities, since each city is unique.

Aspects that Curitiba used to define their in-group and actions taken to create an open communication with users are not universal rules. They are, however, a starting point for other municipal management teams. My study, moreover, highlights the importance of a conscient effort from municipalities in designing a deliberate communication strategy.

5.9 Implications for Future Research

The steps explained in the Discussion section indicate how the city of Curitiba addresses Place Identity with residents and how it builds a community around sustainability. I used the term “engagement” to describe users’ willingness to interact with the city and each other throughout this study, while it is appropriate in the realm of online interaction it would be interesting to find out whether virtual engagement has some real-world implication. Curitiba is not the only city in Brazil making efforts to increase or maintain an identity centered around sustainability, it would be interesting to compare how other cities maintain their social identity online and analyze if there are any similarities in these processes. It would be especially interesting to see how their social identity process and in-group creation takes place in people’s lives outside the online sphere.

I hope that my paper will bring attention to the necessity of qualitative analysis when studying governmental social media engagement. As discussed previously, simply measuring whether there is engagement does little to explain the intricacies of online communication since a high

level of engagement does not necessarily mean positive engagement. In addition, even if engagement is high and positive, it is beneficial to know the reason for it and how it is done.

5.10 Limitations

While I feel this work successfully answered the research question, some caveats are in order. I analyzed the Facebook activity of the City of Curitiba and users that interacted with the page in the period one month; and since users used their personal Facebook profile to interact with the city and each other it is possible that there is some level of social desirability bias in effect.

Especially given the context of this research, users might showcase behaviours in a public forum that directly represent the social norm, in this case: praising Curitiba and comparing it favorably to other cities. While this is a behavior that social Identity Theory accounts for – that is, conforming to in-group behaviors – it is complicated to separate these two phenomena and understand their direct contributions to the posts analyzed.

In addition, this study is not able to analyze any causal relationship between Place Identity and Sustainability. While my analysis indicates that these two variables strongly correlate in the case of Curitiba's Facebook activity, causal relationship goes beyond the scope of my study.

This study only looked at online interactions and could, therefore, only assess the behaviour of people who had participated in the Facebook page. There are residents of the city who do not participate in the page and are not exposed to their online strategy. Because of this, the research could not be expanded to the all the residents of Curitiba, only to the ones who are exposed to their online presence.

Since this is a case study, this research only tells the story Curitiba during the timeframe analyzed according to my interpretation of the codes. It would be interesting to do a comparative

longitudinal study or extend the timeframe to see if these results would vary. Also, while the timeframe of one month is an effective one, it only highlights the city's activity during one "cycle" of posts. Perhaps analyzing a different month could generate slightly different results and bring different relationships to the forefront of the "Curitibano" identity.

Another way to enrich this study would be to include interviews and testimonies of municipality officials and residents; I would encourage other researchers to do this and see if peoples' ideas and comments online were in line with their own experiences in real life.

Chapter 6: Conclusion

My original idea for this study came about during my time in Curitiba and how my experience in the city differed from others around the world; I was curious to know how the city seemed so successful in being sustainable when the efforts of others seemed to not generate many results. The motivation to be more knowledgeable in sustainability in urban centres transformed into reading more about the intricacies of identity building and what it means to be part of a community. Through this process I realized that a sense of belonging is a central aspect of increasing levels of sustainable living in urban areas.

This case study has analyzed how the city of Curitiba maintains the identity of being a sustainable city through social media. It reviewed the current body of literature regarding governmental communication, Social Identity Theory, and Place Identity. The literature review identified and addressed gaps that my research could potentially contribute and on Curitiba's history, culture, and its standing in Brazilian culture.

This case study was done by conducting a Multimodal Discourse Analysis for 30 consecutive days on selected posts of the city's social media activity. The analysis revealed why, in my experience, Curitiba seemed more sustainable than other cities. The MDA revealed that users themselves are a key part in the maintenance of the city's culture and outlined 4 stages of identity maintenance used by the city online.

I believe this maintenance process happens both as a form of celebration of the residents' culture and as a form of self-validation; if the city has a reputation for being green and sustainable, this must be a reflection of residents' actions. The reputation of the city, therefore, is extended to residents. This was clear in posts where residents held Curitiba as a model for other cities and by

non-residents expressing desire for their city to be similar to Curitiba. It creates the idea that if a place is sustainable and green, it must mean that people who live there are doing something right.

Curitiba focuses on what makes the city distinctive to others while fostering a community centered around diversity that does not alienate any user, regardless of place of birth. By doing so, the city introduces sustainability as another important pillar to the community and builds on the efforts of previous management teams in embedding the city's history in sustainable development. Once I found myself part of the in-group, celebrating the city became second-nature and being part of the city's efforts to fostering a place centered around sustainability became an essential part of my membership.

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