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Social Media and Public Discourse Participation in Restrictive Environments

Jobany J. Rico
Florida International University, jhere016@fiu.edu

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by

Jobany Rico

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To: Interim Dean William Hardin
      College of Business

This dissertation, written by Jobany Rico, and entitled Social Media and Public Discourse Participation in Restrictive Environments, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

_____
Richard E. Klein Jr

_____
Manjul Gupta

_____
William Newburry

_____
Karlene C. Cousins, Major Professor

Date of Defense: November 10, 2021

The dissertation of Jobany Rico is approved.

_____
Interim Dean William Hardin
College of Business

_____
Andrés G. Gil
Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2021

DEDICATION

In loving memory of my aunt, Xiomara Rico ("Pilla"), who would be very proud knowing I have

achieved this milestone in the United States

ACKNOWLEDGMENTS

ABSTRACT OF THE DISSERTATION

SOCIAL MEDIA AND PUBLIC DISCOURSE PARTICIPATION IN RESTRICTIVE

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by

Jobany Rico

Florida International University, 2021

Miami, Florida

Professor Karlene C. Cousins, Major Professor

This dissertation investigates citizens' use of social media to participate in public discourse (i.e., access, share, and comment on socio-political content) in restrictive environments: societies ruled by a hegemonic government where users face economic and infrastructure barriers to using digital technologies. Theoretical propositions are built inductively from an interpretive case study of how Cuban citizens use Twitter to participate in socio-political conversations. The case study resulted in the identification of nine affordances (i.e., action potentials) for participating in public discourse that Cubans perceive on Twitter. The findings also showed that the identified affordances enabled Cubans to achieve citizen goals: positive outcomes that made them more effective to counteract the government's hegemonic ruling. The case study also resulted in the identification of six obstacle-circumvention use strategies that Cubans apply to realize Twitter's affordances and the conditions informing these strategies. The case findings were abstracted into a conceptual framework to explain social media-enabled participation in public discourse as a mechanism of empowerment in restrictive environments.

One research contribution is the proposition that social media empowers citizens in restrictive spaces by allowing them to take, in the virtual world, actions related to participating in socio-political conversations that they cannot take in offline settings. Moreover, this work advances that social media empowers citizens in restrictive environments because it increases their self-efficacy and motivation to counteract the government and the knowledge and access to valuable resources needed to be more effective while pursuing this goal. Another contribution was

highlighting that media use in restrictive environments is an involved process requiring users to devise optimization strategies that usually involve the use of supportive technologies in addition to the social media app. The use strategies are informed by limiting societal, individual user-level, and circumstantial conditions.

One of this work's practical contributions is offering pro-democracy advocates in restrictive environments a clearer understanding of the effects of using social media. This dissertation reaffirms that social media-mediated participation in public discourse empowers citizens because it provides the emotional fuel and the knowledge that they need to engage in the tiring battle of pushing back against the government's domination.

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1. INTRODUCTION

1.1. Personal Motivation

One important motivation I had for conducting this dissertation was my interest in socio-technical research. I consider that the most valuable approach for understanding the effects of technologies is focusing on the interaction between the potential for actions provided by the technologies and the potential for actions provided by the structures (e.g., social, technological) existing in the context where they are deployed. Because of the usually complex economic and political systems in authoritarian regimes, they are suitable scenarios for socio-technical research. Although people living in autocratic countries should benefit in principle from accessing and sharing information via Internet-based technologies, the government in these countries usually has a legal system that systematically limits people's access to these technologies. Moreover, psychological factors may also prevent people from using technologies to engage in informational searches and political activities not endorsed by the government. In short, autocratic countries are suitable settings for conducting socio-technical research because the possibilities for IT-mediated behaviors should be highly dependent on contextual dynamics.

I am also interested in the role of information technologies in uplifting democracy in society, given the life experience I had growing up in Cuba. Access to information in Cuba was very restrictive as most people were only exposed to the information circulated by the government. Consequently, even the most skeptical citizens tended to adopt the beliefs and opinions promoted by the government. During my first years in the United States, I quickly experienced the effect of freely consuming diverse information via the Internet on several of my core beliefs (e.g., political, philosophical, ethical). Because I experienced that transformation, I wondered how much different my world views, opinions, and behaviors would have been when I lived in Cuba had I accessed all this information before. I also wonder how different Cuban people's lives would be if they could freely and easily use the Internet to access information. Information technologies change the speed, quantity, and quality of the information that flows in society; thus, they can allow people to

access diverse information easily (e.g., facts, opinions, narratives), which can, in turn, allows them to have empirically grounded beliefs, attitudes, and opinions. In summary, I am personally interested in understanding the potential effects that accessing and using the Internet and modern digital technologies could have on the lives of people living in authoritarian countries.

1.2. Research Motivation and Research Questions

Lately, IS researchers' interest in the role of information and communication technologies (ICT) in the solution of societal problems has been noticeable (Majchrzak et al. 2016). The role of social media technologies in increasing citizens' participation in socio-political processes is one research stream that has received considerable attention within the studies of ICT and societal issues. IS scholars have examined citizens' use of social media for participating in socio-political activities such as social movements (Leong et al. 2019), conversations about significant socio-political events (Miranda et al. 2016), and social reporting (Oh et al. 2013) and collective action (Oh et al. 2015; Vaast et al. 2017) during social crises.

Social media studies in societal settings rely on one assumption: social media can be used freely by any citizen at low technical and financial costs to consume and produce information free from institutional power (Leong et al. 2019; Vaast et al. 2017). Under this assumption, IS research has explored the benefits of social media with respect to several societal outcomes. One stimulating prompt for theory building is to explore social media use and its benefits in a societal setting where this assumption is not satisfied, that is, a restrictive environment. Based on the definition of restricted spaces suggested by The Lifeline Fund for Embattled Civil Society Organizations (Lifeline Fund 2020) and the use obstacle categories used by Freedom House to create the Freedom on the Net report (Freedom on the Net 2018), a restrictive environment is defined as a societal setting where citizens' ability to associate and express themselves easily is limited because of the following reasons:

- The government or powerful non-state groups (e.g., criminal gangs, drug traffickers) exert hegemonic control over citizens, manifested by the use of legal and paralegal methods to censor

information, criminalize citizens who dissent, and harass them as a way to stop them challenging the existing hegemonic ruling (Lifeline Fund 2020).

- There are infrastructure and economic barriers to access digital technologies (Freedom on the Net 2018). These conditions refer to technical and economic factors that limit citizens' access to the Internet and digital devices, for example, prohibitive prices for Internet access and digital devices and low-quality Internet connections.

In summary, a restrictive societal environment is one where citizens' use of digital technologies is limited by three types of constraints: legal and paralegal forces, economic constraints, and technological infrastructure constraints.

A theoretically and practically valuable research that IS scholars can conduct in a restrictive environment is to explain the benefits that social media use can offer citizens in these settings to achieve a desired outcome: challenge the government's hegemonic ruling and increase their participation in socio-political life. Given that the government's hegemonic power in restrictive environments constrains citizens' political freedoms and human rights, as IS researchers, there is value in understanding how and why social media use supports citizens to improve this situation. Therefore, the first goal of this dissertation is to understand how social media use can support citizens in restrictive environments, specifically with respect to their efforts to challenge the government's hegemony to gain more participation in political life.

The notion of empowerment is a suitable lens to look at the phenomenon of citizens' social media-enabled pushback against government hegemony in restrictive environments. Citizens in these settings are disempowered; therefore, a natural question is whether and how social media could give them more power relative to the autocratic state. Empowerment is a process whereby people acquire more control over their lives and the participation in the life of their community as well as a critical understanding of their environment that improves their chances to change it to their benefit (Perkins and Zimmerman 1995; Zimmerman 1990). Empowerment theory (Leong et al. 2019; Maynard et al. 2012) provides an appropriate theoretical lens to understand social media-enabled activism and political participation because it can be used to understand an

intervention's positive outcomes in multiple dimensions of people's lives, such as gains concerning desired behaviors, learning, and motivation. IS research about IT-enabled empowerment in societal settings has been interested in empowerment during social movements. (Leong et al. 2019). Therefore, current research focuses on the temporary (i.e., during the social movement) and objective (i.e., measured as people's presence on offline protests) dimensions of empowerment. We still do not understand the more durable empowerment effects that social media could offer users in their ordinary life as citizens. Moreover, we still have the possibility to spell out the intangible benefits of IT use for citizens in terms of how it challenges their beliefs, attitudes, and motivations with respect to their efforts for counteracting the autocratic government's hegemony.

Three processes can be explored to parse out how digital technologies empower citizens in restrictive environments with respect to their challenge of government hegemony: IT-enabled democratization of public discourse, IT-enabled democratization of collective action, and IT-enabled democratization of political decision making (Leijendekker and Mutsvairo 2014). This dissertation will focus on the first and most basic of these processes: the use of social media to democratize public discourse in restrictive environments. Public discourse is the information flow and conversations around sociopolitical issues (Miranda et al. 2016).

Existent IS works about the connection between social media and public discourse have centered on assessing the democratic quality of the content circulated via these technologies. Existent research is mainly preoccupied with examining social media content to evaluate how much it reflects widespread accessibility and diversity of opinions and framings (Miranda et al. 2016; Shore et al. 2018). Research in this area has also studied how social media-generated discourse supports the organization of offline actions by citizens (Oh et al. 2013; Oh et al. 2015; Zheng and Yu 2016). As IS scholars, we can extend the research on social media and public discourse by taking a different perspective on the democratic benefits of these technologies. We can move beyond assessing the democratic quality of the content and structure of the information that flows on social media to new research projects that study citizens' social media-mediated actions and their consequences as prime evidence of the democratic potential of these technologies.

To fill the gaps mentioned above and advance our understanding of social media-enabled empowerment and the democratizing potential of these technologies, I posit the following research question:

- RQ 1: How does the use of social media technology to participate in public discourse empower the people living in restrictive environments to challenge the government's hegemonic ruling?

Research question 1 invites us to study social media use in the setting of a restrictive environment. Compared to the US and other western countries, social media use in such a setting presents users with a quite distinctive scenario where they face legal and paralegal deterrents to use these technologies freely. Moreover, in these scenarios, the economic and IT infrastructure conditions deviate from the developed world and pose additional challenges for social media use among citizens. Therefore, the societal conditions in restrictive environments offer IS researchers an opportunity to conduct a novel study of contextual use of social media. Carrying out contextual research in such a setting could fulfill Avgerou's (2019) call to investigate how aspects of context, beyond cultural and social characteristics, influence IS phenomena. Avgerou (2019) calls IS researchers to conduct contextual research that considers how aspects of context such as the materiality of large-scale technological conditions (e.g., telecommunication infrastructure) and the material conditions of people's lives within which IS activities are accommodated. In an attempt to fulfill the gap identified by Avgerou (2019) and conduct contextual research of social media use, I posit the second research question of this dissertation:

- RQ 2: How do the societal conditions in a restrictive societal environment shape the use of social media technology for discourse participation purposes?

I use the notion of technology affordance as a sensitizing device to answer the two research questions posed in this dissertation. Therefore, the construct of IS affordance served as a theoretical underpinning to inform data collection and theorizing (Suddaby 2006). Technology

affordances are potential for behaviors arising from the relation between the features of an IT artifact and an actor with certain goals and skills (Volkoff and Strong 2013).

The affordance concept is useful to understand how the use of an IT artifact derives into outcomes that help users achieve desired goals (Burton-Jones and Volkoff 2017). In organizational settings, identifying the affordances of the IT artifact under investigation is considered a suitable path for spelling out how IT contributes to overarching organizational goals (e.g., higher quality care in a hospital or efficient use of resources) (Burton-Jones and Volkoff 2017; Strong et al. 2014). Moreover, in societal settings, IT affordances have been used as an intermediate mechanism to explain how a specific IT artifact enables users to attain positive outcomes for collective action (Vaast et al. 2017; Zheng and Yu 2016) and community-driven environmental sustainability (Tim et al. 2018). For example, vis-à-vis collective action, researchers can identify the affordances that a social media app offers people for carrying out collective action practices such as recruiting participants, mobilizing resources, and agenda-setting (Zheng and Yu 2016). In summary, following the approach used in previous IS research, I considered that identifying the affordances for discourse participation that social media offer users in restrictive environments could be helpful to understand how these technologies support them in achieving overarching goals that they desire in their role as citizens who challenge the state's hegemony (i.e., research question 1).

The affordance framework is also helpful in answering the second research question (How do the societal conditions in a restrictive societal environment shape the use of social media technology for discourse participation purposes?). An affordance lens can be used to spell out how people's possibilities to use IT depends on the IT properties, people's motivations and skills, and more relevant for the second research question, the constraints and opportunities of the environment where the interaction users-technology occurs (Anderson and Robey 2017). A focus on the process of affordance actualization (i.e., how users realize in practice the action potentials they perceive in IT) can be used to spell out how the characteristics of the context hinder the achievement of the outcomes that users desire to attain via the use of the technology. In short, the

notion of affordance actualization can be instrumental for answering the second research question as it enables us to describe how restrictive contextual conditions shape the process of social media use for discourse participation purposes.

I expect this research to extend IS knowledge in several areas. First, this work contributes to the research on the societal benefits of social media by describing how users take advantage of these technologies for participating in socio-political processes when use conditions are below the standard. This dissertation explores the use of social media for democracy advancement when citizens use these technologies under restrictive circumstances (i.e., economic, technological, and legal restrictions). Secondly, this work extends the study of the democratic value of social media beyond examining the content that people generate with these technologies to the actions they take with them and its consequences.

This work also extends the IS studies on social media and its impact on democracy by exploring how citizens appropriate social media not only to engage in collective action during social movements (Leong et al. 2019; Oh et al. 2015) and social crises (Oh et al. 2013; Vaast et al. 2017), but also to fulfill generic social needs in their everyday lives. The narrow focus of existing research on social media for democracy advancement, something that this research attempts to change, is highlighted by Couldry (2015) when he states: "[t]here is then, as yet, no general logic of connective action on social networking sites that can tell us whether, in ordinary times, people's 'platformed sociality' is likely to be oriented towards, or away from, political action." Most IS research focuses on what users do with social media to circulate information and opinions during social movements and crises or what political activists do with these technologies to manage the flow of information they need to support their actions. We need more research on what ordinary citizens (in contrast to socio-political activists) do with social media in their everyday lives (in contrast to during social movements and crises) to satisfy their socio-political information needs. Whereas the current focus of social media-enabled empowerment during social movements can inform us about the short-term and temporal value that social media offer people, targeting the benefits these technologies provide users regarding the participation in socio-political

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conversations can inform us of the more durable effects these technologies provide people in their roles of citizens.

This work will also contribute to the affordance actualization notion as it will propose going beyond cultural and institutional rules and norms as determinants of how affordance actualization occurs. In the context of social media use in restrictive societal environments, other influential environmental characteristics include economic factors (e.g., structural difficulties that users face to buy IT devices and Internet), behavioral restrictions from the established legal system, and the quality of the societal telecommunication infrastructure.

Lastly, this dissertation could contribute to the theory of social media-enabled empowerment by highlighting that the empowerment potential of these technologies goes beyond enabling users to participate (i.e., be present) in offline mass protests and control over tangible resources needed to participate (e.g., money) (Leong et al. 2019). This work is expected to derive more subtle empowerment outcomes related to the motivational and cognitive preparation that citizens in restrictive environments need to successfully push back against the government's authoritarian ruling.

The data collected to conduct this dissertation come from an interpretive case study about Cubans' use of Twitter to access and share socio-political information via their smartphones. Developing theory from a single case study is a "… typical and legitimate endeavor in interpretive research (Lee and Baskerville 2003)". Cuba is a suitable context for this research because it is a classically restrictive environment where a socialist government has ruled for more than half a century. Cuban citizens face significant economic and political barriers to using digital technologies (Freedom on the Net 2018). Twitter is the target technology because exploratory efforts indicated that it was the preferred social media platform for Cubans to share and discuss socio-political information. I focused particularly on Cubans' use of Twitter on their smartphones since cellular Internet access is a recent phenomenon in Cuba. Cubans were allowed to use Internet data on their cellphones for the first time in the nation on December 6th of 2018. Therefore, using Twitter

on a cellphone in Cuba is a phenomenon which novelty offers potential for theory development from a case study (Eisenhardt and Graebner 2007).

Interviews with 21 Twitter users who live in Cuba were the primary source of data. A second method used to gather data was the virtual observation (Kozinets 2002; Zheng and Yu 2016) of a subset of the Cuban Twittersphere (i.e., I observed 39 Cuban Twitter users). The virtual observation consisted of both monitoring the discourse generated on Twitter by a subset of Cuban users and recording content relevant for answering the research questions.

This dissertation is organized as follows. Chapter 2 discusses the main theoretical frameworks that guided this dissertation's data collection, analysis, and theory building. In Chapter 3, I describe the methodology that guided this research, namely, the methodological assumptions, the research design, and the methods of data collection and analysis. Chapter 4 discusses two categories of results. First, it presents the results of answering the research questions applied to the case study context (i.e., Cubans using the Twitter app). Secondly, it discusses the abstraction from the case study results to theory by deriving theoretical propositions. In Chapter 5, the research questions are answered by combining the theoretical propositions derived for each question in Chapter 4 into theoretical frameworks. Chapter 5 also discusses the contribution to theory and practice, the limitations, and the ideas for future research.

2. BACKGROUND THEORY

The first section in this chapter discusses the definition of restrictive environments. Then, given my interest in the interaction between social media use and contextual conditions in restrictive environments, I discuss ideas about conducting contextual IS research. I then review IS literature about the role of digital technologies in democratizing public discourse in society. A further subsection in this chapter reviews the construct of empowerment and the different ways to conceptualize it. Finally, I briefly discuss the notions of IS affordance and IS affordance actualization.

Table 1 summarizes the key concepts used in this study. I discuss these concepts in more detail in the different subsections of this chapter.

Table 1. Key Concepts Used in the Study

Concept	Description	Reference(s)
Restrictive environment	A societal setting where citizens experience legal restrictions to use digital technologies freely (e.g., due to the hegemonic control of autocratic government) as well as economic and technological obstacles	Freedom on the Net (2018) Lifeline Fund (2020)
Societal conditions	Legal (e.g., laws, power structures), economic, material (e.g., technology infrastructure, geographic location), and cultural (e.g., people's values and norms) conditions in the society where the study of IS takes places	Avgerou (2019)
Public discourse	The information flow and conversation around sociopolitical issues	Miranda et al. (2016) Leijendekker and Mutsvairo (2014)
Empowerment	Structures that improve a person's participation in socio-political life and boost his/her subjective state (e.g., motivation and feelings of efficacy) regarding her/his possibility to participate	Zimmerman (1990) Perkins and Zimmerman (1995) Maynard et al. (2012)
Psychological empowerment	A person's perceived possibility to influence the social and political systems	Zimmerman (1990)

	important to them. A person's self-perception of control, efficacy, and motivation to exert control regarding changing the conditions surrounding his/her life	Maynard et al. (2012)
IS affordance	A potential for behavior associated with achieving a concrete outcome and arising from the relation between an IT artifact and a goal-oriented actor. It arises from the relation between the material properties of the technology and the user's goals and skills.	Volkoff and Strong (2013)
IS affordance actualization	The actions performed by users as they take advantage of one or more affordances through their use of the technology to achieve concrete outcomes. Whereas an affordance reflects an outcome that the user desires to get via the technology, the actualization of the affordance involves the exact way in which the user and the IT interact in use.	Strong et al. (2014) Burton-Jones and Volkoff (2017)

2.1. Restrictive Environments

Pro-democracy organizations find it useful to categorize societal settings according to the challenges faced by citizens for taking advantage of digital technologies to advance democracy. Based on the categorizations proposed by The Lifeline Fund for Embattled Civil Society Organizations (Lifeline Fund 2020) and Freedom House (Freedom on the Net 2018), this dissertation advances the notion of a restrictive environment, defined as a societal setting where citizens' ability to associate and express themselves easily is limited because of the following reasons:

- The government or powerful non-state groups (e.g., criminal gangs, drug traffickers) exert hegemonic control over citizens, manifested by the use of legal and paralegal methods to censor information, criminalize citizens who dissent, and harass them as a way to stop them challenging the existing hegemonic ruling (Lifeline Fund 2020).

- There are infrastructure and economic barriers to access digital technologies (Freedom on the Net 2018). These conditions refer to technical and economic factors that limit citizens' access to the Internet and digital devices, for example, prohibitive prices for Internet access and digital devices and low-quality Internet connections.

In summary, a restrictive societal environment is one where citizens' use of digital technologies is limited by three restrictions: legal and paralegal forces, economic constraints, and technological infrastructure constraints. Next, I discuss examples of societies that can be considered restrictive environments.

- The society of some authoritarian countries fits the definition of a restrictive environment. An authoritarian (i.e., autocratic, totalitarian) government is a governing body that monopolizes authority over the state without guaranteeing political pluralism or defense of civil liberties to their citizens (Vaillant 2012). Authoritarianism is in sharp opposition to the concept of democracy. Indeed, it is often presented as the opposite of democracy since it often promotes undemocratic systems and processes (Vaillant 2012). Therefore, authoritarian countries satisfy the first category of constraints that characterize a restrictive environment because citizens are both formally (i.e., legally) and informally (i.e., with paralegal methods) restricted from consuming and sharing socio-political information on social media (Freedom on the Net 2018). Moreover, some authoritarian countries such as Cuba, Venezuela, and Laos fit the full definition of restrictive environments because their citizens also face significant technical and financial hurdles for using social media technologies (Freedom on the Net 2018).

- Another instance of a restrictive environment could be, rather than the whole society of an autocratic country, a subset of this society, for example, rural communities. The 2018 Freedom on the Net report by Freedom House (Freedom on the Net 2018) commonly reported the case of autocratic states where urban populations did not face big economic and infrastructure obstacles to access digital technologies, but where the situation was quite different for rural communities. For example, Internet penetration and access to technologies are quite high in authoritarian countries like China, Egypt, and Iran. However, it is common that rural populations and ethnic minorities in these three countries face financial hurdles to buy Internet and digital devices as well as issues accessing connections with acceptable speed (Freedom on the Net 2018).

- Another illustration of a restrictive environment could occur in a war zone situation where a powerful agent (e.g., a foreign power or a terrorist state) takes forceful control of a given society, deprives its citizens of basic rights, and creates an unstable economic situation where access to the Internet becomes challenging.

2.2. Contextual Explanation in IS Research

The IS contextual research stream is concerned with the different approaches through which IS research accounts for contextual influences in the formation of IS phenomena (Avgerou 2019). Contextual IS research is confronted with decisions about what is considered as the relevant context in an IS phenomenon and what theoretical lens to adopt to conduct a contextual study. Another key question concerning contextual IS research is how to address "…the trade-off between particularism and universalism" (Avgerou 2019). As stated by Avgerou (2019), "[r]esearch that does not account for contextual conditions that bring about IS phenomena may be making false claims of universal validity of its findings, but context-specific research is confronted with the methodological challenge of the production of theory that is valid in different contexts."

In this dissertation, I adopt Avgerou's (2019) notion of context as a domain of conditions of possibility. Avgerou (2019) highlights that this definition "…acknowledges people's agency in the making of IS phenomena: the occurrence of a phenomenon depends on, but is not determined by, conditions of its context." One way that IS research has pursued the development of contextual research is by following a positivist approach, whereby context is introduced by adding factors that represent environment characteristics to a research model that connects all the constituent parts of the IS phenomena (Avgerou 2019). I do not take this perspective in this research. I adopt the interpretivist point of view to develop contextual research for specific settings since I want to study "… the formation of phenomena [citizens' use of social media to participate in public discourse] in their context [authoritarian countries] and [develop] context-specific theory (Avgerou 2019)."

Most IS contextual research has foregrounded social conditions and mechanisms; however, less attention has been devoted to the material aspects of the setting where the IS phenomenon occurs (Avgerou 2019). In this dissertation, I attend Avgerou's (2019) call to foreground technological conditions at the societal level (e.g., telecommunication infrastructure) and the material conditions of people's lives where IS activities take place (e.g., housing and transportation conditions). There is evidence that when ICTs are implemented in societal contexts to improve societal issues, they imbricate not only with the local social setting but also with a range of local material infrastructure (Holeman and Barrett 2017). However, less is known about the impact of local material characteristics in cases where citizens approach existent technologies voluntarily (i.e., available social media apps) to fulfill a social need (i.e., participate in public discourse). In restrictive spaces, country-level technological infrastructure and other material conditions of people's lives are important to consider because they have been shown to influence how digital technologies are taken advantage of to advance democracy (Freedom on the Net 2018). Participation in long-term political processes requires a sustained context and opportunity structure in which individuals can make sense of devoting their limited resources to political activities (Couldry 2015). Material conditions in society are undoubtedly part of these opportunity structures.

In building a contextual theory, I use existing theoretical frameworks that suggest both concepts to describe the target phenomenon and contextual conditions relevant to this phenomenon (Avgerou 2013b; Avgerou 2019). I will frame the phenomenon under study in terms of concepts selected from relevant theories; then, I will refine and extend these theories with insights gained from a case study (Avgerou 2013b). Following what Avgerou (2013b) calls the script of IS explanatory social theory, this research involves interpretations of a case study through concepts provided by framing theoretical lenses. This dissertation is based on a case study of IT-driven democratization of public discourse in one restrictive environment. The data collected is analyzed through the theoretical lenses of empowerment and IS affordances.

2.3. IS Research on the Role of ICT in the Democratization of Public Discourse

One general interest from a group of IS research works has been to show how digital technologies allow citizens to generate an organized collective public discourse around social issues in a way that is effective (i.e., contributing to solving these social issues) and more democratic (i.e., independent from mass media and other more controlled-information channels). Oh's et al. (2013) study of social media-driven reporting during times of social crises is one exemplar of this type of work. Oh et al. (2013) studied under what conditions social media-driven reporting was a source of collective intelligence versus rumor during a social crisis. Their data collection strategy was to analyze citizen-driven information processing through Twitter using data from three social crises. Oh et al. (2013) noticed that although social media allowed citizens to be the first in starting a flow of information potentially useful to manage social crises, citizen-centric reporting on social media may have information quality issues. Oh et al. (2013) found that "…citizen reporting cannot lead to successful sensemaking without a sufficient number of messages being supported with trusted sources." Moreover, they found that "…the shortage of reliable information in the social media space may be more likely to lead to questions seeking information, doubts expressing suspicions, subjective interpretations, or rumors."

Another research about IT-driven collective discourse was Oh's et al. (2015) study of the role of social media in public discourse generation during a social movement. Oh et al. (2015) analyzed how Egyptians used Twitter to engage in a collective discourse that supported the social movement in the country in 2011. Oh et al. (2015) showed that citizens' use of Twitter hashtags enabled the emergence of collective sensemaking about the social situation unfolding in Egypt. The authors remark that Twitter hashtags allowed the public discourse to evolve from chaotic milling discourse into organized keynoting discourse. The Twitter-mediated transition in public discourse from milling to keynoting supported the collective action that erupted in Egypt (Oh et al. 2015). Social media allows citizens in undemocratic societies such as Egypt to maintain orderly communicative structures during an unstable political situation and empower them to maintain a high level of awareness about why and how to participate in a social movement (Oh et al. 2015).

In short, during times of social unrest, social media affords citizens the creation of an alternative (i.e., different from the government discourse) and effective (i.e., organized and informative) social discourse in support of the collective action taking place in the country.

Zheng and Yu (2016) looked at how civic activists use social media to organize the public discourse they needed to support a social program. Zheng and Yu (2016) examined how Weibo enabled Chinese activists to launch and manage "Free Lunch for Children" (FL4C), a charitable program targeting children's food needs in schools. Zheng and Yu (2016) found that FL4C organizers used Weibo and their own official website to support the collective understanding and discursive representation of the goals and significance of their program. By using Weibo and their website, FL4C organizers promoted the issue of child hunger to the public in a way that was independent of the monopolized agenda-setting scheme of the press (Zheng and Yu 2016). The use of digital technologies helped FL4C activists increase citizens' engagement with the program, as Weibo users became not only receivers of information, but more active diffusors and generators of program-related content (Zheng and Yu 2016). For example, users added their comments to pieces of information about FL4C, which served to draw attention to the importance of the FL4C efforts (Zheng and Yu 2016). Zheng and Yu (2016) concluded that "…, Weibo was more effective in raising public awareness of … child hunger than traditional [more closed] media channels". In short, digital technologies were instrumental in permitting FL4C to carry out the agenda-setting process with less governmental control and with more participation from Chinese citizens.

Another group of IS studies has been directed to evaluate the democratic quality of the socio-political information and opinions circulating on social media. One illustration is Miranda's et al. (2016) research about the phenomenon of social media-driven mass communication and public discourse. Miranda et al. (2016) examined whether the public discourse generated around a socio-political issue in social media was more emancipatory than the one in traditional media. They used interpretive media packages as the basis to compare social and traditional media. An interpretive media package is "a discourse participant's social construction of an issue… (Miranda et al. 2016)". They found that social media are emancipatory because they relax authorship,

citation, and influence constraints for people willing to participate in discourse; that is, they impose fewer structural constraints on discourse (Miranda et al. 2016). Nevertheless, the discourse that emerges on social media, especially on lean social media, e.g., Twitter, is less framed (less nuanced) than the one occurring in traditional media (Miranda et al. 2016).

Another research interested in the democratic nature of the flow of political communication on social media was Shore's et al. (2018). Shore et al. (2018) studied the diversity of the political communication that flows on Twitter. Their empirical setting was political slant on Twitter. These authors studied the association between "… the slant of the information an account receives to the slant of the information they post themselves (Shore et al. 2018)". Although they observed the presence of small echo chambers (i.e., users only following others whose opinions are similar to theirs), overall, communication does not follow this pattern on Twitter. There is some evidence of homophily on Twitter (e.g., the outgoing point of view is correlated with the incoming point of view), but also an average tendency to moderation and many points of contact among different points on the political spectrum (Shore et al. 2018). Twitter political communication differs when an active core, in which network structure corresponds to political slant, is compared to a much larger and less active moderating majority where network structure is more weakly related to slant (Shore et al. 2018).

The analysis of the IS publications about IT-enabled democratization of public discourse reveals several research gaps:

- Most research focuses on what users do with social media to transmit information and opinions during social movements and crises or what activists do with these technologies to manage the flow of information they need to support their actions. We need more research on what citizens do with social media in their everyday lives to satisfy their socio-political information needs.
- Current research is evaluative as it focuses on assessing the democratic quality of the content and structure of the information that flows on social media. Existent research is mainly preoccupied with examining social media content to see how much it reflects

widespread accessibility and diversity of opinions (Miranda et al. 2016; Shore et al. 2018) or support the organization of offline social actions (Oh et al. 2013; Oh et al. 2015; Zheng and Yu 2016). We can move beyond assessing the democratic quality of the content and structure of the information that flows on social media to new research projects that study citizens' social media-mediated actions and their consequences as prime evidence of the democratic potential of these technologies. We can theorize how the use of social media for public discourse participation changes the beliefs and behaviors of citizens in restrictive environments concerning their power struggle against the government. There are suggestions that the value of social media for the power struggle that citizens in restrictive environments undertake against the government is to be found in how using these technologies alters how much citizens value democracy and their cognitive capability to assess the government's actions (Bailard 2012; Sullivan 2014). Also, in how social media use can lead these citizens to experience a sustained motivation and need to keep the fight (Couldry 2015). It is in our purview as researchers to examine the link between social media use and its effects on citizens' cognitive and motivational state regarding their possibilities to successfully challenge the autocratic state.

- As recently highlighted by Avgerou (2019), "… the identification of context in relation to which IS phenomena unfold requires explicit research attention…" because "[r]esearch that does not account for contextual conditions that bring about IS phenomena may be making false claims of universal validity of its findings…". The consideration of context is particularly relevant in social media-enabled public discourse studies since the environment in these studies is not the formal organization usually considered in IS research but complex societal settings. Considering the peculiarity of the context seems even more fruitful for theory development when the effect of social media is studied in a restrictive environment. Citizens in these settings use technologies to access, create, and discuss political information, subject to the restrictions resulting from complex socio-technical and legal structures (Leijendekker and Mutsvairo 2014; Morozov and Docksai

2011). As IS researchers, we have a tradition of spelling out how the outcomes from the introduction of ICT in societal environments are influenced by historical events (Avgerou 2013a), contextual technological infrastructures (Holeman and Barrett 2017), and contextual social norms and policies (Leonardi et al. 2016). Therefore, as IS researchers, we can join the conversation about the democratizing potential of social media started by political science and communication researchers and provide our unique point of view about how to disentangle the combined effects of technologies and the complex contextual structures existent in restrictive spaces.

Based on the research gap I have discussed, I now turn to theories of empowerment and IT affordances to meet the research objectives. Empowerment is an appropriate theoretical lens to understand social media-enabled activism and political participation because it can be used to understand an intervention's positive outcomes in multiple dimensions of people's lives, such as gains concerning desired behaviors, learning, and motivation (Leong et al. 2019; Maynard et al. 2012). Another potential value of the empowerment notion for addressing the gaps is that this construct allows us to look at both empowering processes and empowered outcomes (Perkins and Zimmerman 1995). This advantage should allow us to frame social media-mediated actions as empowering actions and the results that users attain from these actions as empowered outcomes.

I chose to understand the empowerment phenomenon using an affordance lens because IT-enabled empowerment can be studied through a theoretical framework that describes how IT-mediated actions (empowering processes) derive into higher-level outcomes (empowered outcomes). The affordance lens is indeed useful for this purpose as it can be used to describe how a set of potential individual actions and their associated immediate outcomes support the achievement of broader goals (Burton-Jones and Volkoff 2017; Strong et al. 2014). Other IS research works have identified affordances of specific IT artifacts as the starting point to explain how IT use by individuals contributes to higher-level goals. For example, the identification of affordances has served other scholars to explain the contribution of IT use to collective action

(Vaast et al. 2017; Zheng and Yu 2016), environmentally sustainable work practices (Seidel et al. 2013), and community-driven environmental sustainability (Tim et al. 2018).

2.4. Theories of Empowerment

In principle, empowerment means to give power to another (other) person(s). In a general sense, power has a behavioral connotation as it refers to the ability of one actor, individual or collective, to affect the actions of others (Pigg 2002). However, the theory of empowerment, which has been heavily developed by researchers from the Community Psychology field (Zimmerman 1990), takes a broader approach to understanding empowerment. Empowerment is seen as a concept capable of capturing the connection between individual well-being and the larger social and political environment (Perkins and Zimmerman 1995). It is a construct that "… connects mental health to mutual help and the struggle to create a responsive [society] (Perkins and Zimmerman 1995)". Empowerment can be studied at different levels, such as individual, interpersonal, organizational, and community (Zimmerman 1990; Zimmerman et al. 1992). This dissertation focuses on individual-level empowerment because it explores how social media empowers users in restrictive environments in their lives as citizens.

Individual-level empowerment has two connotations, one objective and another one subjective. The objective dimension captures the person's actual possibilities to take desired actions and his/her authority to make decisions about valuable resources. The subjective dimension is about the person's feelings and beliefs about his/her possibilities and skills to change the environment as s/he desires. Therefore, empowerment refers to actions related to a person's participation in socio-political life and his/her subjective state (e.g., motivation and feelings of efficacy and control) regarding the possibility to participate and the consequences of participation (Zimmerman 1990). The objective side of empowerment means that a person has more structures to enact desired changes. The subjective dimension of empowerment refers to whether the person knows the processes needed to enact desired changes and experiences positive feelings and perceived efficacy when s/he considers pursuing desired course of actions.

In their comprehensive review about empowerment, Maynard et al. (2012) highlight two different ways of looking at empowerment. The objective dimension has been called structural empowerment. In organizational settings, Maynard et al. (2012) define structural empowerment as the degree to which organizational characteristics (e.g., team and job designs, organization policies and procedures) enable the transition of authority and responsibility from upper management to employees. The subjective dimension of empowerment is called psychological empowerment. In an organizational context, psychological empowerment is "… less concerned with the actual transition of authority and responsibility but instead focuses on employees' perceptions or cognitive states regarding empowerment. " (Maynard et al. 2012). Psychological empowerment can be defined in terms of motivational processes that lead people to experience a cognitive state achieved when they perceive to be empowered (Maynard et al. 2012). Considering that this dissertation studies empowerment in the context of people using social media in the highly constrained political environment of a restrictive space, the notion of psychological empowerment is the most appropriate dimension to consider. Most empowerment research in both organizational and community settings has also focused on the notion of psychological empowerment.

The idea of psychological empowerment contemplates the possibility that an empowered person may have no real power in the political sense, but that s/he may have the motivation and perceived efficacy for making efforts to gain such an objective power (Zimmerman 1990). Psychological empowerment is related to people's perceived possibility to influence the social and political systems important to them (Zimmerman et al. 1992). Given a specific socio-political domain, e.g., the political system or a pressing social issue, psychological empowerment is a self-perception of perceived control, self-efficacy, motivation to exert control, and perceived competence (Zimmerman et al. 1992). As we can see, psychological empowerment involves intrapsychic variables such as a sense of competence and control and a critical awareness of the sociopolitical environment (Zimmerman et al. 1992). Psychological empowerment "… includes the development of skills necessary to participate effectively in community decision making, and

comprises elements of self-esteem, a sense of causal importance, and perceived efficacy (Zimmerman et al. 1992)".

The construct of empowerment implies both processes and outcomes (Perkins and Zimmerman 1995). Processes are actions, activities, or structures that could be empowering (Perkins and Zimmerman 1995). Empowering processes for individuals might include participation in community organizations and activities that improve their quality of life (Perkins and Zimmerman 1995). According to Perkins and Zimmerman (1995), "[e]mpowered outcomes refer to operationalizations of empowerment that allow us to study the consequences of empowering processes." Simply put, empowered outcomes are the outcomes of empowering processes. The distinction between empowering processes and empowered outcomes is useful for this dissertation. It implies that social media-mediated actions related to participation in public discourse might be considered empowering actions, whereas the results that social media users attain from these actions could be empowered outcomes.

IT-enabled Empowerment

Leong's et al. (2019) work on the process of social media-enabled empowerment in social movements is pertinent to this dissertation. They state that participants could use social media to shift the power dynamics in a social movement by increasing their capability to participate in collective actions related to the movement, their influence on policy makers and other participants, and their control of resources valuable to participate and organize the movement. Leong et al. (2019) posit that participation, influence, and control could be used as reference empowered outcomes to study the empowerment potential that social media offer participants in social movements. In summary, Leong et al. (2019) consider that social media is an effective tool for social movement participants to overcome the inability to participate in actions related to the movement, to influence relevant stakeholders (e.g., citizens that constitute potential participants), and control important participation resources (e.g., money, public attention).

Deng et al. (2016) also propose a framework to understand the empowerment potential of IT. They studied Amazon Turk workers and how their use of the Amazon crowdsourcing platform to do small paid jobs could empower them as members of society. Deng et al. (2016) found that these workers feel empowered when their interactions with the Amazon crowdsourcing employment tool allow them to experience any of the nine values associated with their work-related expectations. These shared values are access, autonomy, fairness, transparency, communication, security, accountability, making an impact, and dignity (Deng et al. 2016). Deng et al. (2016) classify the manifestation of empowerment that workers expressed when a subset of the nine values was present in the crowdsourcing work structures into four dimensions. These dimensions are meaning, competence, self-determination, and impact. Deng et al. (2016) suggest that the Amazon Turk platform, an IT-mediated environment, empowers users when it enables them to find job choices that they find personally meaningful (i.e., meaning) and where they can decide about how to do the required tasks (i.e., autonomy). The Amazon Turk tool also makes users feel empowered when they think their job has a significant influence on other citizens and feel confident that they have the knowledge and skills to conduct the required job tasks (Deng et al. 2016).

The four dimensions used by Deng et al. (2016) to study empowerment, namely, meaning, competence, self-determination, and impact, were cited by Maynard et al. (2012) as the most widely accepted subdimensions of the psychological empowerment construct. However, as Maynard et al. (2012) clearly show, these dimensions are better suited to understand empowerment in the context of people acting as employees (i.e., for job-related empowerment studies). For people acting as citizens challenging state power, which is the context of this dissertation, it is better to use other dimensions of psychological empowerment such as perceived self-efficacy, perceive-control over important resources, and level of knowledge of the context and its causal agents (Perkins and Zimmerman 1995; Zimmerman 1990).

In the next section, I briefly discuss the notions of affordance and affordance actualization.

2.5. IS Affordances

The first reason for using the notion of technology affordances in this research is its value for outlining how the use of an IT artifact derives into concrete outcomes that could be helpful for users to attain desired goals in their role as organizational or societal actors (Burton-Jones and Volkoff 2017; Vaast et al. 2017). In organizational settings, identifying IT affordances serves as an intermediary mechanism to explain how the process of technology use leads to the attainment of ultimate organizational goals (Burton-Jones and Volkoff 2017). Other researchers have shown that the concrete outcomes resulting from realizing the affordances of an IT artifact could be used to explain how technology contributes to achieving organizational-level goals (Strong et al. 2014). Moreover, in societal settings, IT affordances have been used as an intermediate mechanism to explain how a specific IT artifact enables users to attain positive outcomes concerning collective action (Vaast et al. 2017; Zheng and Yu 2016) and community-driven environmental sustainability (Tim et al. 2018). For example, vis-a-vis collective action, researchers can identify the affordances that a social media app offers people for carrying out collective action practices such as recruiting participants, mobilizing resources, and agenda-setting (Zheng and Yu 2016). Therefore, following the approach used in previous IS research, I considered that identifying the affordances for discourse participation that social media offer users in restrictive spaces could be helpful to understand how these technologies support them in achieving overarching goals that they desire in their role as citizens who challenge the state's hegemony (i.e., research question 1).

A second reason for the value of the affordance construct is that it allows us to examine IT use by focusing on the interplay between the material properties of a technology artifact and the characteristics of the environment where it is deployed. Therefore, this construct should be helpful to study social media use in the context of restrictive environments and their distinctive socio-political characteristics.

A third reason for adopting the IS affordance perspective is its suitability for developing theory from a case study. The affordance lens is "consistent with the goals for midrange theories of being technology-specific, but also producing some generalizable results." (Volkoff and Strong

2013). It is a framework that can be adopted to derive explanations of technology use and consequences "… at a level of granularity that is specific with respect to the technology while also providing some generality beyond individual case examples." (Volkoff and Strong 2013).

The affordance theory was originally derived as part of an ecological approach to understanding visual perception (Gibson 1986). The affordance notion suggests that humans orient to objects in their world (e.g., rocks and trees) in terms of the objects' affordances: the possibilities that the objects offer for action (Gibson 1986). Gibson (1986) defined an affordance as what an environment, and more particularly an object, offers, provides, or furnishes to someone. Adapted to IS research, affordances are defined "… as the potential for behaviors associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an IT artifact) and a goal-oriented actor or actors" (Volkoff and Strong 2013). The affordances of an IT artifact for an individual arise from the relation between the material properties of the technology and the individual's goals (Volkoff and Strong 2013). That is to say, the potential for actions of an IT artifact depends on our intentions and needs once we approach the technology. The person's skills also determine his/her possibilities for perceiving certain potential for actions in an IT artifact object (Chemero 2003; Volkoff and Strong 2013).

The notion of technology affordances relates to outcomes that users wish to attain by interacting with the technology (Volkoff and Strong 2013). Affordances are perceived potential for actions that users attach to a technology; hence, "[a]ffordances can include the expectations and beliefs of users, whether or not they are "true" or "right." "(Nagy and Neff 2015). Nagy and Neff (2015) suggest that affordances are also informed by users' fears, expectations, and desires, which emphasizes the perceptual, subjective, and suppositional nature of the affordance concept,

Whereas ecological psychology's approach to affordance focuses on a single animal and object, studying the effects of technologies in organizations and societies requires a different approach. Rather than examining the actions that emerge from the properties of an artifact and a person's skills and goals, we should consider how the social context shapes what an actor perceives in an object. What an object affords a person is influenced by cultural factors because

an individual's intentional repertoire embodies culturally driven meaning (Heft 1989). The intentional acts that a person acquires within a sociocultural context are situated with reference to particular objects; thus, these objects are invested with a functional meaning in relation to these actions (Heft 1989). Heft (1989) illustrates this argument with the example of a mailbox. Heft explains that mailboxes afford people mailing letters to the degree that they know what it means to mail a letter, which implies that they have this act incorporated as part of their intentional repertoire in a specific sociocultural context. The letter-mailing affordance of the post-box is not something it possesses only by virtue of its materiality but an ongoing socio-material accomplishment (Bloomfield et al. 2010).

   The affordances of an object are not reducible to their material constitution but are inextricably bound with the social practices and cultural conventions of the people who interact with this object (Bloomfield et al. 2010; Hutchby 2001). Bloomfield et al. (2010) emphasize that the IT-mediated actions that a user takes with a technology artifact are definitely supported and bounded by the technology material properties, but the user's social context, his/her individual purposes, and his/her abilities also define the user-technology interactions. The enablements and constraints of a technology artifact do not make sense without reference to the social practices and cultural conventions of the environment where it is deployed (Bloomfield et al. 2010). To summarize, the potential for actions that someone perceives in a technology artifact is determined by the technology's material properties (e.g., designed functionalities), the person's skills and goals, and the socio-material characteristics of the environment.

Affordance Actualization

When studying the affordances of IT artifacts, the focus may go beyond the perception of the affordance (i.e., being aware of an action potential) to the actualization of this affordance (Anderson and Robey 2017; Strong et al. 2014; Volkoff and Strong 2013). Strong et al. (2014) define affordance actualization as "the actions performed by actors as they take advantage of one or more affordances through their use of the technology to achieve immediate concrete outcomes in support

of… [their goals]." An affordance is an action potential, whereas its actualization is the realization of this potential. An affordance reflects an outcome the user desires to get via the technology "…while affordance actualization involves the exact way in which the user and system interact in use" (Burton-Jones and Volkoff 2017). Burton-Jones and Volkoff (2017) illustrate the difference between these two concepts with an example. They notice that one affordance of an Electronic Health Record for clinicians is capturing clinical data, which intended outcome is to enable staff to document their work. In contrast, " [t]he constituent parts of this affordance become observable when users actualize it, i.e., in the precise way in which clinicians actually enter their documentation in the [system]" (Burton-Jones and Volkoff 2017).

An affordance actualization perspective to study IT use permits highlighting the factors contributing to the ease or difficulty that actors encounter as they try to realize the technology's affordances (Strong et al. 2014). Therefore, I expect the affordance actualization concept to be useful in bringing out characteristics of the specific society under investigation that contribute "to the ease or difficulty that actors [citizens] encounter as they act to realize the technology's affordances [social media's affordances] (Strong et al. 2014)". I expect the notion of affordance actualization to be relevant in answering the second research question (How do societal conditions shape the use of social media by people living in authoritarian countries to participate in public discourse?). The affordance actualization approach should be a way to underscore what (and how) local conditions in society shape the way people take advantage of the potential for discourse-related actions they perceive in social media.

In their detailed study of the concept of affordance actualization, Strong et al. (2014) identify several overarching factors that shape the IS actualization process. These factors are the users' skills and abilities with the technology, the users' goals and motivations, the performance of the technology features related to the affordance (i.e., how well the features work when the IT is used), and work environment's characteristics (e.g., resources and behavioral norms characteristics of the context) (Strong et al. 2014). The perception of an affordance has also been suggested as a fundamental condition for enabling its actualization (Davis and Chouinard 2016).

That is, the user's awareness of the function that the technology can serve is the first step for later attempts to realize this function. Another factor that influences the possible realization of an IS affordance is the cultural and institutional legitimacy of the IT-mediated actions derived from the realization of the affordance (i.e., the social support in executing the IT-mediated action) (Davis and Chouinard 2016; Fayard and Weeks 2007). A similar observation was made by Zammuto et al. (2007) as they indicate that another factor that may limit (or facilitate) the actualization of IT affordances is the existence of organizational cultural norms and reward systems that encourage and enable users to engage in the IT-mediated actions promoted by the technology.

Bloomfield et al. (2010) picture an even more complex description of the affordance actualization process. They state that the outcomes of using a technology artifact in a social setting depend on the simultaneous actualization of the affordances of other technologies by many social actors. Describing how particular IT-related action possibilities are realized (or not) in a given social setting requires looking beyond the individual human and machine dyad since we should remain aware of the ways in which technological affordances are enabled (or interfered) by the co-presence of other people and other objects (Bloomfield et al. 2010). The social study of technology cannot focus on an individual encountering an object, but on how and when specific action possibilities emerge out of the ever-changing relations between people, and between people and objects (Bloomfield et al. 2010). Bloomfield et al. (2010) remind us to consider the co-presence of people other than the technology user and the existence of other artifacts in addition to the technology artifact under investigation.

In the following section, I detail the methodology that guided this research. This section will discuss the methodological assumptions, the research design, and the methods of data collection and analysis.

3. METHODOLOGY

Figure 1 presents a summary of the overall research method and phases.
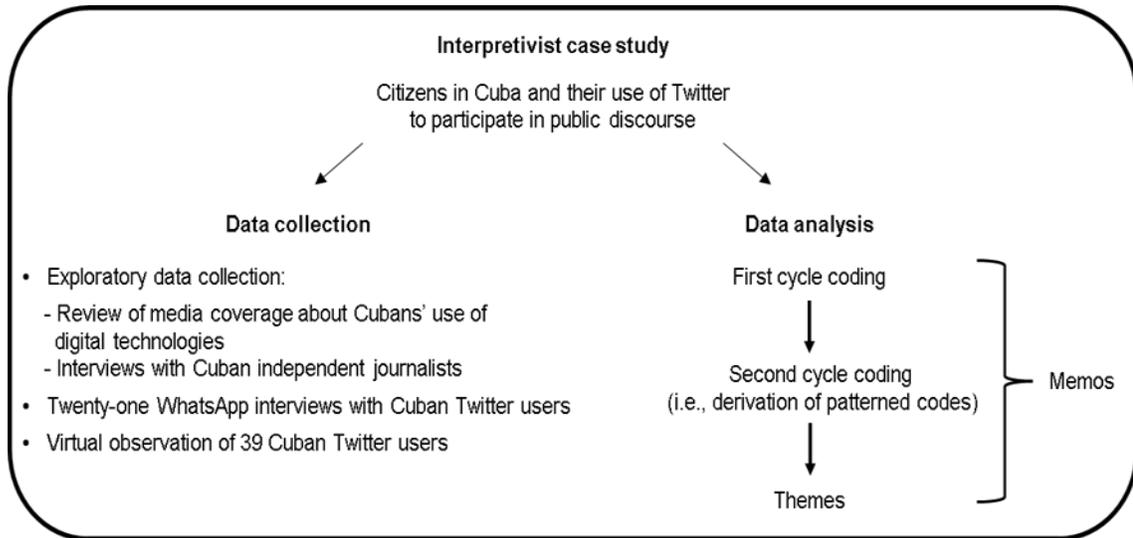
Figure 1: Summary of the Methodology

3.1. Ontological, Epistemological, and Axiological Assumptions

The research questions will be approached following the interpretivist paradigm. Therefore, these questions will be answered by collecting qualitative data from which theoretical propositions will be built inductively (Orlikowski and Baroudi 1991) (i.e., propositions will emerge from my literature-informed interpretations of participants' experiences using social media to participate in public discourse). As Creswell (2013) indicates, an interpretivist approach is appropriate whenever the purpose is to understand the context in which subjects address a problem or issue. A similar idea is emphasized by Walsham (1995): " Interpretive methods of research in IS are aimed at producing an understanding of the context of the information system, and the process whereby the information system influences and is influenced by the context." Therefore, interpretive research is suitable as a framework for this dissertation because the restrictive nature of the environment where citizens

interact with social media will be an important component to consider when building theory from this research.

Ontologically, IS interpretivist researchers are guided by the assumption that people "… develop and use their own subjective understanding of themselves, [and] their setting…". (Lee and Baskerville 2003). What is there to be known are the meanings that people create and attach to their world around them (Lee and Baskerville 2003). For interpretivists, the subjective meaning that participants assign to IT and its consequences represents an objective reality that needs to be understood (Lee and Baskerville 2003). In this dissertation, ontologically, the purpose is to understand the subjective meaning that people assign to the role of social media in allowing them to create and discuss socio-political information free of government control (Orlikowski and Baroudi 1991). I am interested in the way Cubans interpret their interaction with social media for discourse participation purposes. I want to know their beliefs and perception about what they can do with social media in terms of discourse participation and the consequences for their lives as citizens that they perceive from their interactions with these technologies.

Understanding how social media promotes public discussions in a given society demands capturing the contextual meaning actors assigned to these technologies and how this meaning shapes use. I assume that meaning is not only a function of the material properties of the technologies but also of historical and cultural characteristics that influence people's intentions and goals (Orlikowski and Baroudi 1991). For example, social media enable political discussions about sensitive topics in certain contexts because of people's contextual understanding of encoded phrases they can use to avoid online censorship (Rauchfleisch and Schäfer 2015). In this example, the possibility to discuss sensitive topics online does not only emerge from the possibility that social media offers users to access and share political information from multiple non-government-controlled sources (e.g., civil society groups). The culturally situated practice of deciphering coded criticism of the government also explains this possibility. Focusing on the meanings that people assign to their interactions with social media does not deny the material possibilities and constraints provided by technologies, e.g., the capability to meet virtually (versus physically) is an essential

determinant for allowing discussions about sensitive topics. The idea is to emphasize that the social context also shapes people's conception of how to interact with technology.

Epistemologically, the belief is that understanding the meaning that users assign to their interaction with social media needs the construction of interpretations that account for how this meaning is created and sustained (Orlikowski and Baroudi 1991). Rather than researching by starting with a set of constructs and their hypothesized relationships, I will attempt to derive concepts and their interconnection from gathering the social actors' interpretations of their reality (Orlikowski and Baroudi 1991). The assumption is that citizens' interactions with social media to participate in discourse will be shaped by the meanings they ascribe to these technologies, that meanings emerge out of social interactions in a given social context, and that meanings are developed and modified through an interpretive process (Orlikowski and Baroudi 1991).

Axiologically, I do not take a value-neutral stand while studying the phenomenon of citizens' social media-driven participation in authoritarian states. I assume that my prior beliefs, values, and interests with respect to the lives of citizens in totalitarian states shape the way I conduct this research (Orlikowski and Baroudi 1991). I believe that citizens from autocratic states should use social media and other technologies to push back against the hegemonic power exercised by the government. I believe that citizens' attempts to use technologies for this purpose are ethical and good for society, whereas the efforts engaged by the totalitarian states to restrain users from freely using technologies are a setback for citizens' wellbeing.

3.2. Research Design

I answered the research questions by carrying out a case study. Case studies are appropriate whenever gaining contextual knowledge is fundamental to addressing the problem at hand (Creswell 2013). This situation applies to the present dissertation as knowing which of the possible behaviors and outcomes triggered by social media will prevail in a particular restrictive environment is only possible if a thorough theoretical understanding of that context is achieved (Morozov and Docksai 2011).

A case study is a research approach "… in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case themes" (Creswell 2013). A case should be "… bounded or described within certain parameters, such as a specific place and time" (Creswell 2013). Case study investigation can be based on a single case or multiple cases. Eisenhardt and Graebner (2007) state that "[b]uilding theory from case studies is a research strategy that involves using one or more cases to create theoretical constructs, propositions and/or midrange theory from case-based, empirical evidence". The theory developed from case studies is emergent as it arises from "…recognizing patterns of relationships among constructs within and across cases and their underlying logical arguments." (Eisenhardt and Graebner 2007). Case selection should be justified by theoretical concerns, not statistical reasons (Eisenhardt 1989). Eisenhardt and Graebner (2007) state that cases are chosen based on theoretical sampling, which "…means that [they] are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs". The selection of a case to study in this dissertation implied choosing both a particular restrictive environment and social media application suitable to study the phenomenon of social media-enabled discourse participation in restrictive spaces.

Site Selection

Following a purposeful sampling approach, I decided to select a single revelatory case (Creswell 2013) that could offer a rich perspective of the phenomenon of social media-enabled participation in public discourse in restrictive environments. Selecting only one case study is a suitable option in IS interpretivist research (Lee and Baskerville 2003), which in my case was the most sensible choice given that available resources (e.g., the available time to complete the dissertation and funding) dictated the need to focus on only one country. Therefore, I chose to study Cuban citizens'

use of Twitter to participate in public discourse. Cuba was selected as a case site because of multiple reasons.

Cuba is a classic restrictive environment where a socialist single-party government has ruled for more than six decades. The 2019 Human Rights Watch report indicates that the Cuban government represses and punishes dissent and public criticism (Human Rights Watch 2019). Cubans who criticize the government continue to face the threat of criminal prosecution without benefiting from due process guarantees (Human Rights Watch 2019). In addition, Cubans are systematically denied rights to free expression and association (Human Rights Watch 2019).

Cuba also has distinctive socio-economic characteristics. In 2016, according to a survey by Rose Marketing, about 27 % of Cubans earn under $50 per month; 34 % earn between $50 to $100; 20 % earn $101 to $200, 12% earn between $201 to $500; and almost 4 % said their monthly earnings topped $500 (Whitefield 2016). Cuba has a dual currency system, whereby most wages are set in Cuban pesos, while the tourist economy and the market for many basic goods and services operate with Cuban Convertible Pesos (CUC), set at par with the US dollar. Cubans' economic quandaries also translate to access to IT. In 2018, Cuba had the lowest mobile phone penetration rate in Latin America (Freedom on the Net 2018).

One feature that makes Cuba an especially appealing context is that it was a society closed to the Internet and digital technologies until recently. For example, the government began allowing Cubans to buy personal computers as recently as in 2008 (Freedom on the Net 2018). In 2015, for the first time, Cubans experienced a massive opening to the Internet. In 2015, the Cuban government simultaneously opened the first public Wi-Fi hotspots in 35 public locations (i.e., public places where people could access a slow Wi-Fi connection for a paid fee). Before 2015, Internet Internet access for Cubans was almost non-existent. The main options to connect before 2015 were to visit one of the very few state-run available cybercafes (where the hourly rate was inordinately high) or use time-quoted Internet access provided at the job place (which was very regulated (e.g., the main social media sites were blocked)). Another breakthrough occurred in December 2018, when Cubans were allowed for the first time to have 3G Internet access in their

cell phones. Although cellphone internet plans opened more possibilities for citizens to access the web, it is still a very expensive option. As of March 2019, the cheapest plan to obtain cellphone Internet access was 7 CUC (which amounts to 7 dollars or 175 Cuban pesos) for 600 megabytes of data.

Another reason for selecting Cuba was my familiarity with the context. As a Cuban-born, I have a significant understanding of the cultural and historical conditions operating in the country. Creswell (2013) suggests that a researcher's familiarity with the context is a criterion to be weighted in the case selection decision. Therefore, as a native of the culture, I am well suited to comprehend the complex social dynamics in Cuba, which could be essential for the inductive theory development process that I will follow to answer the research questions.

Twitter was selected as the target social media technology because the exploratory data collection (described later in this chapter) suggested it was the application preferred by Cuban citizens, Cubans from opposition organizations, and independent media outlets to engage in socio-political conversations. Moreover, Twitter is the application frequently chosen by IS researchers interested in spelling out the impact of social media on the quality of public discourse and people's possibilities for participating in this discourse (Mousavi and Gu 2019; Shore et al. 2018).

3.3. Data Collection

As recommended for case studies, I combined several data collection methods: interviews, virtual observations, and document analysis. Interviews with Twitter users who live in Cuba were the main source of data. Virtual (online) observation or virtual ethnography (Kozinets 2002) is a data collection approach where the researcher follows key social media accounts and takes notes of the content relevant to the research questions (Zheng and Yu 2016). This method has been applied in previous IS research on social media's impacts on societal phenomena (Zheng and Yu 2016). In this research, virtual observation consisted of virtually monitoring what a subset of Cuban Twitter users tweeted as a path to comprehend how this technology was used to enable their participation

in socio-political conversations. Virtual observations complemented the findings emerging from the interviews and suggested new avenues of inquiry to pursue in the interviews.

Document analysis was primarily used at the beginning of the research to support creating the first interview protocols. Document analysis consisted of reading and extracting information relevant to the research questions from press articles covering how Cubans used digital technologies. I was interested in articles specifically about Cubans' use of Twitter and press reports about Cubans' interactions with other technologies such as the Internet in general, other social media apps, and smartphones. I analyzed press articles from Cuban independent media and international outlets discussing how ICT was helping Cubans fight for a more democratic country.

Data collection was divided into two phases. An initial exploratory phase extended from May 2019 to August 2019, where I conducted document analysis and exploratory interviews with citizens who had insights into how Cubans were using ICT to gain more freedoms. A second phase extended from September 2019 to May 2020, where I conducted both the main interviews with Cuban Twitter users and systematic virtual observations of the Cuban Twittersphere.

Exploratory Data Collection

An exploratory phase was sensible because, for interpretivist research, strategies for collecting data systematically and explicitly are notoriously difficult to specify before fieldwork begins (Barley 1990). In most cases, researchers are initially ignorant of how the setting is organized; hence, exploratory activities enable them to gain familiarity with the setting and discover routines that suggest avenues for structuring inquiry (Barley 1990). Therefore, the main goals of the exploratory efforts were to understand how Cubans use the Internet and other digital technologies (e.g., PCs and smartphones), common difficulties they had to access digital technologies, and strategies they used to overcome these difficulties. Another important aim of the exploratory phase was to gain initial insights into how Cubans were using digital technologies specifically to participate in pro-democratic activities, particularly in the free access and creation of public discourse.

The exploratory data collection started with document analysis, which consisted of retrieving press articles discussing Cubans' experiences with digital technologies as tools to increase their access to diverse socio-political information sources. I also retrieved and examined articles discussing general ideas about how Cubans used digital technologies. I was primarily interested in collecting press coverage in the period after December 6th of 2018, the day where Cubans were allowed for the first time to have Internet access on their cellphones. This day marked a shift in Cubans' relationship to the digital world since many of them were allowed for the first time to access the Internet under conditions they could not have before, e.g., at home, daily (or at least, more frequently than before), and to consume information in real-time.

With respect to the Cuban independent media, I chose to limit the search to the archives of two outlets well known for systematically covering how Cubans use digital technologies to advance democracy. These two outlets are the independent journal 14ymedio and the project YucaByte.The newspaper 14ymedio, founded in 2014, was the first Cuban independent digital media and was created with the explicit aim of using digital technologies to counteract the Cuban government news monopoly and deliver Cubans alternative political opinions and data about the social reality in the island not distributed by official channels (Knight Center 2016). The project YucaByte's goal (www.yucabyte.org) is to study the impact of ICTs in Cuba. They are mainly interested in depicting how the youth, entrepreneurs, and civil society use ICT to advance their personal and professional aims (www.yucabyte.org). I searched the section devoted to technology within 14ymedio.com and yucabyte.org and retrieved ten articles of interest, five from each medium. The date of the articles extends from December 11th, 2018, to August 12th, 2019.

I also performed a google search to retrieve international press coverage about Cuban's relationship with digital technologies. I used the terms "use of the Internet in Cuba" and "use of social media in Cuba". I found four press articles about how Cubans were using digital technologies to overcome the government's barriers to access information and the free expression of socio-political opinions. One article was from the New York Times, one from the Washington

Post, one from France24.com, and one from The Economist. The date of the articles extends from January 24th, 2019, to July 7th, 2019.

I complemented the exploratory phase by interviewing three independent journalists who lived in Cuba and worked for 14ymedio (one of the independent newspapers I used for document analysis). 14ymedio relies heavily on ICT to overcome the hurdles placed by the government to do independent journalism. The newspaper's goal is to use ICT to create new communication channels and educate a new generation of informed citizens who can rely on technologies to achieve higher levels of freedom of expression (Sanchez 2015). Given 14ymedio's reliance on ICT to fulfill their goals, I considered that interviews with their journalists during the exploratory data collection could offer me valuable information. The purpose of the interviews with these journalists was to find out how they used the Internet to access the information they needed to do their reporting and communicate with readers. I also wanted to know what difficulties they faced to benefit both personally and professionally from digital technologies. Finally, I asked them their point of view about the effect that the Internet and social media were having on Cuban's pursuit of a more democratic country.

I took advantage of 14ymedio reporters' active presence on social media to contact them. I contacted two of the reporters via Twitter direct messages and one using a Facebook message. I used a recruitment script and a data collection strategy approved by the university's Institutional Review Board (IRB) to contact these participants and conduct the interviews [1]. The interviews were carried out virtually via an audio WhatsApp call, and they were recorded. I recorded the interviews as it allowed me to capture all the information communicated by the participant and avoid focusing on writing his/her words during the conversation. Participants were asked to offer verbal informed consent to both the interview and its recording. I recorded the interviews with my laptop using the Voice Recorder Windows app. I had my laptop next to me while I had the phone calls. Using an app on my laptop to record the interview audio was a sensible decision since it

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[1] The IRB approved this dissertation research in June 2019. The conditions set by the IRB to conduct these interviews were to have participants offer verbal consent to both participating in the interview and recording its audio.

enabled me to read the interview questions and probes while conducting the call. Interviews were conducted in Spanish. Appendix 1 shows an English translation of the interview protocol. I transcribed the interviews' audio recording in Spanish and then wrote brief memos (in English) summarizing the main ideas expressed by participants. The interviews lasted 41, 46, and 32 minutes.

Main Data Collection Phase

From the exploratory data analysis, one thing that became evident is that Twitter is the preferred social media for Cuban citizens, Cubans from the opposition, and Cuban independent media to share and discuss socio-political information. Twitter is also the preferred social media to circulate socio-political content in the US (Mousavi and Gu 2019). Therefore, it seems that Cubans' preference for Twitter replicates a more general global pattern.

The research subjects were Cuban Twitter users. It was important to recruit users who live in Cuba (i.e., I excluded the Cuban diaspora) since only they approach Twitter under the direct influence of the socio-economic, political, and cultural forces operating in Cuba. I chose to recruit participants directly via Twitter. The first step I took was to create a pool of potential subjects to invite to participate in the research. To create the initial pool of potential participants, I used my Twitter account to monitor the Cuban Twittersphere from September to October 2019. From the accounts of an initial group of Cuban independent media organizations and journalists I already followed before September 2019, I selected potential subjects following two methods. First, because independent journalists interact with citizens on Twitter, I monitored the retweets and conversations from these journalists' accounts to identify users whose profiles stated they lived in Cuba. Second, I reviewed my Twitter's suggestion about "Who to follow" to identify people whose profile stated they lived in Cuba.

A potential research participant had to meet several inclusion criteria besides being a Twitter user who lived in Cuba. First, the subject had to be an ordinary citizen (i.e., independent journalists and opposition figures were excluded). I expected ordinary citizens to differ from

independent journalists and opposition members with respect to the goals motivating Twitter use and their skills and knowledge. I believed these differences would mean Twitter's affordances for participation in discourse would differ between citizens and other kinds of social actors. Ordinary citizens' life experiences differ notably, at least on average, from independent journalists and opposition members. The latter group seems to have, on average, a better economic situation and more access to technological resources, higher levels of education (at least in the case of journalists), and a different reaction to the fear of being punished by the government. Another relevant difference is that folks from the latter group approach Twitter from a more professional perspective as they respond to the agenda of the organization they work for; thus, they use Twitter following motivations that might differ from those of ordinary citizens.

Another exclusion criterion was to leave out ordinary Cuban citizens who primarily used Twitter for actions other than participating in public discourse. It is common to find Cuban users who almost uniquely use Twitter to consume and share sports content, content about IT products and services, content about the business they own or work for, or other content not related to news and opinions about socio-political issues and events. These are "apolitical" users who never or very rarely tweet, retweet, or comment on socio-political content. Other research works about the influence of digital technologies in the political life of autocratic regimes have also filtered out non-politically motivated users. For example, Gainous et al. (2018) suggest focusing on the content that citizens from closed regimes consume on social media rather than whether they use these technologies. Gainous et al. (2018) indicate that "… it is not the platform that influences opinions, but the type and form of the content consumed. Using Facebook alone does not influence political attitudes if the content to which one is exposed is not political. A group of friends using Facebook to share information on a collective hobby produces social capital, but likely little in the way of political influence".

Finally, as per an IRB directive, eligible participants must be showing their real identity on Twitter (i.e., their real name and picture).

Interviews

In October 2019, I had identified a group of 27 potential research participants (i.e., 27 Cuban Twitter users who met the inclusion criteria, only pending the verification of their identity). From November 2019 to April 2020, as the research progressed, I was able to identify 12 new potential participants. Once the potential research subjects were identified, I contacted them on Twitter via a direct message. The recruitment script I used in this message included my name, my identification as an FIU researcher, a brief explanation of the research goal, a short description of how the interview was to be conducted, and details about the compensation. The script also had one question intended to meet the IRB directive to verify that participants were using their real name and picture on their profile. I also attached an informed consent document to the contact message. I asked participants to read the informed consent form, and if they finally agreed to participate, I started the interview by asking them to offer verbal consent for both conducting the interview and recording it.

I conducted and recorded the interviews with Twitter participants, following the same approach I used for the initial interviews with independent journalists. I made a WhatsApp call to participants who agreed to participate, I set up the cellphone in speaker mode, and I had my laptop next to me, which I used to record the call audio with the Voice Recorder Windows app. Before I conducted the first interview, I created an interview protocol with a semi-structured format in Spanish. An English translation of that initial interview guide is shown in Appendix 2. The protocol included the main questions I wanted to ask participants and the probes I prepared to inquire further about certain details. My overall goal with the questions in this first interview was to get a general sense of the possibilities for accessing and creating socio-political content that Twitter offers Cubans and how these possibilities were enacted in practice. In addition, consistent with the notion of IS affordances, I inquired users about the specific Twitter features they used, their motives and goals when they approached Twitter, and how they perceived that the contextual conditions in Cuba impacted how they interacted with Twitter. The codes generated as the data analysis progressed suggested new concepts and ideas relevant to the research questions. Therefore, the interview protocol was regularly updated to incorporate new questions and modified some of the

existent ones in an attempt to gather more information about emergent ideas. Appendix 3 includes a sample of some of the new and modified questions added to the interview protocol.

Out of the 39 potential participants I identified during the data collection months, 21 agreed to participate in this research. Therefore, I was able to interview a total of 21 Cuban Twitter users. Out of the 21 interview participants, 14 were males (62 %), and seven were females (38 %). Concerning participants' age, the mean was 32.1 years old, the median was 29 years old, the standard deviation was 8.98 years old, the youngest person was 23 years old, and the oldest one was 55 years old. Participants represented 11 of the 15 Cuban provinces, with Havana being the most heavily represented with 6 participants. Five other provinces were tied in terms of representation, with 2 participants from each of them.

The first 11 interviews were conducted between October and December of 2019. The last ten interviews were conducted from March to May of 2020. I conducted the first interview on October 19th of 2019 and the last one on May 14th of 2020. The average interview duration was 46.5 minutes. Fourteen of the 21 participants started using Twitter after December 6th of 2018 (the day cellular Internet data became available in Cuba). The other seven participants already had a Twitter account before this date; however, only three were regular Twitter users before this date (the other four participants already had a Twitter account but rarely used it).

Virtual Observation (VO)

Observation is a signature data collection method for interpretive research. According to Creswell (2013), "[t]he observations are based on your research purpose and questions. You may watch physical settings, participants, activities, interactions, conversations, … during the observation… You should realize that writing down everything is impossible. Thus, you may start the observation broadly and then concentrate on research questions." Given that this research aims to understand how Cubans interact in a virtual environment, I chose to conduct a virtual observation (VO) exercise. Adapting Creswell's definition, I can state that virtual observations are those where we watch conversations among participants who meet in a virtual digital medium. Virtual observation

results in data directly copied from the computer-mediated communications of online community members (Cuban Twitter users in this case) (Kozinets 2002).

Virtual observation (VO) has gained popularity in IS research. Zheng and Yu (2016) used virtual ethnography to collect data from Weibo in their research about social media-enabled collective action. Virtual ethnography consisted of following the Weibo account of the Non-Governmental Organization (NGO) under study as well as the personal accounts from several activists working for this organization (Zheng and Yu 2016). The researchers systematically observed the discourse generated by these accounts and took notes about Weibo posts that they deemed to contain useful information (Zheng and Yu 2016). Zheng and Yu (2016) summarized the benefits of virtual observation as follows "…[the researcher's] direct participant observation as an ordinary Weibo user broke the spatial and temporal boundaries of face-to-face semi-structured interviews, and provided multi-layered, rich and subtle sense-making by the authors with regard to the emerging and scaling of the [studied NGO's] campaign …". Leong et al. (2019) also included the conversations on YouTube and Facebook about the environmental movement that they were researching as part of the data that they analyzed. They searched YouTube and Facebook for posts made by individual citizens and environmental community groups chronicling the environmental movement they were studying (Leong et al. 2019).

Observation in qualitative research should be done efficiently and with a clear target (Barley 1990), an issue that is even more pressing in virtual environments where the risk of information overload is higher (Kozinets 2002). It is fundamental to design an observation protocol that specifies what to observe, whom to observe, when, and for how long (Creswell 2013). It is also important to define how notes will be made for the data collected from the observation (Creswell 2013).

I designed a VO protocol where only tweets with relevant information were recorded. Given the large volume of data that can be accessed via social media platforms, it is common for researchers to store and analyze only a fragment of all the available data. For example, Vaast's 2017 research was based on data from Twitter. However, rather than analyzing all the available

tweets, they restricted their attention to tweets that reflected instances of connective action (which was the phenomenon they were studying). They specified clear criteria for deciding when a tweet could be considered worth analyzing (i.e., an instance of a connective action episode). I proceeded similarly by establishing specific conditions for the usefulness of the tweets I observed. I centered my attention on tweets with information related to the research questions. Using the research question as a lens to filter observation data is common in virtual and physical observations (Barley 1990; Da Cunha and Orlikowski 2008).

I decided to record tweets containing:

- Cubans' expression of what Twitter meant for their possibilities to communicate freely (i.e., communication benefits they perceived on Twitter).

- Needs, desires, and goals that users, in their role of citizens, satisfy and achieve via Twitter.

I considered that tweets with such content could contribute to answering the first research question. I also retrieved tweets containing information about environmental influences on how Cubans interacted with the Twitter app (research question 2). In other words, tweets with information about how Cuba's socio-economic and political conditions shape Cubans' use of Twitter. Therefore, I also paid attention to tweets containing:

- Expressions of problems accessing and using the Internet.

- Expressions of problems accessing and using Twitter.

- Tweaks and workarounds that Cubans used to solve the problems they face for accessing and using Twitter (and the Internet in general).

After I coded the first 11 interviews, I concentrated the VO efforts on two goals. First, I attempted to corroborate findings derived from the interviews that I considered required more clarification. The VO was a great resource to find examples confirming the codes that I could not initially certify only from the interviews. For example, VO data allowed me to corroborate the existence of a Twitter use strategy utilized by Cubans that I called "surveillance avoidance via an anonymous account". Secondly, I kept conducting the VO exercise to discover new codes and ideas relevant to the research questions. The VO was indeed a source of novel information since

it enabled me to discover ideas and patterns in the data that had not come out in the interviews. For example, one particular manifestation of the affordance of "communicating with non-government discourse gatekeepers" was citizens' use of the Twitter Support Team account to report government accounts that engaged in disingenuous actions on Twitter (i.e., artificially amplifying content). I discovered this finding (and others) exclusively from the VO.

Virtual monitoring started on September 22nd of 2019 and concluded on the last week of May 2020. I monitored the same group of users I had already identified as potential research participants for the interviews. This group's size ranged from 27 users at the beginning of the monitoring to 39 when this activity ended. During the months when I was conducting the virtual observations, I checked the list of target users once a week (mostly on the weekends) to monitor and record relevant content generated by these users during the week.

Monitoring proceeded by logging on Twitter and checking out the pool of target users' accounts to record tweets and replies with textual information that I deemed valuable. I created a Twitter list called "Most relevant users," which included the users I was observing to facilitate this process. Every time I logged in to Twitter to conduct the observations, I scanned this list. Doing so allowed me to focus on the content from these users and exclude information from other accounts that I followed that were not relevant for data collection purposes. For every tweet that I read and considered relevant, I did the following:

- I bookmarked it on Twitter. This allowed me to have easy access to this tweet at a later time and conveniently access all the commentary generated around it (e.g., the replies to the tweet).

- I copied the tweet's text and text from replies to the tweet that I considered to be relevant and pasted it in a Word document. This document had four columns. The first column had the tweet date. I used the second column for the text that I copied from the tweet. The third column contained the code(s) applicable to the tweet (if there was an applicable code, otherwise, there was only a note about the relevance of the text in column four). Finally, if applicable, the fourth column included brief notes pointing out any remarkable idea I

learned or confirmed from the tweet. Classifying and categorizing (i.e., coding) the data textually copied from online media is necessary for virtual observations (Kozinets 2002). The notes represented my interpretation of the tweet and its replies. Sometimes the note was a simple statement of why the tweet was an instance of a code previously derived from the interviews. On other occasions, the interpretation was a brief reflection of how the tweet clarified unclear ideas from the interviews or why it offered information about a new idea. All the VO information recorded and coded in the Word document was later uploaded to NVivo and analyzed as described in section 3.4.5.

Although I initially organized the VO data in a single Word document, chronologically as described in the previous paragraph, I later realized there was a more meaningful way of storing the VO data: one document per user. I made this choice considering that I was observing a manageable number of users (i.e., 39) and the fact that it was easier to interpret any new tweet that I wanted to add by comparing it to previous tweets, or interview fragments, produced by the same user. Therefore, I created a four-column Word document, with the same format as the document described in the previous paragraph, for each individual user for whom I found at least one useful tweet. I did not find valuable tweets from all 39 observed users but only from 28 of them. There was a group of eleven users whom I monitored for whom I did not record any tweet as part of the virtual observation exercise. The reason for this exclusion was that the tweets I observed from these users were relevant but repetitive (i.e., I had already recorded tweets with similar information from other users).

The group of 28 individuals from whom I recorded virtual data consisted of the 21 participants who participated in the interviews and seven other users whom I did not interview. Out of the 28 observed users, 18 were males (64 %), and ten were females (36 %). The volume of tweets recorded for each individual varied. I recorded less than five tweets for nine individuals. For each of the remaining 19 users, I collected at least five tweets. On average, I collected 8.25 tweets per individual. In total, I recorded 231 tweets from the virtual observation exercise.

3.4. Data Analysis

Figure 2 presents a summary of the data analysis process, which is described with more details in the upcoming subsections.

The data analysis focused on the data collected from the interviews and the virtual observation exercise. Since the interviews were the main data source, I first describe the analysis of the interview data. First, I transcribed the recordings of the 21 interviews from Spanish to English, and then I applied the qualitative coding practices suggested by Saldaña (2015) to the transcribed data. The transcribed texts from these interviews were the basis for writing notes, memos, codes, and themes.

The first step was data preparation and pre-coding, where notes (i.e., jots) were written on the transcribed interviews (Saldaña 2015). Notes are short ideas synthesizing the text or pointing out something interesting about it (Creswell 2013). They are preliminary words or phrases with ideas for analytic consideration (Saldaña 2015). Note writing occurred while transcribing the interviews because it was convenient to make comments and quick observations as I was transcribing the interview audio. I also made some handwritten notes during the interviews. While transcribing, I made notes for any text fragment where the participant mentioned something relevant either specifically to the research questions or in general about technology use in Cuba and the cultural, economic, and political characteristics of the Cuban society. As Miles et al. (2014) recommend, I started the process of coding after adding notes to the transcribed texts.

Since this was my first experience coding, I manually coded the first interviews for two reasons. First, I believed the only way to understand the complex coding process was to carefully analyze each interview fragment and decide what code, if any, applies to it. As pointed out by Saldaña (2015), "After you have gained some experience with hard-copy coding and have developed an initial understanding of the fundamentals of qualitative data analysis, apply that experiential knowledge base by working with CAQDAS [Computer-Assisted Qualitative Data

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Analysis Software]". Also, given my inexperience in coding, I initially tried to avoid dealing with two complex tasks: learning to code and learning to use coding software. It turns out that this is a shared sentiment for many novice qualitative researchers, as evidenced by Saldana's (2015) observation: "Trying to learn the basics of coding and qualitative data analysis simultaneously with the … multiple functions of CAQDAS programs can be overwhelming for some, if not most." Therefore, I coded the first 11 interviews manually and the last ten interviews using NVivo. For the manual coding, I used Microsoft Word with a landscape layout and a table with three columns (Saldaña 2015). The first and widest column contained the fragments of the interview transcripts, the second column contained the preliminary notes, and the third one displayed the codes.
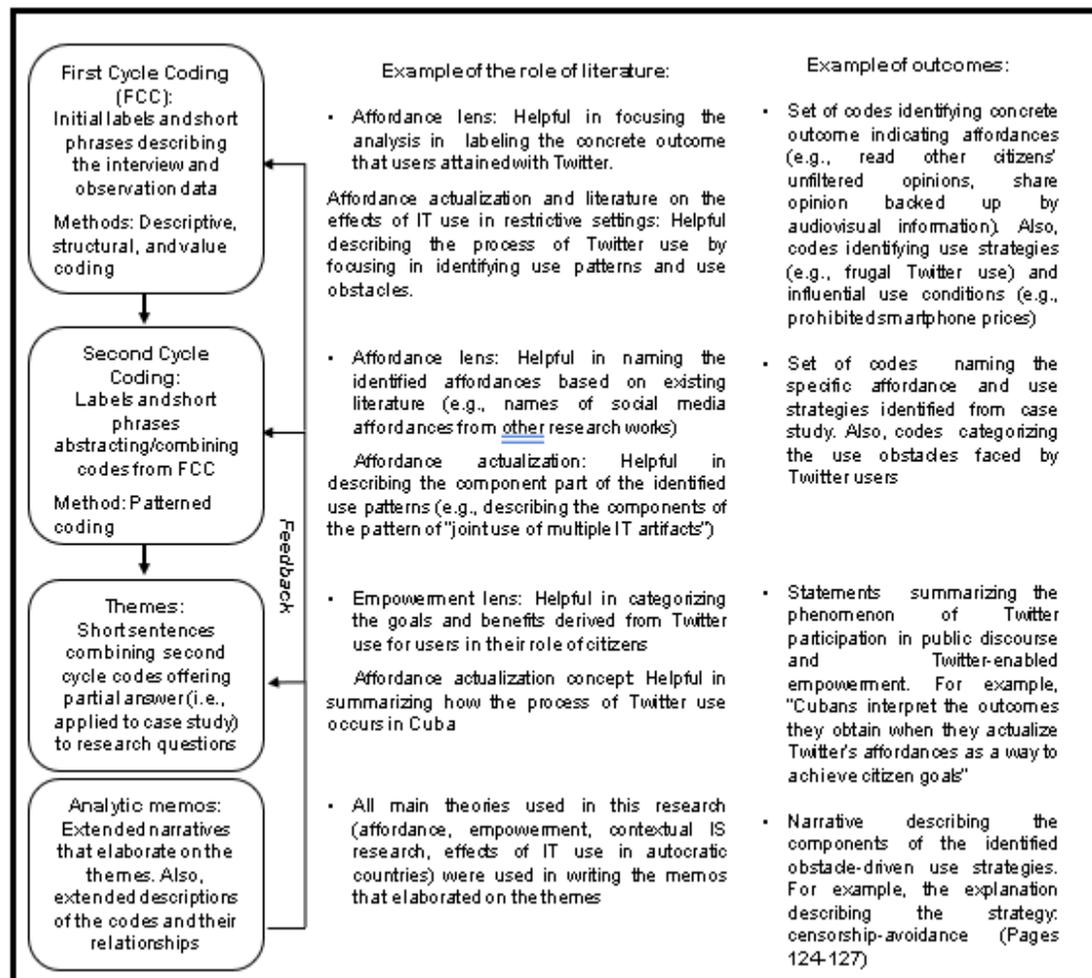
Figure 2: Summary of Data Analysis

First Cycle Coding

The research questions guided the coding process (both first and second cycle coding). As discussed in the Introduction, one suitable way of answering the first research question is by identifying affordances. A technology affordance refers to an outcome or goal that a user perceives s/he can get by using the technology in particular ways (Burton-Jones and Volkoff 2017). Therefore, I was particularly interested in deriving codes that refer to users' beliefs, desired outcomes, and perceived benefits around their Twitter participation. The second research question relates to the connection between the particularities of the context in a restrictive environment and how people perceive and actualize Twitter affordances. Therefore, the second question led the coding process in the direction of identifying actions and strategies that users take to achieve desired discourse participation outcomes.

The coding process started with first cycle coding (FCC), which are the "…processes that occur during the initial coding of the data" (Saldaña 2015). Saldaña (2015) discusses more than 20 FCC methods but warns against using too many of them to code our data. He suggests that just a few FCC methods may suffice to gain initial insights from the data. One of the FCC approaches I applied was descriptive coding, which generates codes that summarize the passage's essential topic. Descriptive codes are identifications of the topic (i.e., what is talked in a fragment), not abbreviations of the content (Saldaña 2015). Because of its simplicity and categorization possibilities, descriptive coding is suitable for most qualitative research (Saldaña 2015).

I also applied structural coding, which "applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question used to frame the interview" (Saldaña 2015). I chose structural coding because it is a method "... framed and driven by a specific research question and topic" (Saldaña 2015). Also, since structural coding proposes a content-based summarization, I considered it a good complement to the topic-based summarizations offered by descriptive coding.

I also applied value coding, which is "… the application of codes … that reflect a participant's values, attitudes, and beliefs, representing his or her perspectives or worldview." (Saldaña 2015). Value coding was helpful because I was interested in deriving Cuban users' perspectives about the needs, desires, and goals that they satisfy and accomplish via their Twitter-driven participation in discourse. I also wanted to know their beliefs regarding how Twitter allowed them to achieve desired outcomes.

The last FCC method I used was subcoding. Saldaña (2015) defines a subcode as "… a second-order tag assigned after a primary code to detail or enrich the entry…". Subcoding was not a method I planned to use in advance. However, a hierarchical structure in participants' answers became apparent while I was coding the interviews. I noticed that many of the codes I was deriving belonged to the same overarching category. For example, I noticed that words and ideas connected to the topic of the interview questions could be used as structural codes that served as primary codes for more detailed, second-order labels. For instance, the subcoding structure "Use goal/ Counteract government discourse" captures the relationship between "Use goal" as a structural code and "Counteract government discourse" as a more specific, content-related label. Subcoding was also applied to link descriptive codes with more specific content-related codes (e.g., Consequence of action/ use discouragement).

As the analysis progressed, I created a list of the codes I was deriving along with the FCC method I used to derive them. I used this list as a starting point for coding each new interview. Creating and updating first cycle codes was guided by writing brief coding memos. These short coding memos helped describe the meaning of the codes and record my thoughts about words and ideas that could represent each code.

After the manual analysis of the first 11 interviews, I generated 74 first cycle codes. Appendix 4 contains the full list of these codes. Table 2 presents a sample of these codes.

Table 2. Examples of First Cycle Codes

FCC guiding method	Examples of codes
Descriptive	- Twitter and another app - Twitter use condition - Concrete outcome from use
Structural	- Twitter use condition/ Slow internet connection - Twitter use condition/ Unstable internet connection - Benefit / Discuss politics in public - Benefit / Access information to assess government's performance
Value	- Belief/ Safe way to criticize the government - Belief/ Convenient access to information - Belief / Influence on government

Second Cycle Coding (SCC)

The need for SCC methods naturally arises as we gain more precision in discovering patterns in the data. It is common to realize that larger text segments are better suited to one key code than several individual codes (Saldaña 2015). Saldaña (2015) recommends recoding the data after all FCC have been created as a preamble for deriving the themes (Saldaña 2015). Saldaña (2015) observes that "… some [first cycle] codes will be merged together because they are conceptually similar; infrequent codes will be assessed for their utility…; and some codes … may be dropped altogether because they are … deemed "marginal" or "redundant" …". In short, "[t]he primary goal during Second Cycle coding is to develop a sense of categorical, thematic, conceptual, and/or theoretical organization from your array of First Cycle codes… Basically, your First Cycle codes (and their associated coded data) are reorganized … to eventually develop a smaller and more select list of broader categories, themes, concepts, and/or assertions." (Saldaña 2015).

Saldaña (2015) proposed six SCC methods. I chose to apply the method of pattern coding since this approach offers a great balance between application simplicity and summarizing (categorization) potential. Pattern codes are explanatory codes that signal an emergent theme or explanation (Miles et al. 2014). Pattern codes are meta-codes that group first cycle codes into a smaller number of categories, themes, or constructs (Miles et al. 2014). Saldaña (2015) suggests

conducting second cycle pattern coding by collecting similarly coded passages from the data, reviewing the first cycle codes assigned to these passages to find commonality, and assigning them various pattern codes. A pattern code is a stimulus, a starting point, to develop a statement that describes a major theme or a theoretical construct from the data (Saldaña 2015).

I started pattern coding by grouping similar first cycle codes together. I put together all the data chunks from the 11 interviews corresponding to similar codes. From a careful reading of the chunks associated with similar codes, I reflected on how to relabel the phenomenon or idea that participants were describing. In other words, I tried to summarize related first cycle codes into a smaller number of categories (i.e., pattern codes). I looked for pattern codes representing summarizing categories, causes, and explanations (Miles et al. 2014). Although I remained open to identifying emerging categories and ideas not directly connected to the research questions, these questions heavily guided this summarization task.

I reduced the list of 74 first cycle codes into 28 second cycle codes. Each second cycle code was associated with a set of first cycle codes. For example, Table 3 summarizes the first cycle codes that formed the second cycle code "cost of obstacle-driven use strategy"[2]. Appendix 5 contains a codebook with the 28 second cycle codes I generated from the first 11 interviews. A codebook is a list of codes, code descriptions, and data examples for references (Saldaña 2015). The codebook in appendix 5 includes the name of each code, a brief description of its meaning (i.e., what the code is summarizing and referring to), and examples of data representative of the code (i.e., translated fragments from participants' interview answers or VO tweets).

Table 3: A Second Cycle Code and Its Components First Cycle Codes

Component first cycle codes	Second cycle code
Participation discouragement	Cost of obstacle-driven use strategy
Wasted Internet data	

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[2] The reader should notice that the term "obstacle-driven use strategy" was another code I derived. However, during the writing process, I decided that a better term would be "obstacle-circumvention use strategy". This latter term is the one I used to write the results.

Wasted time	Description: Participant mentions the drawbacks s/he perceives from engaging in obstacle-driven use strategies.
Low-quality participation	
Annoyance	
Missed content	

Memoing

In addition to coding, another analytic strategy for qualitative research is to engage in memo writing. According to Miles et al. (2014), "An analytic memo is a … narrative that documents the researcher's reflections … about the data. These are not just descriptive summaries of data but attempts to synthesize them into higher-level analytic meanings." Memoing is a method to rapidly capture thoughts throughout data collection and analysis (Miles et al. 2014). At more advanced stages of the study, however, "…memos can be more elaborate, especially when they piece together several strands of the data…" (Miles et al. 2014). Memo writing is a method to derive insights and findings from the data and a tool to document our coding processes and code choices (Saldaña 2015). In short, memos capture our thoughts about the results of the coding process and our reflections on what the data progressively tell us about the research questions.

For each interview, I wrote two types of memos: short memos and one extended analytic memo. I wrote short memos as I was coding each interview. Data coding short memos documented the coding process (Saldaña 2015). I wrote them to reflect on my reasons for selecting some codes, the similarities and differences between some codes, the hierarchical structures I discovered in the emerging codes, and other ideas about the coding process. Content-related short memos were my most basic attempts to derive patterns and preliminary research findings from the interviews (Saldaña 2015). Content-related short memos were mostly, although not exclusively, one to a few sentences with a brief summary of what the participant was describing in an interview fragment, my views (i.e., my conjectures) on what the participant was implicitly trying to convey, and my observation of how the fragment helped to answer the research questions. The extended analytic memo that I wrote for each interview included:

- A brief summary of each interview question, where I summarized what I learned from the participant's answer to that question.

- A summary table with the affordances for participation that the participant perceived on Twitter, together with the Twitter features and the participant's goals and motivations relevant to the affordance.

- Specific ways, strategies, and "hacks" that the participant used to achieve his/her desired participation goals.

- My observations of how the participant's particular case compared to previously interviewed participants.

- My thoughts about ideas that were still incomplete and needed attention in future interviews and virtual observations.

I also wrote overarching analytic memos after a round of several interviews. I wrote such memos after the fifth, eleventh, and sixteenth interviews. The format and topic covered in these memos were the same as the extended analytic memos. The difference is that the overarching memos consolidated and abstracted the findings and observations made in all previous interviews. Finally, I wrote transition memos to support the conversion from first to second cycle coding (Saldaña 2015). I wrote those memos after putting together all the interview fragments that belonged to the same code. Transition memos captured my idea of how each code could be changed or removed and how it might connect to other codes.

NVivo Coding

The 15 second cycle codes derived from the manual coding were the starting point for the NVivo coding. I started the process by creating 15 nodes in NVivo that represented these 15 codes. I also created subnodes for each second cycle code (i.e., subcodes) representing its first cycle code components. I also loaded the ten Word documents containing the transcriptions for the last ten interviews as files. Each transcribed interview contained several notes that I wrote while I was

transcribing it. I transformed these notes into NVivo annotations. An annotation is a convenient way of recording a note in NVivo as it facilitates the retrieval and editing of the note.

I used the 15 initially created nodes to code each of the last ten interviews. Although these codes were satisfactory for labeling most of the text passages, it quickly became evident that new codes were needed to capture the essence of some fragments. It is expected that once a researcher has identified a set of second cycle patterned codes, s/he may find the need to relabel some of these codes or add new ones (Saldaña 2015). For example, I discovered a new pattern code, "Circumstantial conditions" reflecting particular conditions of the specific user-Twitter interaction episode. Another new pattern code I created was "Learned strategy", which represents primarily non-IT-based solutions that Cuban users found to minimize their difficulties using Twitter. I also relabeled some of the second cycle codes I found on the first coding round, mainly because I realized that they captured a broader phenomenon or idea than I initially perceived. For instance, "use recommendation" was relabeled "How to increase Twitter's impact", and "perceived benefit for individual" was recoded as "perceived effect on individual". Finally, I merged some second cycle codes. For example, "country-level obstacle", "person-level obstacle", and "other obstacles" were grouped into the code "use obstacle".

I also took advantage of NVivo's feature to create memos. I created a total of 29 memos as I was coding the last ten interviews. Some memos were coding memos, which I used to reflect on the coding process (e.g., why a new code was being created, why codes were being merged or split into subcodes). Other memos were analytical as they contained a synthesis of new patterns that I discovered during the analysis of the last ten interviews.

Virtual Observation Analysis

The first phase of analysis of the virtual observation data occurred as it was being collected. It was natural to classify the observation data with the codes I derived from the interviews because the main purpose of the virtual observation exercise was to triangulate the interview findings. That is why I analyzed (e.g., coded and jotted) the virtual observation data as I was collecting it.

The analytical strategy I now describe was the second and final phase of the virtual observation data analysis. This phase took place in June 2020, once I had collected all the virtual observation and interview data. In this second phase, I uploaded the 28 Word documents I had filled out with virtual observation data as files to NVivo. Many of the tweets in these documents already had a code assigned during the first virtual observation coding phase. However, some tweets had only temporal codes (which were identified with a question mark) or no code at all (i.e., they only had notes specifying why they contained useful information). Therefore, the first task in NVivo was to assign a final code to each fragment of virtual observation data. Some fragments kept the initial code I had initially assigned, but others got assigned a different code.

During this second phase of VO data analysis, I also wrote analytics memos in NVivo. Some memos captured conclusive ideas that seemed clear after coding the interviews and all the virtual observation data. Other memos were written to record the meaning of new codes and relationships between codes that emerged exclusively from the virtual observation data.

Themes

The final data analysis phase was writing themes from the codes generated after analyzing the interview and virtual observation data. Saldaña (2015) defines a theme as "…an extended phrase or sentence that identifies what a unit of data is about and/or what it means". Themes are "… complete sentences that elaborate on the researcher's interpretations of participants' meanings in more nuanced and/or complex ways." (Saldaña 2015). Whereas a code is "…a word or phrase describing some segment of your data that is explicit, … a theme is a phrase or sentence describing more subtle and tacit processes" (Saldaña 2015). Saldaña (2015) illustrates the difference between a theme and a code with the example of "Security", which can be a code, and "Denial means a false sense of security", which is a prototypical statement capturing a theme. In short, in contrast with a code which is a word or short phrase mainly summarizing and describing an idea particular (i.e., close in meaning to) the data, a theme represents a longer phrase about a more general and abstract idea.

Themes are created by comparing the major codes obtained from the data analysis (e.g., second cycle codes) and attempting to offer a tentative explanation of the phenomena under study (Saldaña 2015). Themes should put together several major codes or categories to describe processes, tensions, causes, and consequences (Saldaña 2015). Saldaña (2015) suggests adding the verbs "is" and "means" to major codes or the relationship between codes in order to derive themes. Based on these suggestions by Saldaña (2015), I derived themes by writing summarizing short sentences that indicated how each second cycle code, or the relationship between two or more second cycle codes, provided an answer to the research questions. I also wrote some themes that were not directly answering the research questions but were still valuable. For example, the theme "Cubans' drives for using Twitter to participate in discourse are also emotionally laden". Although this theme does not directly contribute to answering the research questions, it is still useful as it captures an observation about why citizens in totalitarian regimes feel motivated to use social media for political purposes. Table 4 summarizes all the themes. The first column of Table 4 represents the overall topic of the themes in column 2.

Table 4: Themes About the Phenomenon of Twitter-Enabled Empowerment

Theme topic	Theme
Drivers of participation	- Cubans' drives for using Twitter to participate in discourse are also emotionally laden. - Affective motivations and beliefs about both the outcomes of use and the process of use are determinants of the behavior "use of Twitter to participate in public discourse". - Users have both individualistic drives (i.e., desired personal benefits as citizens) and community-driven drives (i.e., desire to benefit another person and their community) for using Twitter to participate in public discourse.
Twitter-enabled citizen empowerment	- The affordances for discourse participation that Cubans perceive on Twitter are a form of action empowerment. - Cubans perceive on Twitter affordances related to the access and creation of socio-political content, as well as the possibility to communicate with key socio-political actors

	- Cubans interpret the outcomes they obtain when they actualize Twitter's affordances as a way to achieve citizen goals
	- Twitter-enabled citizen goals are empowered outcomes that Cuban attain from Twitter.
	- Empowered outcomes could be instances of psychological empowerment, such as the perception of recovered freedoms and the process of learning about democracy.
	- Empowered outcomes could be objective outcomes such as the influence on the socio-political life and the control of intangible socio-political resources.
Actualization of Twitter affordances	- Twitter use strategies are built to overcome use obstacles (i.e., they are obstacle-driven strategies)
	- Twitter use strategies are built around both useful Twitter properties and the joint use of Twitter and other technologies.
	- The determinants of the use strategies that Cubans apply to use Twitter are factors related to the socio-economic system in Cuba (i.e., macro factors) and also factors specific to each user (i.e., micro factors).
	- There are circumstantial conditions (i.e., conditions of the specific actualization moment) that ultimately determine what use strategy the user will adopt
	- The macro and micro factors influence the circumstantial conditions
	- The selection of a specific use strategy occurs as users reflect on how to better use Twitter given the circumstantial conditions.
	- Obstacle-driven use strategies could be learned strategies that the user has previously applied or improvised strategies.
	- Applying obstacle-driven strategies implies negative consequences and costs for the users.
	- The actualization of some of the Twitter affordances that Cuban users perceive on Twitter is a collective endeavor; it depends on more than one user taking advantage of multiple affordances.
Twitter affordances for other actors beyond citizens	- Focusing on the affordances that Twitter offers several types of actors (citizens, government, Twitter developers) is a good starting point to understand the possibilities that social media offer citizens in restrictive environments to advance democracy.

3.5. Assessment of the Validity of the Case Study Results

There are standards for qualitative researchers to assess the validity of the case study accounts they propose. Klein and Myers (1999) proposed a set of principles for conducting and evaluating interpretivist field studies. I complied with these principles while conducting this research. For example, Klein and Myers (1999) recommend following the principle of contextualization, which requires the researcher to reflect on the social and historical background of the setting. In this dissertation, the discussion of the affordances and citizen goals that citizens perceive on Twitter includes references to how the historical conditions in Cuba drive citizens to have such perceptions. Klein and Myers also emphasize the principle of abstraction and generalization, whereby unique instances found in the case study are related to ideas and concepts that apply to multiple situations. I applied this principle when I abstracted the case study results I found in Cuba into theoretical propositions (i.e., general ideas) that describe the phenomenon of social media use and empowerment in restrictive environments. I also applied Klein and Myers' principle of suspicion, which requires the researcher to be sensitive to distortions in the narratives collected from the participants. I applied this principle when describing the degree to which Cubans were able to influence the government via their Twitter participation. Cuban users tended to have an overly optimistic view of how much their Twitter participation mattered. However, after carefully observing the Cuban Twittersphere and reading of both Cuban independent media outlets and literature about this phenomenon in other restrictive settings, I concluded that Twitter participation offered Cubans limited and short-term benefits regarding their power struggle against the government.

I also adopted Creswell's (2013) standards to address the validity of the case study results. Creswell (2013) defines validation in qualitative research as an effort to evaluate the accuracy of the findings and proposes eight validation strategies to accomplish this purpose. Creswell (2013) recommends that qualitative researchers engage in at least two of the eight strategies in any given study.

One of the validation strategies recommended by Creswell that I applied in this research was "[p]rolonged engagement and persistent observation in the field … [to build] trust with participants, [learn] the culture, and [check] for misinformation that stems from distortions introduced by the researcher or informants." The data collection phase in this dissertation was indeed a long-term effort since the virtual observation extended for several months (i.e., from October 2019 to May 2020). This allowed me to acquire a good understanding of the nascent culture of Cuban netcitizens who appropriate social media to participate in public discourse activities. The extended observation I conducted also enabled me to qualify and correct inaccurate statements posed by interview participants. For example, participants tended to overstate the impact of social media denouncements on the government's actions. The VO exercise enabled me to better understand how accurate this perception was. For instance, I realized that simple replies (even negative ones) that government entities offered to citizens' criticism on Twitter were interpreted by participants as evidence of influence.

Triangulation is another approach recommended by Creswell (2013). It refers to the process of "…corroborating evidence from different sources to shed light on a theme or perspective" (Creswell 2013). Triangulation usually manifests when a researcher locates evidence to document a code or theme in different sources of data (e.g., interviews, archival documents, surveys) (Creswell 2013). I triangulated the findings emerging from the interviews with the virtual observation data. For instance, as part of the VO exercise, I was able to observe Twitter users actualizing the affordances suggested by the interview participants, such as sharing content in real-time and communicating with non-government public discourse gatekeepers (e.g., users communicating with Cuban independent journalists on Twitter). Another example was the possibility I had to corroborate via the VO exercise the common perception among interview participants that Twitter content generated by citizens influenced the government's actions. For example, I witnessed instances of government officials responding on Twitter to users' criticism and denouncements. Finally, the VO enabled to discard (or refine) findings that initially emerged from the interviews. For instance, the VO led me to conclude that the affordance of communicating

with foreign citizens, which I initially identified from the interview data, was not a potential for action correctly characterizing Cuban users.

Creswell (2013) also advises doing peer review as a validation method. Peer review consists of having an external check by another (other) researcher (s) of one's findings and interpretations (Creswell 2013). The peer reviewer would ask the researcher questions about methods and interpretations and offer his/her feedback. In this research, the dissertation advisor served as a peer reviewer. The advisor offered me guidance on how to apply the coding methodology by Saldaña (2015). Moreover, she also provided me several rounds of feedback and suggested modifications for the codes and findings that I derived as part of the data analysis.

Delivering a rich and thick description is another approach proposed by Creswell to enhance the results' validity. The writer should describe in detail the setting and phenomenon under investigation since this would enable "…readers to transfer information to other settings and to determine whether the findings can be transferred because of shared characteristics" (Creswell 2013). A thick description can be accomplished by describing from the general ideas to the narrow details combined with using participants' quotes (Creswell 2013). In this dissertation, several instances evidence rich descriptions. For example, in section 3.2 (Site Selection), I offered a detailed account of the main economic, political, and technological infrastructure features of the case study setting, i.e., the Cuban society. I also explained how the historical conditions of political and human rights deprivation experienced by people in Cuba were related to their perception of affordances for discourse participation on Twitter. Moreover, I also described how these historical conditions inform Cubans' perceptions of the goals they attain in their role as citizens from using Twitter. Finally, I used a large number of quotes to illustrate the findings. I included at least one quote to illustrate each of the findings presented in the results chapter. Moreover, I created an extensive appendix (Appendix 6) with additional quotes backing up these findings.

4. RESULTS

In this chapter, I discuss the results from the data analysis. I will present two categories of results. First, I will discuss the case study findings, which are results relative to the specifics of the case study context (sections 4.1 and 4.3). Secondly, I will discuss theoretical results, which are those valuable to understand the phenomena of social media-enabled citizen empowerment and social media use in restrictive environments (sections 4.2 and 4.4). Presenting these two categories of results, those specific to the case and more abstract propositions derived from the specificities of the case, is a common way of answering the research questions guiding interpretivist research (Avgerou 2013a).

As it is traditional for interpretivist research, all findings are presented with sample data quotes from the studied research subjects. Appendix 6 contains extra quotes I did not include in the body of the text, but that could help understand the research findings I discuss. Throughout this chapter, I point the reader to Appendix 6 for more quotes relevant to the finding being discussed. Each quote in Appendix 6 refers to the finding it illustrates and the page in the main document where it was discussed.

About the derivation of results specific to the case study (sections 4.1 and 4.3)

The case study findings are those that address the research questions relative to the Cuban context. Therefore, these results describe how Twitter use for participating in public discourse empowers Cuban citizens in their battle against the autocratic government. They also address the second research question in the context of Cuba and Twitter by outlining how the societal conditions in Cuba shape Cubans' interactions with Twitter. In short, these are results applicable to Cuba and Twitter.

The case findings are generalizations from empirical statements to empirical statements (i.e., generalizations from data to description) (Lee and Baskerville 2003). In interpretive research, empirical statements are the qualitative raw data collected by the researcher (e.g., interview answers and researcher's notes from observation) as well as the researcher's

summarizing description of the sample subjects based on the raw data collected (e.g., memos summarizing participants' interview answers, pattern codes) (Lee and Baskerville 2003). Therefore, the case study findings reported in this dissertation are the output of transforming empirical statements made by each interview participant and observed user into themes that describe the phenomenon of Cubans' empowerment via their use of Twitter for discourse participation purposes.

Avgerou's (2013a) research is a good example of an interpretivist IS research that first derives results specific to the case study before outlining more general findings. Avgerou (2013a) first derives an explanation for the trusting behavior of Brazilian citizens in relation to the e-voting technology deployed in that country (i.e., akin to the discussion that applies to Twitter use in Cuba in sections 4.1 and 4.3 of this dissertation). Then, Avgerou (2013a) abstracts these results to address the question of how citizens' trust in e-voting technology is formed and maintained over time (i.e., akin to the generalizations of the case study results discussed in sections 4.2 and 4.4 of this dissertation).

About the generalization to theoretical results (sections 4.2 and 4.4)

Deriving theoretical results from a single case study is "[a] typical and legitimate endeavor in interpretive research…" (Lee and Baskerville 2003). The notion of statistical, sampling-based generalizability is inappropriate to measure the quality of a theory built from a case study (Lee and Baskerville 2003). Statistical, sampling-based generalizability implies that the validity of a theory in a setting different from the one where it was derived or empirically tested improves as the sample size increases. The generalizations from a case study rely on a different kind of inference: "inference from case study findings to theory rather than from a sample to population characteristics…" (Lee and Baskerville 2003). As neatly stated by Klein and Myers (1999), "[t]he validity of generalization from a case does not depend on representativeness in the statistical sense but on the plausibility and cogency of the logical reasoning used in describing the results from the cases, and in drawing conclusions from them".

According to Lee and Baskerville (2003), case study generalization is an exercise of generalizing from empirical statements to theoretical statements (i.e., generalizing from description to theory). Theoretical statements are propositions about the relationships between constructs not directly observable but whose existence could be theorized from the publicly observable behaviors of the people part of the setting (Lee and Baskerville 2003). Generalization from a case study is an exercise of proposing theoretical statements that describe an IS-mediated phenomenon. The output of generalization is not proven statements ready to be tested in other settings, but "… well-founded but as-yet untested hypotheses" (Lee and Baskerville 2003). Case studies should be generalized to theoretical propositions that need to be adapted if the goal is to test them in new settings (Walsham 1995). The goal of a case study is to yield abstract conceptual statements or templates (Avgerou 2019). These theoretical templates "… can subsequently be used in other settings, subject to empirical testing of their validity in each new setting or with the researchers' judgment that there is sufficient similarity between the setting in relation to which the template was produced and the setting within which it is applied" (Avgerou 2019). It is instructive to contrast the approach followed to build theory from an interpretive case study to the strategy for theory building prescribed by the positivist perspective. Positivists derive theoretical propositions solely from existing theory and use empirical evidence to test them (Orlikowski and Baroudi 1991).

4.1. Cuban Citizens' Empowerment via Twitter-enabled Public Discourse Participation

I studied social media-enabled empowerment by identifying the affordances for discourse participation that Cuban users perceive on Twitter and the positive outcomes they achieve from realizing these affordances regarding their possibilities to challenge the government's hegemony.

Empowerment is a construct that "… connects mental health to mutual help and the struggle to create a responsive [society] (Perkins and Zimmerman 1995)". I chose to understand the phenomenon of empowerment using an affordance lens because the notion of empowerment requires researchers to consider both empowering processes and empowered outcomes (Perkins and Zimmerman 1995). Certain processes, actions, activities, and structures can be empowering,

and the outcomes of such processes result in a level of being empowered (Perkins and Zimmerman 1995). Empowered outcomes are operationalizations of empowerment that could be useful to study the consequences of empowering processes (Perkins and Zimmerman 1995).

The idea in the previous paragraph suggests that IT-enabled empowerment can be studied through a theoretical framework that describes how IT-mediated actions (empowering processes) derive into higher-level outcomes (empowered outcomes). The affordance lens is indeed useful for this purpose as it can be used to describe how a set of potential actions and their associated immediate outcomes support the achievement of broader goals (Burton-Jones and Volkoff 2017; Strong et al. 2014). Other IS research works have identified affordances of specific IT artifacts as the starting point to explain how IT use by individuals contributes to higher-level goals. For example, scholars have identified affordances to explain the contribution of IT use for collective action (Vaast et al. 2017; Zheng and Yu 2016), environmentally sustainable work practices (Seidel et al. 2013), and community-driven environmental sustainability (Tim et al. 2018).

I found that empowering actions via Twitter (i.e., Twitter's affordances for discourse participation) enable Cubans to attain empowered outcomes, which represent positive results that Cubans attain in their role as citizens that make them more effective counteracting the government's hegemony and make them feel they have more participation in the socio-political life. In Figure 3, I refer to the empowerer outcomes as citizen goals because they represent results users obtain in their role as citizens in society. Figure 3 serves as a summary of the phenomenon of Cuban citizens' empowerment via Twitter-enabled public discourse participation in the form of a graphical representation of the connection between empowering actions and empowered outcomes. Figure 3 is also a roadmap to guide the reader in understanding the results presented in this chapter.

In essence, Figure 3 shows that Twitter empowers Cuban citizens by enabling them to take actions regarding public discourse participation that the government hinders them from taking in offline settings. Twitter offers Cubans the potential to take empowering actions in the form of public discourse participation affordances. The data analysis showed that Cubans interpret the

consequences of those actions and how the government reacts to them and consider that they have gained something valuable in their role as citizens who struggle for power against the state. Cubans consider that taking empowering actions is valuable because they are a conduit to achieve desired goals as citizens who push back against the government hegemony. The citizen goals I identified reflect rights and resources that people in a functional democracy benefit from as they pursue a fulfilled socio-political life, for example, the possibility to influence the government's policies, the freedom to access a free press, and the possibility to express formal complaints to the government. The Cuban government denies Cubans these possibilities; therefore, Cubans turn to Twitter to participate in public discourse and attempt to achieve them.
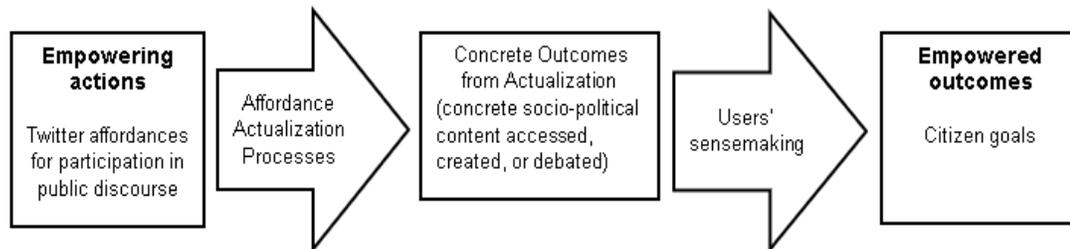
Figure 3: Twitter-Enabled Participation and Citizen Goals

How do Cubans realize they have achieved desired goals as citizens after actualizing Twitter affordances for discourse participation? A process of sensemaking mediates this realization. Sensemaking is the process of understanding an ambiguous situation and constructing meaning (Weick et al. 2005). Thus, sensemaking is the process whereby people understand situations by coming up with words and categories that characterize the components of the situation (Weick et al. 2005). Cubans engage in the process of sensemaking to interpret and frame their Twitter-mediated actions and their impact on the government's actions and, more generally, their lives (Weick et al. 2005). It is not evident what the effect of using Twitter is for Cubans opposing the government since most of the positive results seem intangible. Therefore, Cuban users interpret the consequences of using Twitter to participate in socio-political conversations and materialize these interpretations in labels that describe perceived Twitter's benefits. For example, Cubans label the benefits of using Twitter for pro-democracy purposes with phrases such as "getting freedom of

expression", "getting visibility", and "learning facts about the government's decisions" (Weick et al. 2005). These labels represent desired outcomes they achieve via Twitter participation.

4.1.1. Empowering Actions: Twitter Affordances for Public Discourse Participation

Identifying affordances started by recognizing that an affordance is a potential for action that, if realized, would lead to the achievement of outcomes. An affordance reflects desired or expected outcomes achievable via actions (Burton-Jones and Volkoff 2017). The IS affordance literature has used a common approach for identifying affordances, which is to abstract the concrete IT-enabled outcomes mentioned by participants into generic actions that enable these outcomes (Burton-Jones and Volkoff 2017; Bygstad et al. 2016; Strong et al. 2014). As Strong et al. (2014) put it, "… researchers seeking to identify affordances need to uncover the immediate concrete outcomes the actors experienced or expected to experience [by using the IT] ...", then using retroduction, they should further uncover the affordances that can enable these outcomes (Strong et al. 2014). As also suggested by Bygstad et al. (2016), the researcher can identify the specific, immediate outcomes that users attain when they interact with technology; then, the affordances are the potential actions involved in getting those outcomes.

I used Burton-Jones and Volkoff (2017), Strong et al. (2014), and Bygstad et al. (2016) as reference works to identify the affordances in this dissertation. The affordances they identified in their research are clear actions that users of a specific IT can take with the technology to attain desired concrete outcomes. For example, Burton-Jones and Volkoff (2017) identified affordances such as "Reporting on operations" and "Making managerial decisions" and their respective immediate concrete outcomes such as "Appropriate report submitted" and "Appropriate managerial decision made". I keep the IS tradition of naming affordances with gerunds that describe "…the actions that would be taken to actualize that affordance." (Strong et al. 2014).

I identified nine affordances for participation in public discourse that Cuban users perceive on Twitter. These affordances are possibilities for action related to citizens' capability to access, create, and comment on socio-political content. I derived these nine affordances from the

analysis (i.e., coding and memoing) of what users stated they achieved with Twitter regarding access, creation, and commentary of socio-political information and opinions. Each affordance is presented with one or two quotes from either an interview participant or a Twitter user observed during the VO. The quotes representing each affordance are sample data fragments I used to derive the affordance during the coding phase.

Also, keeping the tradition in the IS literature, each affordance is presented with a table (Tables 5 to 13) containing aspects describing the affordance in more detail. Column 1 from the table includes a subset of the Twitter properties that form the affordance. I only mentioned a subset rather than all possible important properties since attempting to lay them all out would imply dealing with the repeating decomposition problem (i.e., there are multiple features within any IT feature) (DeSanctis and Poole 1994). Column 2 of the table contains some specific outcomes that users attain from realizing the affordance (Burton-Jones and Volkoff 2017; Strong et al. 2014). These outcomes are actually codes that I generated during the coding phase that allowed me to identify the affordance in question. The third column is called "examples of actualization episode". It describes generic examples of specific ways a user can interact with Twitter to realize the affordance and transform it into one of the concrete outcomes mentioned in column 2. These examples are actual uses I observed during the virtual observation exercise.

The Nine Affordances for Participation in Public Discourse

Affordance 1: Accessing Citizen Generated Socio-Political Content

Twitter provides Cuban users several affordances related to access to public discourse. One of these affordances is accessing citizen-generated socio-political content (Table 5). Cuban users consume the unfiltered socio-political content produced and shared by fellow Cubans on the Twitter platform. This content includes facts, analysis of facts, opinions, casual observations, rumors, and experiences. Knowing about the raw experiences lived and the opinions expressed by fellow citizens is not easy for Cubans. The state systematically directs the official media not to cover citizens' life experiences or their uncensored opinions. Moreover, independent media is highly

restricted by the state; thus, it has little reach among citizens, especially in offline settings. Although Cubans can access other citizens' discourse as they interact in offline settings (e.g., on the streets, at work), this offline input is restricted in several aspects. Offline citizen-generated content usually comes from close people (e.g., family, friends, co-workers) and those citizens who share the same geographic location (e.g., neighborhood, city). Also, it tends to be tainted by the fears of political percussion and criticism by government sympathizers. Twitter has expanded the potential for Cubans to hear and consume what other citizens have to say about the country's socio-political life. Affordance 1 is illustrated in the following participant quote (see another quote on Appendix 6):

"*With Twitter, you learn a lot about other Cubans' experiences that you did not know before… That opens your eyes, you know… because there are a lot of things that you still do not know about this country, even being a Cuban…*" "*… what others post also allows you to learn important things that you need to be an informed person. You will never learn these things watching national television… [because] the secrecy is unbelievable…*" (Participant 20, May 2020)

Accessing citizen-generated content is not a passive act of consuming the stream of content on one's timeline or passively searching for content on Twitter. Actualizing this affordance may also require active involvement from the user. For example, a user can also actualize this affordance by taking the initiative of asking others on Twitter to share desired information with him/her. The following data fragment exemplifies the active access to citizen-generated content (see another quote on Appendix 6):

"*I do not have to wait for the official media to give me news anymore. I just log into Twitter and ask 'People! Does anybody know anything about this?' [referring to any specific information that the participant wants to know]*" (Participant 21, May 2020).

Accessing citizen-generated content is related to other social media affordances discussed in the IS literature. More basic affordances such as relationship formation (e.g., forming Twitter links with users from Cuba) and browsing others' content (e.g., reading the content published by fellow Cubans) are enabling conditions for this affordance (Karahanna et al. 2018). The affordance of sourcing (Karahanna et al. 2018), which refers to the possibility of asking other

users for information that one needs, is another social media affordance that enables accessing citizen-generated content.

Table 5: Characteristics of Affordance 1

Example of enabling IT properties	Immediate concrete outcome	Example of actualization episode
Follow button (it enables a user to follow other users from Cuba) Existence of a user's profile (it enables a user to identify other users who live in Cuba) Capability to receive content from followed accounts on one's timeline The tweet and reply features (they enable a use to ask others for desired information and receive feedback)	Read about other citizens' life experiences Read other citizens' unfiltered opinions Find data shared by other citizens that the government hides/ does not share	Reading a tweet from a fellow Cuban detailing an economic quandary s/he is facing Reading a tweet from a fellow Cuban arguing why an economic quandary s/he is facing is the government's responsibility Reading a tweet from a fellow Cuban telling a personal story of a human-right violation act that the government perpetrated against him/her

Affordance 2: Accessing Non-Government Sources of News

Another Twitter affordance related to the access to public discourse that Cubans perceive on Twitter is accessing non-government sources of news (Table 6). This affordance refers to the possibility Cubans find on Twitter to read news headlines and articles published by Cuban independent media and international media outlets. A user may also get news articles from non-government sources when other users share such content from their accounts. The following interview excerpts are illustrative of this affordance:

"[On Twitter] I found news items I could not find anywhere else… it allows me to receive information from many different news outlets; thus, it makes it easier to contrast points of views from different sides" (Participant 6, November 2019).

"… *[T]here [On Twitter] you can see the headlines published by Cuban independent media, and even if you do not want to read the whole article or you cannot read it because you do not have [Internet] data, at least you learn about what is going here [in Cuba] …" "… If you want to be well informed and avoid the lies told by the government, Twitter offers you access to the reality narrated by the real media in this country [the independent media]*." (Participant 14, April 2020).

Accessing multiple non-government sources of news is the result of more primary social media affordances. For example, Cuban users actualize the affordance of browsing others' content (Karahanna et al. 2018) to consume the headlines and news shared from the accounts of independent and international media organizations.

Table 6: Characteristics of Affordance 2

Example of enabling IT properties	Immediate concrete outcome	Example of actualization episodes
Follow button (it enables a user to follow accounts from non-official news outlets) Capability to receive content from followed accounts on one's timeline Notifications (to trigger attention to content shared from non-official media outlets) Capability to access links shared by other accounts (to follow links to news articles)	Read news published by non-official outlets Validate the articles published by official media Find news with data that the government does not offer	Receiving notifications, and then reading, news articles from multiple independent media covering a current event Searching the account of an independent media outlet and reading an article they published

Affordance 3: Accessing Real-Time Socio-Political Content

Another affordance related to access to public discourse is accessing real-time socio-political content (Table 7). Twitter offers Cubans unprecedented and truly unique (i.e., not available to them before) access to information about socio-political events as they emerge in society. Twitter seems to be the first source of breaking news that Cubans have had. Twitter enables Cubans to know

about socio-political events within minutes after they have occurred and important socio-political communication within minutes after being released. The following are a few examples of real-time information that Cubans access on Twitter that I was able to identify during the data collection:

- Other citizens' real-time tips about the location of a retail store offering a scarce necessity good.

- Live information about episodes of repression against dissenting voices.

- Live information about episodes where a government entity (e.g., an institution or official) ignores or abuses the right of a citizen. For example, when a government-run commercial entity refuses to take responsibility for and amend a poor service (product) offered to a citizen.

- Late-breaking official communication from government entities directed to citizens in targeted local areas (e.g., a specific neighborhood). This information is usually not properly circulated by the government; thus, some citizens who learn about it may share it on Twitter.

- News about international events that could impact the country (e.g., news about the development of the COVID-19 pandemic as they were first coming out in February and March of 2020).

The next interview fragment illustrates affordance 3:

"*One good thing about Twitter is that you have access to information in real-time. I can tell you that Twitter has given me, for the first time, access to instantaneous information… It is a quick way to learn about the latest political events and many other things…*" (Participant 8, December 2019)

It is important to notice that the perception of affordance 3 is motivated by more particular needs than what drives affordances 1 and 2. Affordances 1 and 2 are driven by the aim of validating official discourse and finding reliable information about the current social reality. The action of accessing real-time socio-political content is motivated by the goal of finding valuable information that one needs in a timely manner, that is, information that one needs to take action at the moment. I realized that this affordance is also motivated by the desire to mobilize quick support against government actions perceived to be negative for citizens. One classic example is the value of real-time Twitter content to push back against the government when it engages in acts of repression against dissenting voices. I found countless examples during the VO where Twitter users shared

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videos and pictures of acts of repression against citizens in (almost) real-time (i.e., within minutes or hours after the event occurred). Users value sharing this kind of content quickly with others to give visibility to the event and mobilize timely push back against the government's wrongdoing.

Finally, the perception of this affordance arises from the benefits that Cubans see in the possibility of accessing timely international news relevant to Cuba. Consistent with its strategy to hide from the public anything that stains its reputation or creates distress among citizens, the Cuban government also manages international news coverage to its advantage. This phenomenon was very evident during the beginning of the COVID 19 pandemic, as the government was very slow to respond to the threat and inform citizens about it. The VO revealed that Cuban users found on Twitter a source of timely news about the state of the pandemic as it was becoming a global issue. The next tweet shows the case of a user who alerted other users about the threat of COVID 19 and demanded the government to take action based on an article from the New York Times. The user published this tweet the same day the New York Times article was published: "*How long is the government keep putting citizens at risk? COVID is serious, people! The New York Times is reporting that the US stopped the flights from China. We have to start controlling the international flights. @DiazCanelB start taking this seriously #Cuba*" (tweet on 02-10- 20).

Table 7: Characteristics of Affordance 3

Example of enabling IT properties	Immediate concrete outcomes	Example of actualization episodes
Possibility to set up Timeline and see the latest content first Notifications (to alert users of content recently posted) Portability of the Twitter app (i.e., possibility to install it on cellphones)	Find timely information Read breaking news	Reading a tweet reporting a recent (within minutes or hours) repression act against another citizen Reading a tweet with information about ongoing dangerous situations occurring on the streets (e.g., flooding and dangerous zones to avoid, reports of ongoing social scams)

Affordance 4: Communicating with Government Entities

Beyond the access to discourse, Twitter also offers Cuban users a set of affordances related to creating links and communicating with entities that empower their participation in public discourse and political life. I call these entities key discourse participation entities. One of these affordances is communicating with government entities (Table 8). Cuban users can send opinions, ideas, requests, and complaints directly to government entities on Twitter. Direct communication with government entities is enabled as Cubans follow the accounts of government institutions and officials and tag them with the @ feature in their tweets. Whereas it has been historically very difficult for Cubans to reach government entities with an opinion, suggestion, or complaint, Twitter has made this option a real possibility. Cubans find valuable the possibility that Twitter offers them to convey relevant information directly to the government. The following interview excerpt illustrates affordance 4 (see another data quote in appendix 6):

"… *[A]nd a very important thing, I can contact Cuban government officials. I cannot say I can interact with them on Twitter since they have never replied when I contact them, but at least it is good that I can reply to their tweets with my opinions. Say something and let them know what my needs are. There is no way you can do that outside of Twitter because even in Facebook is not the same, it [Facebook] does not have the same importance…*" (Participant 1, October 2019)

Table 8: Characteristics of Affordance 4

Example of enabling Twitter properties	Immediate concrete outcomes	Example of actualization episodes
Twitter rules that enable official institutions to hold formal accounts (e.g., Twitter Manual for Governments, process of verification for government accounts) The tag feature (@) (to directly tag a government entity with a tweet)	Reaching out to a government entity Publicly tell an opinion to a government entity Publicly criticize a government entity Publicly shame a government entity	A user tags a government official with the @ feature in a tweet where s/he describes a personal socio-economic issue that s/he is experiencing. A user replies to a tweet from a government entity challenging the

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Reply feature (to reply to a tweet posted by a government entity)		opinion/information put forward in this tweet.

Affordance 5: Communicating with Non-Government Public Discourse Gatekeepers

Another affordance relative to communicating with useful entities is communicating with non-government public discourse gatekeepers (Table 9). The data analysis revealed that Cubans find value in the possibility of communicating via Twitter (i.e., sending tweets and receiving replies) with two groups that increase their chances to participate in public discourse: Cuban independent media organizations and the Twitter Support Team. These groups are discourse gatekeepers because they serve a filtering role in disseminating information in the online sphere. The Cuban independent media has the potential to amplify some of the issues raised by citizens on Twitter (e.g., via publishing news articles). The Twitter Support Team supports users to report bad actors trying to generate fake, artificial, or threatening content on Twitter. The qualification "non-government" on affordance 5 indicates that these entities' goals to filter content online are not aligned with the government's content control goals.

By sharing their denouncements and personal stories with the accounts of independent media outlets, Cubans may have this shared content picked up and published by these entities, which serves to amplify these denouncements and stories to a larger audience. In addition, Cuban independent journalists and organizations can amplify citizens' shared content not only by formally publishing it but also by simply retweeting it and commenting about it on Twitter. For example, the following is a fragment from a Twitter thread where a user tells the story of a neighbor beaten by police for committing a non-violent crime (see another data quote in Appendix 6). The user denounced the issue and encouraged independent media to pick up this event:

"*Hello #Cuba. Today I am denouncing a problem that touches me closely. He is my neighbor, [participant mentions the person's full name], who lives on San Diego street, Pueblo Nuevo, #Matanzas. He was fishing and... [participant creates a thread of tweets explaining the details of the event] … He is my neighbor and I want justice. I am authorized by his wife to inform*

about her husband's case to [Cuban] independent media [the user tags the Twitter accounts of three independent media: 14ymedio, CiberCuba y Diario de Cuba]." (tweet on 04-29-20).

Affordance 5 is similar to the social media affordance of "mobilizing resources", which was identified by Zheng and Yu (2016). Mobilizing resources refers to "[f]orming alliances with a wide range of actors to construct and expand networks across time and space." (Zheng and Yu 2016). In this case, Cuban Twitter users can form alliances with Cuban independent journalists to expand the network of citizen-centered discourse.

Whereas communicating with independent media outlets empowers Cubans' discourse production, communicating with the Twitter Support Team allows citizens to disempower the Cuban government's disingenuous attempts to create online discourse. The Twitter Support Team encourages users to report powerful actors when they attempt to control Twitter discourse artificially. As exemplified in the next paragraph, Cubans take advantage of this reporting possibility to minimize the government's chances to artificially position narratives on Twitter or their attempts to silence dissenting voices by threatening and insulting them on Twitter.

Two of the most evident efforts of the Cuban government to control the discourse online are hiring Twitter writers and planned collective efforts to position narratives about ongoing events. The VO exercise showed that Cuban users often report government-hired Twitter writers when they violate Twitter rules of services. For example, paid writers usually use an anonymous profile with someone else's face photo, which is considered impersonation, and prohibited, according to Twitter rules. Also, since hired writers mostly retweet and repeat the content from specific government accounts, Cuban users can report them by pointing out their evident spammy behavior that denotes the artificial creation of discourse. Cuban users can also report the government's planned collective efforts to position narratives by informing the Twitter team about accounts that repeat the verbatim tweets put forward by government accounts. In short, Twitter's reporting possibilities are another mechanism that Cubans can use to minimize the government hegemony over Twitter discourse.

The following tweet is an example of a user contacting the Twitter Safe account to denounce an attempt by the Cuban government to generate artificial discourse by artificial

repetition of a message. In his tweet, in addition to the following message, the user shares a video of a series of tweets generated by dozens of accounts repeating a pro-government message that condemns the US government for including Cuba in the list of countries that do not cooperate with the global fight on terror:

"*If @TwitterSeguro [@TwitterSafe] starts suspending your accounts, do not complain and do not start claiming that it was Trump who did it… CC: [the user tags the accounts of three high-rank government officials] [the user also shares the video documenting several accounts repeating the same pro-government tweet]*" (tweet on 05-13-20).

The next tweet is an instance of a Cuban user reporting another user's account who seems to have the profile of a government-paid writer as it only repeats messages generated in official government accounts. The user makes the denouncement by tagging the @TwitterLatAm and @TwitterSupport accounts:

"*This account is a pearl [the user @ mentions the account that he is reporting] … it only retweets things defending the government @Twitter @TwitterLatAm @TwitterSupport*" (tweet on 05-28-20).

Table 9: Characteristics of Affordance 5

Example of enabling IT properties	Immediate concrete outcomes	Example of actualization episodes
The thread feature (it enables users to write stories in detail that independent media can pick up for reporting) The @ mention feature (to directly contact the account of the desired gatekeeper) The reporting Twitter feature (to report the accounts of government trolls) The Twitter support team account	Visibility for shared denouncement Amplify valuable content shared by other users Report government's efforts to control discourse	A tweet where a user denounces a personal issue and tags with the @ feature the account of an independent media outlet. A user tags with the @ feature the Twitter Safe account in a tweet where s/he is denouncing the account of a government troll

"@TwitterSupport" (this is a designed effort by Twitter to give users an extra possibility (in addition to the reporting feature) of reporting spam, impersonation, and threats)		

Affordance 6: Communicating with the Cuban Diaspora

Communicating with the Cuban diaspora (Table 10) is another potential for action that Cubans find on Twitter. Cubans use Twitter to connect and exchange socio-political content with people in the Cubans diaspora with whom they have no personal ties. Although many Cubans have personal links with people in the Cuban diaspora (e.g., family members and friends), having the possibility to exchange socio-political content with people they do not personally know seems more suitable for having honest and unrestrained socio-political discussions. Communicating with the Cuban diaspora means that users can consume the socio-political opinions and information that fellow Cubans living in democratic countries share on Twitter. It also means that users can request people in the diaspora their opinion and data about events and situations of socio-political importance. Finally, actualizing this affordance also means that Cuban users can engage in online socio-political discussions and debates with people from the diaspora. In such conversations, I have observed that diaspora members tend to share their perspectives based on the knowledge about democracy they have acquired living outside Cuba.

Affordance 6 is enabled from a basic affordance of social media: relationship formation, which refers to the possibility that users can form relationships with other users in social media settings and create communities (Karahanna et al. 2018). Cuban users actualize the affordance of relationship formation to form semi-personal ties with the Cuban diaspora and they can later take advantage of this relationship to access content they desire. Another primary affordance that enables affordance 6 is sourcing, which entails requesting other users for information that one needs (Karahanna et al. 2018). Sourcing manifests in situations when Cubans ask diaspora

members for content about specific events since they have difficulties (e.g., censorship, little Internet data) gathering data and perspectives about these events.

The following tweet illustrates affordance 6 (see another data quote in Appendix 6). Here a user asks members of the Cuban diaspora in the US to clarify seemingly false information put forward by the Cuban government. This user requests members of the diaspora for valuable information that he needs: *"#Cuba People in the US! These people [the government] are saying that the situation is bad over there. They are talking about food scarcity issues [occurring in the US]. What can you tell me about it? I am sure this is another strategy to deviate our [Cuban citizens'] attention from the issues we have here at home [i.e., in Cuba] #NTVMiente [i.e., NationalTelevisionLies]"* (tweet on 05-08-20).

Table 10: Characteristics of Affordance 6

Example of enabling IT properties	Immediate concrete outcomes	Example of actualization episode
The automatic "follow" recommendations (since they include suggestions to follow Cubans in the diaspora) Existence of a user's profile (it enables a user to identify users from the diaspora) The @ feature (to tag specific users in the diaspora that one wants to engage in conversation with)	Debate with diaspora members Request data about socio-political topics to diaspora members Learn democracy from diaspora members Learn about life in foreign countries	A tweet where a user asks users in the diaspora to comment about a specific socio-political event that s/he needs to know more information about A tweet where a user asks members of the diaspora for information about characteristics of the form of government in their countries

Affordance 7: Sharing Socio-Political Content

Sharing socio-political content (Table 11) is another potential for action that Cubans find on Twitter. A Cuban user can reach fellow Cubans and other important public discourse participants (e.g., the media, the government, the Cuban diaspora, international organizations) with content that s/he

desires to share with them. Shared content can be self-created, such as opinions, self-made analyses of socio-political events, and self-created audiovisual information of socio-political nature. Shared content can also be created by other users, such as information shared on Twitter by fellow Cuban citizens, Cuban independent and international media accounts, and government accounts. The social media affordance of content sharing (Karahanna et al. 2018), which refers to social media users' possibility to distribute content unrelated to their personal lives to other users, is a more generic illustration of affordance 7.

To sum up, Cuban users do not only profit from accessing the information on Twitter but also take an active role and share socio-political content with others. Whereas, for example, actualizing affordance 1, accessing citizen-generated socio-political content benefits the user who takes this action, taking advantage of affordance 7 may benefit both the user who does it and other Twitter users. When a user shares socio-political content with others, s/he may perceive personal benefits (e.g., find support for solving a personal issue, feeling good as a citizen) as well as contribute to the well-being of others, for example, by contributing to fulfilling their socio-political informational needs. The following data fragment exemplifies affordance 7 (see another data quote in Appendix 6): *"[When] the official Cuban media reports a distorted view of the social reality; then I use Twitter to show [other Cubans] that what is being reported is inaccurate… [doing so] allows my followers to form a criterion about the news, …"* *"For example, recently, I uncovered a false news shared on Twitter by an official journalist … [I] found the real picture [a picture different from the one shared by the official journalist] in another source and shared it…"* (Participant 10, December 2019).

Cuban users know the importance of sharing content that can gain visibility, which means content that many fellow Cubans and international users can read. Cubans perceive the use of appropriate hashtags as one way of sharing content that can become visible. The careful use of hashtags is seen as contributing to the goal of positioning content on Twitter that can counteract the government narratives. From the virtual observation, I observed multiple tweets, like the

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following tweet, where users reminded and asked others to use specific hashtags while sharing

content on Twitter:

"*It seems like nonsense, but please use the hashtag #Cuba to denounce this dictatorship

and bring the truth about this country to light. There are very good tweets out there, but without that

hashtag, they get nowhere #ElCambioEsYa [#TheChangeIsNow]*" (tweet on 04-23-20).

Table 11: Characteristics of Affordance 7

Example of enabling IT properties	Immediate concrete outcomes	Example actualization episodes
Tweet feature (to share written information (e.g., an opinion) with fellow Cubans) Retweet feature (to retweet socio-political info found on one's timeline) Upload button (to upload audiovisual data as part of one's tweets) The hashtag feature (to categorize the shared content and increase its visibility)	Counteract information shared by the government Enable other users to read one's opinion Express support for other's opinions Amplify others' denouncements	A user creates a thread telling a negative personal experience s/he had with a government-run commercial entity and adds tips on how to avoid a similar situation A user retweets a tweet with a news headline posted by an independent media account.

Affordance 8: Sharing Content to Counteract Government's Data and Narratives

Another affordance relative to creating socio-political content is sharing content to counteract the

government's data and narratives (Table 12). A Cuban user can take advantage of Twitter to share

content such as opinions and denouncements of social issues and add factual data to the shared

content in a way that backs up his/her point of view. Common sources of facts are pictures and

videos documenting an offline event relevant to the written opinion, textual fragments and

screenshots from news articles published by independent media, and old reportages made on

official media channels (usually containing government data that contradict the government's

current positions). Another common source that users take advantage of to add veracity to the

content they share is screenshots from their cellphone revealing personal communications they have with their contacts (e.g., Facebook, WhatsApp).

Affordance 8 is different from affordance 7 (sharing socio-political content) for at least two reasons. First, perceiving affordance 8 seems to be driven by a more specific motivation than perceiving affordance 7. Affordance 8 is motivated by a user's heightened concern with sharing content that effectively counteracts the government narratives (i.e., that clearly proves the government wrong) and that seems legitimate (i.e., coming from an ordinary citizen who is just freely speaking his/her mind). From the VO, I noticed that the actualization of affordance 8 is very common when the user's goal is to denounce a personal or an important social issue. Users tend to seek legitimacy when making such denouncements. Secondly, whereas the actualization of affordance 7 may only imply the user sharing his/her own written opinion, realizing affordance 8 implies combining the user's own words with other kinds of content. For example, affordance 8 is actualized when a user shares audiovisual content (self-created or obtained from others) and links to external sources (e.g., another user tweets, links to news articles). The following interview fragment exemplifies affordance 8 (see another data quote in Appendix 6):

"It is my way and others' to unmask the government. With the pictures and videos that we upload on Twitter, we are exposing them… Some years ago, it was easy [for the government] to claim that someone who thought differently wasn't telling the truth, but now with social media, everyone sees that what we are denouncing is true. There is no way [for the government] to lie…" (Participant 6, November 2019)

Table 12: Characteristics of Affordance 8

Example of enabling IT properties	Immediate concrete outcomes	Example of actualization episodes
The upload feature (to add audiovisual material (e.g., a picture or a screenshot from a news article) to an opinion written in a tweet)	Share a written opinion backed up by audiovisual information Share a written opinion backed up by numbers	A user tweets an opinion and supports it by uploading a picture or video that the user personally captured to back up his/her claim.

The retweet feature as it allows user to quote others' tweets (e.g., retweet factual data shared by another account and write an opinion about it) Links (the possibility to include URLs to sources of news as part of tweets)	Expose a contradiction in the government's actions and discourse	A user retweets a news article from an independent media and writes an opinion based on the data presented in the article.

Affordance 9: Sharing socio-political content in real-time

Sharing socio-political content in real-time (Table 13) is another potential for action that Cubans find on Twitter. The value of the information that Cubans can share on Twitter sometimes does not rely on the information itself but on how timely it can be shared. In other words, the value of the shared content on Twitter sometimes emerges from the possibility to circulate it in real-time. Producing real-time content is valuable as it enables users to alert and let fellow citizens know about useful information that they might need to know promptly. Here are some illustrative quotes of this affordance:

"*If I am walking down the street and I see something that I believe people should know of immediately, I talk about it on Twitter and upload a picture if I can*" (Participant 17, April 2020).

The following is a tweet where a user alerts other users of a negative situation:

"*People who live in #LaHabana you should know that undercover police officers are fining citizens for not wearing a mask. They fined my cousin with 2000 Cuban pesos one hour ago.*" (tweet on 04-29-20).

Table 13: Characteristics of Affordance 9

Example of enabling IT properties	Immediate concrete outcomes	Example of actualization episode
Portability of the Twitter app	Alert other citizens in a timely manner Give visibility to others' denouncements	Tweeting about a bad situation that the user just experienced on the street and that other citizen may experience

		too if they do not know about it in a timely manner.
		Tweeting a recently taken video or picture of a government repression act against a dissenting citizen.

4.1.1.1 Citizens' beliefs about the process of actualizing Twitter's affordances

The data analysis revealed that Cuban users do not only perceive affordances for discourse participation on Twitter but also evaluate the process of realizing these action potentials. Users form beliefs about what it is like to use Twitter to achieve desired discourse participation goals. One of these beliefs is that Twitter is a convenient channel to access unregulated socio-political content (i.e., content not endorsed or controlled by the government). The other belief is that Twitter is a safe channel to criticize the government. These beliefs are Cubans' perceptions of what it is like to use Twitter to participate in public discourse relative to other platforms they could potentially use with similar purposes.

Cuban users consider that Twitter is a convenient channel to access unregulated socio-political content. According to Google's English dictionary provided by Oxford Languages, convenient means "involving little trouble or effort". First, I will explain why Cubans perceive Twitter as a channel to consume socio-political content with little effort. Twitter allows Cuban users to centralize in one place the headlines from many Cuban independent media (affordance 2) and exposes them to opinions from other Cubans with dissenting voices (affordance 1). Therefore, Twitter is viewed as a condensed way of accessing non-government-controlled content. This centralization permits users to avoid spending time and Internet data searching for individual sources of this kind of content. Thus, Twitter is an alternative to individually searching existing websites, blogs, and news apps containing unregulated content. The following participant quote illustrates this belief:

"*What happened was that, once I discovered Twitter, I stopped checking out Cuban independent news websites such as CiberCuba, Diario de Cuba, and all other tons of websites out there. Twitter spoon-feeds me all the news items. I do not have to think about where to better find news that I am interested about… and it [Twitter] gives me quick access to what I want… I can read the news headlines on Twitter, and if I am interested, I click the link to read the whole news…*" (Participant 3, November 2019).

Users also highlight the convenience of Twitter by comparing it to Facebook. As the next quote shows, some participants point out that the Facebook app consumes more Internet data and exposes them to less relevant socio-political content (e.g., more gossip) than Twitter (see another data quote in Appendix 6): "*I like Twitter because it gives me the kind of information that I want. It allows me to stay informed. That is different from Facebook, where people share a lot of irrelevant content and a lot of pictures and videos. By the way, that is why Facebook consumes more Internet data than Twitter. I like Twitter because it is a light app, it is mainly texts, so, it consumes less Internet data.*" (Participant 19, April 2020).

The second dimension of convenience is related to the observation that Twitter use involves little trouble of being punished by the government for consuming non-government regulated content. Cubans perceived Twitter as a safe channel to access dissenting content because they can access content censored by the government (i.e., Cuban independent media content) without explicitly visiting the site of these sources. Avoiding visiting censored sites by taking advantage of the varied content accessible via one's timeline makes users feel less afraid of consuming information from censored sources on Twitter. As explained by one participant: "*Another [Twitter's] advantage is that, because I work for the Cuban state, directly visiting the website of a censored newspaper such as 14ymedio is not desirable, since that means there would be an explicit trace that I was visiting those places. However, on Twitter, you are just checking out all the content on your timeline, the tweets from 14ymedio and other media outlets, and it does not seem that you were visiting censored content*" (Participant 12, March 2020).

Cuban users also believe that Twitter is a safe channel to criticize the government because criticism of the government can be aired more safely when compared to other alternative public channels such as offline spaces. This belief is informed by the perception that it is harder for the government to punish someone who dissents on Twitter. Some participants believe that one is less likely to be detected for criticizing the government in an online forum like Twitter. Whereas it is straightforward for the government to detect and rescind offline manifestations of dissent, it is harder for them to devote resources (e.g., time and personnel) to identify and reprimand someone with dissenting opinions online. It seems that when a user realizes that many others are criticizing the state on Twitter, s/he feels less afraid of "joining the herd" and expressing his/her criticism as well. The following data excerpt exemplifies this belief (see another fragment in Appendix 6):

"*Another thing, Twitter has given me my rights as a citizen since I can use it to criticize the government without mincing my words. It is more difficult to do so on the street or at work… Here [On Twitter] it is more difficult that they [the government] notice you ….*" (Participant 4, November 2019).

4.1.2. Empowered outcomes: Twitter-enabled citizen goals for Cubans

I found that empowering actions via Twitter, namely the actualizations of Twitter's affordances for discourse participation, enable Cubans to attain three categories of citizen goals (i.e., three categories of empowered outcomes). Cuban users consider that Twitter empowers them to recover freedoms, gain influence over the socio-political life, and access non-material resources valuable to challenge the government's hegemonic ruling. The following subsections discuss the empowered outcomes identified from the case study. Figure 4 is a more detailed version of Figure 3 to illustrate how the nine affordances described in the previous sections enable the achievement of specific empowered outcomes. Figure 4 also serves as a roadmap for the reader to better understand this subsection's findings.
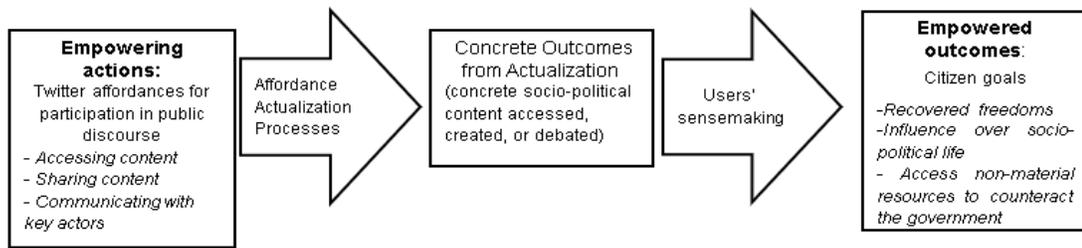
Figure 4: Twitter-Enabled Participation and Citizen Goals (Updated Version)

4.1.2.1 Twitter-enabled citizen goals: recovered freedoms

The analysis and interpretation of the data unveiled that Cuban users interpreted the actions they did with Twitter (i.e., the actualization of the nine affordances) and the results they obtained (i.e., the concrete outcomes) as a way to recover in the virtual space, some basic citizen freedoms they do not have in the offline world. It was common among interview participants and observed users to express their desire to enjoy basic civil and political freedoms and their sadness for being denied these freedoms by the government. Cuban users approach Twitter with repressed desires of freedom; hence, it seems logical they interpret the actions they take and the results they experience with this technology to enact these freedoms in the virtual sphere. Now, I discuss the perceived freedoms that Cubans attain via their Twitter participation.

Freedom to Discuss Politics Publicly

Cubans perceive that they can enact on Twitter the freedom to discuss politics publicly, which is related to a more generic freedom: the freedom of speech. Twitter is perceived as a channel to publicly discuss and debate political issues with other interested parties such as fellow Cuban citizens, the Cuban diaspora, and foreign users. Given the Cuban government's hegemonic nature, Cubans do not have a public sphere where they can freely air their political opinions and engage in conversations with each other. In Cuba, "talking politics" has usually been done in private circles. Consequently, for Cubans, the possibility to exchange political opinions with other Cubans in an online public forum like Twitter amounts to discussing politics in public (e.g., in a public offline meeting). The choice of the adverb "publicly" to qualify this recovered freedom was deliberate since

it captures the possibility of talking politics and doing it in a public way. As one participant remarked: *"[W]hen you see a tweet bringing up a specific topic, and then you see a lot of new people replying to the tweet, what you are seeing is something that cannot be done on the street, which is publicly talking politics"*. (Participant 17, April 2020)

Next, I present another data excerpt instantiating the perceived possibility that Cubans see on Twitter to discuss politics in public (see another data quote in Appendix 6). The following is a tweet where a user clearly states that one of his goals on Twitter is to engage in public political discussions: "*I created this account to denounce the atrocities that we live here, to engage in free discussion, something that we can't do on a public square. Twitter is the tool that young Cubans are using to learn what it is like to discuss politics without fears of repression*" (tweet on 12-16-19).

Each citizen goal that I discuss in this section can be linked to the actualization of a subset of the nine affordances discussed in section 4.1.1. Cubans' perception and realization that they have achieved certain desired outcomes as citizens derive from assessing the actions they take with Twitter (i.e., from the affordances they actualized with this technology). Table 14 shows affordances which actualizations are related to the goal of perceived freedom to discuss politics publicly. Column 1 in Table 14 lists the affordances, and the second column contains specific ways that each affordance could be actualized to give rise to the perceived freedom. These actualizations episodes are based on real interactions I observed during the VO exercise. Although tables similar to Table 14 can be created for each of the multiple citizen goals that will be discussed in this section, I only present an illustrative table (i.e., Table 14) to keep the length of this dissertation manageable.

Table 14: Example of an Empowered Outcome and Its Related Affordances

	Example of affordance actualization

Relevant discourse participation affordances	
Accessing citizen-generated content (affordance 1)	A user reads a tweet where another user gives her/his opinion about an important political issue (e.g., the need of opposition figures and parties in Cuba)
Accessing non-government sources of news (affordance 2)	A user finds on Twitter a link to an article from an independent journal offering arguments about the importance of having multiple political parties in the country
Sharing socio-political content (affordance 7)	A user retweets the above-mentioned link to share it with other users and adds his/her opinion in the retweet.
Communicating with the Cuban diaspora (affordance 6)	A user replies to a tweet from a person in the Cuban diaspora who is giving his/her opinion about strategies for opposition leaders to succeed in Cuba

Freedom to Protest Publicly

Another freedom that Cuban users perceive they can enact on Twitter is the freedom to protest publicly, which is related to a more generic freedom: the freedom of association. To explain this freedom, I first define the term public protest by adapting the definition proposed by The Cuban Observatory of Conflicts, a Cuban NGO running in the US devoted to empowering citizens in Cuba who face conflicts with the government. A public protest is a collective offline or online action where a group of citizens expresses in a public forum (i.e., a platform where other citizens and government officials can hear them) criticism of either a government policy, organization, or official, because of political, social, or cultural disagreements (The Cuban Observatory of Conflicts 2020).

A Twitter-enabled public protest is a collective outcome because it depends on the simultaneous and similar use of Twitter by many users sharing a goal. Twitter allows Cuban users to engage in an online collective government criticism to express their disapproval of a clear issue and demand specific solutions. These actions are public because the relevant government entities are directly informed of the denouncement demands, and many Cuban users can consume the content shared by the protest participants (and potentially join the claim as well). As citizens from

other autocratic countries, Cubans are denied the freedom to engage in peaceful offline protests. Therefore, Twitter is a medium where they can somewhat enact this freedom. In one of the interviews, a participant described how he learned about and joined a citizens' Twitter-led campaign in 2019 to protest against the high Internet prices set by ETECSA[3]. He mentioned the following: "*I took those denouncements so seriously that I felt like I was protesting on the street*" (Participant 6, November 2019). This fragment illustrates that users can interpret the collective denouncements that they make of specific issues as a form of protest.

The following is another interview fragment that exemplifies participants' perception of their possibility to engage in public protests via Twitter (see another data fragment for this finding in Appendix 6): "*It [Twitter] allows me to participate in online campaigns. For example, the Twitter campaigns "Cierren Fronteras" ["Lock down the country"] and "Bajen los precios de Internet" ["Lower Internet Prices"]. I have intensively participated in the latter campaign.*" (Participant 13, March 2020)

Similar to other collective actions enabled by Twitter (Miranda et al. 2016; Vaast et al. 2017), Cuban Twitter-driven protest participants use the hashtag and the @ features in recognizable ways. The hashtag is used to encapsulate the phrase that summarizes what is being criticized or demanded. Some examples of hashtags used in Twitter-led protests have been #BajenLosPreciosDeInternet (i.e., "Lower Internet Prices") to demand ETECSA to lower Internet prices, #CierrenFrontera (i.e., "Lock down the country") to demand the Cuban president to stop incoming international flights at the onset of the COVID19 pandemic, and #YoSoySnet (i.e., "I am SNET") to demand the Ministry of Communication to lift the ban on SNET[4].

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[3] ETECSA is a state-owned, single telecommunication and Internet provider in Cuba.

[4] SNET, which stands for Street Network, was a network created by young Cubans. As this website describes it, SNET was a "Cuban grassroots wireless community network which [allowed] people to play games or pirate movies by using interconnected network of households" (Wikipedia 2019). In August 2019, the Cuban government enacted new law that effectively made SNET illegal, which prompted SNET users to use online forums and demand the government to revise that legislation.

The @ feature is used to notify the relevant government Twitter account (s) when any protest participant tweets or retweets his/her criticism using the hashtag chosen for the protest. Because these protests have specific demands, concrete government entities can be identified as potential solution agents. Therefore, the use of the @ feature usually targets the same government account or set of accounts.

I identified at least two recognizable types of Twitter-driven protests. The first type is spontaneous protests, where one user starts using a given # to make a denouncement, and progressively other users could start making the same claim using the same #. One example of this type of protest was the one called for by a user to denounce a common practice engaged by Cuban institutions, ministries, and public officials: blocking citizens from accessing their Twitter content. As the following tweet shows, this user started a claim for a collective protest proposing the use of the hashtag #CubaMeBloquea (i.e., Cuba blocks me) and directed it to a specific government entity with the use of the @ feature:

"*All Cubans who have been blocked on social media by government institutions and officials should reveal it with screenshots and the hashtag #CubaMeBloquea, as a response to tonight's @mesaredondacuba TV show*" (tweet on 04-26-20).

This call was followed by other users who used the hashtag #CubaMeBloquea to share their own experiences with this issue.

The second category of protests is organized convocations. Cubans have coined these protests as Tuitazos (i.e., "Very Loud Tweets"). One characteristic of a Tuitazo is that it gets scheduled for a specific date and time. The idea is that participants use the common hashtags and make their demands at the specified time, rather than sparsely throughout several days, so that the generated discourse has more potential to become viral. One person initially calls for a Tuitazo, but details about it (e.g., date, time, issue, and #) are then shared and re-convocated by other users. For example, the following tweet illustrates the convocation of a Tuitazo: *"#Cuba. Let's organize and demand @ETECSA_Cuba to listen to us as citizens and to respect us as clients.*

Next Saturday, May 30th, Cuban Tuitazo. #BajenLosPreciosDeInternet ["Lower Internet Prices"] #PreciosJustos ["Fair Prices"] #TarifaPlanaYa ["Internet Flat Rate Now"]" (tweet on 05-23-20)

As this tweet exemplifies, a Tuitazo is called for by one user who explicitly invites others to participate in a Tuitazo. The protest is set up for a specific moment in time ("Next Saturday, May 30th"), with a specific goal ("... demand @ETECSA_Cuba to listen to us as citizens and to respect us as clients.") and using a defined hashtag (s) (#BajenLosPreciosDeInternet, #PreciosJustos, #TarifaPlanaYa). As reported in an article by the Cuban independent digital newspaper ADN Cuba (ADN Cuba 2020), this user's convocation was indeed followed by many other users who mainly used the #BajenLosPreciosDeInternet to demand lower Internet prices.

Freedom to Access a Free Press

Another freedom that Cuban users perceive they can enact on Twitter is the freedom to access a free press. Understanding this finding is better achieved by recalling that two important roles of a free press are offering citizens public service information and information to evaluate the government's performance (e.g., data and observations that allow citizens to know how well public representatives are doing) (Benkler 2006). Given the absence of free press in Cuba, citizens find a platform to amend this information gap on Twitter. In essence, because Twitter offers Cuban access to two categories of information usually delivered by the free press in democratic countries, I found that Twitter is a proxy for Cubans for having access to a free press. Now I present evidence of why Cubans believe Twitter to be a source of public service information and information to assess the government's performance.

Public service information is one intended to serve the community members. Public service information helps citizens make good decisions when participating in socio-economic activities. Access to information as a public service is even included as a right in article 53 from the Cuban Constitution. However, Cubans do not have systematic ways of accessing the information they need to successfully operate as citizens because the government selectively hides information that, although valuable for people, they believe can cause social unrest or hurt their reputation. In

addition to intentional information hiding, as a consequence of the weak economic system in the country, the government lacks orderly information-sharing mechanisms for citizens to find instrumental information they could use in their day-to-day citizen activities. Cuban users find Twitter a solution for this socio-informational gap.

On Twitter, users perceive a platform where they get exposure to opinions, observations, and facts generated by fellow citizens about common and daily challenges they face. For example, users get exposure to data and commentary about other Cubans' experiences with public transportation, working conditions, the supply and price of basic goods and services, the health care system, among other topics related to a citizen's ordinary life. The access to valuable public service content means the possibility that Cubans see on Twitter for accessing information about contemporary social issues and events in Cuba that could help them make better decisions when navigating the complexity of the social life. The following participant quote shows that Cubans perceive Twitter as a channel where they have recovered the freedom to access public service information (see another relevant quote about this finding in appendix 6).

"…. [I]f it wasn't for Twitter, you never learn about where an accident occurred, whether someone was killed in your neighborhood…" "If you do not check Twitter, you never know if something important will happen in your city or where to find a food item that you need…" "… and as I told you, Twitter is a source of political information, entertainment information, and other things you need to know..." (Participant 12, March 2020).

This quote shows that participants find on Twitter not only helpful political information but also valuable social information. The following tweet is also an example of how Cubans interpret Twitter as a channel to learn valuable social information that alerts them about potential dangers they face: "*The government does not care that buildings collapse and people die as a consequence [a common phenomenon that occurs in the Old Havana neighborhood]. The only thing they care about is that people do not learn about it. It must be very hard for the government to have lost the monopoly over information on social media. Now if something important happens, Cubans will know about it*" (tweet on 10-10-19).

Twitter is also a source to find information to evaluate the government's performance. In this sense, Twitter is a proxy to a free press where information critical of the government and its actions circulates and citizens can consume it. The media in Cuba works as a propaganda system for the government; thus, citizens have no easy access to evaluations of the consequences of the government's actions and policies. Although interested citizens could access this kind of information on independent media websites, the government's online censorship and high Internet prices make this a challenging prospect. Twitter centralizes in one place the headlines shared by independent media outlets and the information and opinions shared by independent journalists, opposition figures, and ordinary citizens with dissenting and critical views. Therefore, Twitter is a good source of non-government-controlled information with critical evaluations of the political system in Cuba, the specific policies enacted by this system, and the officials enacting these policies. It is also a channel with information about ideas on how to change the current political system and its concomitant policies. In short, although Cubans have been historically impaired from judging the truth and social value of the government's actions and policies, Twitter is changing this dynamic, as the following quote shows:

"*Before Twitter, I consumed a lot of information from the official media and little alternative information from other [non-official] sources. After some time on Twitter, you start to become aware of many things you did not know before… [A]nd you realize that what they [the government] say is not true. Well, I already knew that they [the government] lied a lot! But on Twitter, the lie becomes more evident…*" "*There is a lot of new information [on Twitter] … and it is easier to separate right from wrong.*" (Participant 1, October 2019).

The critical content about the government that circulates on Twitter also helps Cubans realize that the root cause of many of the socio-economic problems they face is the result of the political system. Unfortunately, many Cubans are still unclear about the negative impact that a totalitarian government has on people's lives. Therefore, the content consumed on Twitter is one step forward to open "their eyes" regarding the true negative effects of the political system operant in the country. The following quote exemplifies this idea (see an additional quote in Appendix 6):

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"… I was never aware that everything was a consequence of the communist nature of the government. I was never clear that Communism was the culprit of all the issues in Cuba…, I did not know that the issue was the political system" … "I knew there were many problems in Cuba, but I was never interested in politics and understanding the role of politics in all of that… Twitter allows you to realize that all the criticism that you hear on the streets against the system [the political system] are true… [Y]ou realize that people from the opposition and dissenting voices have a valid point when they criticize this [expletive] system…" (Participant 6, November 2019).

4.1.2.2. Twitter-enabled citizen goals: influence on the socio-political life

Cubans users also perceive that using Twitter for discourse participation purposes enables them to influence the decisions and actions of relevant socio-political actors in the country. The data analysis showed that a user could perceive his/her actions as influencing fellow Cuban citizens' way of thinking and actions. Users also consider that via Twitter, they can affect government entities' actions, policies, and discourse, at least to some extent. The possibility to influence the socio-political life in the country that Cubans perceive on Twitter can be labeled as the possibility to conduct effective advocacy. Advocacy is the strategy used by citizens and civil society to influence the government's decision-making process and change citizens' perception of core issues (Lifeline Fund 2020). Therefore, the two kinds of influence on the socio-political life that Cubans perceive they can enact via Twitter are well-known instances of effective advocacy.

Influence on Other Citizens

The first form of influence that I discovered can be labeled influence on other citizens. A Cuban user can find on Twitter a platform to motivate other citizens to think differently about the cause and solution of social problems in the country. By actualizing Twitter affordances for discourse participation, a user can reframe social issues in a compelling way to others and clearly shows the government's responsibility in causing the issues. A Cuban user can motivate others to reframe their view of the social reality by sharing his/her opinions on socio-political matters and backing

them up with well-reasoned arguments, news reportages, and visual evidence (i.e., pictures and videos documenting the issue). In short, a Cuban user can find on Twitter a platform where s/he can reach fellow citizens and change their socio-political views and opinions. The following participant's quote exemplifies this possibility: "*Many times, what I want is to motivate others. For example, the official Cuban media report a distorted view of the social reality; then I use Twitter to show [other Cubans] that what is being reported is inaccurate… [doing so] allows my followers to form a criterion about the news, … they can decide whether what the official media state is true.*" "*For example, recently, I uncovered a false news shared on Twitter by an official journalist … [I] found the real picture [a picture different from the one shared by the official journalist] in another source and shared it…*" (Participant 10, December 2019).

Another manifestation of influence on other citizens is the perceived possibility to mobilize others into Twitter-mediated actions such as Tuitazos and collective denouncements. On Twitter, a user can materialize a possibility s/he does not have in offline settings: calling for collective Twitter-mediated actions and having others respond and join the call. During the VO, I observed several instances where a user proposed to use a specific hashtag to denounce a concrete issue and called others to join him/her by using the same hashtag. On several occasions, I observed that the user who made the call was followed by dozens of retweets using the suggested hashtag. One illustration of a user mobilizing others into a Twitter-mediated collective denouncement is the following example, where a user asks others to denounce the privileged position of the Castro family members: "*Let's heat this up a little bit. I propose to use the hashtag #SiYoFueraUnCastro [If I were a Castro member] followed by a phrase describing something that an ordinary Cuban will never do. For example, #SiYoFueraUnCastro I would drive a Mercedes Benz*" (tweet on 04-19-20).

Many other Cuban users followed this initiative, evidenced by the fact that this tweet received 160 replies, most of them using the hashtag suggested by the user. The tweet was also retweeted 96 times, many of them also using the suggested hashtag.

A Cuban user can also call for a Tuitazo and be followed by many others, which is also perceived as evidence of the potential to influence other citizens' behavior via Twitter. In the next

interview fragment, a participant reflects on the possibility to mobilize others via a Tuitazo: "*Yes, [Twitter gives me more power as a citizen] because sometimes I have been able to influence others. For example, with this new trend of doing Tuitazos, I have personally called for Tuitazos and observed that people follow me … [I]f another person is joining me is because I motivated him/her, because we share similar ideas… If s/he joins the Tuitazo is because I influenced her/his way of thinking*" (Participant 15, April 2020).

Influence on the Government's Discourse and Actions

The second form of influence that Cubans perceive they could get from their Twitter participation is on the government's discourse and actions. Cuban users perceive that tagging government accounts with the @ feature to express criticism, denounce, or request a solution for personal and social issues may trigger a government response. I identified three typical situations that may justify why Cubans perceive they could influence the government with their Twitter participation. These situations are Twitter replies that Cubans receive from the government's accounts, official media coverage of the citizens' criticism and denouncements circulating on Twitter, and changes in policies and government actions following intense citizens' led Twitter protests.

First, Cuban users have noticed (and I did too on several occasions during the VO exercise) that the accounts of government entities and officials sometimes reply to users' Twitter complaints and denouncements. The extent to which the replies from government accounts are helpful for Cuban users varies. A government account may simply reply to offer the user a banal justification for the denounced situation or criticize the user for daring to make a public denouncement. Sometimes, however, the government reply offers the user either a proper justification for the denounced issue or a solution for it. The next interview fragment evidences the case of a participant who had a successful experience denouncing a personal issue on Twitter. In the interview, the participant was describing a service issue he experienced with ETECSA. Then he mentioned the following: "*I visited several [ETECSA] commercial stores to complain, and they all said they did not know how to fix the issue… So then, I decided to use Twitter to complain directly with people higher*

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in the company hierarchy…As you can see, it was via Twitter that I got an answer to my complaint. Coming to the office [the brick-and-mortar ETECSA office] did not help. That's one of Twitter's benefits" (Participant 6, November 2019).

The second form of evidence that leads Cubans to believe that their Twitter actions influence the government is the observation that sometimes official media channels (e.g., national TV stations and official newspapers) discuss the issues that people bring up on social media. The following interview fragment illustrates this observation (see another data quote related to this finding in appendix 6): "*They [government officials] evidently read. For example, Mr. Marrero, you know, the Minister [The Prime Minister of Cuba], has said in his live presentations on La Mesa Redonda show 'Considering the claims that people have made on social media'. I remember that even Diaz Canel [The Cuban President] … stated [on TV] that he had read a post from a Twitter user complaining about the excessive price of pork in Havana… and he said that investigations should be conducted on that matter… This shows that he [The Cuban President] reads the denouncements that people make on social media.*" (Participant 19, April 2020)

The VO exercise allowed me to find several other instances substantiating Cuban users' claims that Twitter discourse could leak into official media channels. One of those cases was the official response to the criticism that many users expressed on Twitter of the initial preventive measurements taken by the government at the early onset of the COVID 19 pandemic. Around mid-March of 2020, it was common to find users criticizing the government for not locking down the country on time and expressing their disapproval for the government campaign that encouraged people to start using PrevengHo-Vir, an homeopathic treatment that, according to the Cuban government, could allegedly prevent illness from COVID. The pseudo-scientific nature of homeopathic medicine and the general distrust Cuban users have in the government led to a wave of Twitter criticism of the government strategy to curb the effects of the pandemic. In response to the online criticism about this topic, I discovered that the official newspaper Tribuna de la Habana had issued a news article counteracting the negative opinions about the government-promoted treatment (Tribuna de la Habana 2020). In this article, the official media journalist used phrases

such as, '*There has been a matrix of negative opinions on social media which goal is to devalue it [PrevengHo-Vir]*', and '*Those who disseminate on social media messages [depreciating messages against PrevengHo-Vir] … do not care about people's well-being …*'. Therefore, it seems that the goals of the article were to counteract a conversation that people were having online criticizing the government and attempt to position a narrative favorable to the state.

The final form of evidence that Twitter-led citizens' actions influence the government is Cuban users' observation that if enough pressure is exerted via Twitter, the government may revert certain policies and decisions. For example, there is the belief among Cuban users that if a Tuitazo is organized where many users participate and make a clear denouncement of a specific issue, the government may feel pressure to listen to people's demands.

One of the interview participants discussed his perception of the connection between Twitter-driven protests and the government's reactions. In part of his interview, the participant explained his point of view about the government's ban of SNET and the final decision made by the government about it:

"*I am going to tell you what happened with SNET [the user explained to me what SNET was and the story of the government's attempt to eliminate it] … Suddenly, a wave of tweets about SNET emerged on Twitter and we even created a hashtag #YoSoySNET that became a trending topic… Because of this [because of the Twitter complaints], the Ministry of Communication decided to do what they are now doing, which is to allow SNET to be part of the Joven Clubs[5]… This wouldn't have been possible without Twitter, because on Twitter, once you post something, everyone can read it*" (Participant 8, December 2019).

Other interview participants also linked some well-known Twitter protests conducted by Cuban users to the government's reaction following these citizen-led actions. The following is another fragment from an interview where a participant made this connection:

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[5] Joven clubs are government-run computer labs that offer Cubans who do not have computers, access to basic computer services (e.g., Internet, printing).

"*One example is when we used Twitter to demand the government to shut down schools last month after the pandemic started. Diaz Canel [The Cuban President] stated [on TV] that 'Social media users had requested the closure of the schools'… The same thing happened with ETECSA … [S]ome time ago, … they [ETECSA] announced those crazy [i.e., crazy in the sense of expensive] new data plans…. They [ETECSA] didn't do what we demanded exactly on Twitter [Cubans demanded ETECSA to keep the new data plans at the same old data plan prices], but at least they did something[6]. They [ETECSA] did that because people bombarded their Twitter accounts with complaints*" (Participant 21, May 2020)

To summarize, the data analysis allows us to conclude that citizen-generated discourse on Twitter influences the government's actions. The interview data I presented above and the results of the VO exercise provide validity to the Cubans' claim of their influence on the government via Twitter's affordances. In fact, this phenomenon support findings from the case of other autocratic states where a link has been found between citizens' online denouncement and demands and governmental reaction, for example, in China (Chen 2014; Sullivan 2014) and Zimbabwe (Leijendekker and Mutsvairo 2014). In both the case of Cuba and other autocratic countries, one clear aspect is that this influence is limited; it only works occasionally and for certain demands, and it usually leads to partial solutions from the government. The prospect of influencing the government via social media demands is restricted to specific issues and particular situations. For example, in Cuba, the prospect of changing government actions seems higher for economic actions and policies than for aspects of the legal system. Similarly, targeted issues such as modifying a newly enacted economic law seem more open to influence than a long-established mechanism of domination used by the government, such as the strict control of the private sector.

Although there is clear evidence of the (limited) influence of citizen-generated discourse on Twitter on the Cuban government's actions, systematic data collection and analysis are needed

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[6] ETECSA modified the new data plans so that the amount of price increase was lower than what they originally announced.

to assess the extent of this influence. Data is needed to determine what issues can be addressed and how much they can be fixed in favor of Cuban citizens via Twitter-driven denouncements.

4.1.2.3. Twitter-enabled citizen goals: access to non-material resources to counteract government hegemony.

I noticed that Twitter was also a way for Cuban citizens to access resources that could help them be more effective in their fight against the government's hegemony. Control over the resources needed to achieve desired outcomes is another empowered outcome that citizens can attain via social media use (Leong et al. 2019). Leong et al. (2019) state that when people attempt to use social media to participate and impact a socio-political activity (e.g., a social movement), one form of social media empowerment is people's ability to gain access to material and non-material resources relevant to their goal. The data analysis showed evidence that Twitter use for discourse participation purposes enabled Cuban users to gain access to several non-material resources to push back against the government's hegemony. These non-material resources are legitimacy, visibility (e.g., public attention), solidarity, and knowledge of democracy.

Legitimacy

The data analysis revealed that Cubans perceive Twitter as a channel to legitimize their criticism of the government (i.e., a way to confer legitimacy to their denouncement). Cubans see on Twitter a formal framework to declare the government's actions and policies as well as existing social (or personal) issues as wrong and demand a solution. The perception of formality and legitimacy arises from Cubans' observation that their messages can be directly delivered to the relevant government entities (i.e., the entities responsible for the policy/action or those who can solve the denounced problem). The legitimacy and seriousness of the denouncements are also enabled by the possibility for Cubans to provide evidence (e.g., audiovisual evidence) to support their claims.

To understand why Cubans interpret Twitter as conferring legitimacy to their denouncement, we need to look at the historical relationships between citizens and the state in Cuba. Historically, Cubans have faced systematic limitations to accessing opportunities to make

formal criticisms of the government. First, the government limits the existence of formal structures where citizens can get their complaints of government policies and concerns about current issues of social interest addressed. Therefore, for a Cuban user, the act of tweeting a complaint and tagging a government entity is interpreted as a formal manner to criticize the state. Especially when taking this action occurs in a public forum like Twitter where other citizens can observe.

Secondly, the Cuban government has historically labeled any criticism as false and illegitimate, claiming that dissenting citizens have bad intentions (e.g., they work for foreign governments) or casting doubts on the accuracy of the information they share. With Twitter, citizens criticize the government while showing that they are "Cubanos de a Pie" ("Ordinary Citizens") with no ties to any political entity. Framing their criticism from this legitimate standpoint makes it harder for other observers (e.g., fellow Cubans users, international users, and media outlets) to believe the government narrative about the bad motives of those who dissent. Moreover, with Twitter, Cuban citizens can share facts to support their dissenting opinions. Backing up opinions with facts adds truthfulness to the government criticism that users air on Twitter, at least from the perceptions of fellow Cuban users.

Next, I present an excerpt where a participant refers to the possibility of using Twitter as a conduit to add legitimacy to his denouncements. The excerpt is part of an interview where the participant was describing his participation in a citizens' Twitter-led campaign to protest the high Internet prices set up by ETECSA: *"[T]hen, many cybercatfish [i.e., government Twitter-paid writers] and some government officials started attacking us [the citizens] on Twitter. They claimed that the [Twitter-driven] campaign was financed by American imperialism and that all of us were 'gusanos' [i.e., it translates as worms. A term used by the Cuban government to denigrate those who dissent]. That is why I chose to take pictures of myself standing outside of the Cuban capitol building and another one outside of an ETECSA commercial building on Aguila and Dragones, exposing my face and stating 'I, [participant mentions his name], standing here outside the Cuban Capitol, demand ETECSA to reduce the Internet prices'… you know, this way they can cut the [expletive]…*

everyone on the Internet could see that I was just a Cuban asking for a change that I thought was necessary" (Participant 6, November 2019).

The following tweet extracted from the VO also exemplifies the idea of Twitter-enabled legitimacy. It is a tweet where a user formally denounces a personal issue. He tagged the Cuban president and a relevant government-owned company and showed them a picture evidencing the denounced issue: "*Look @DiazCanelB [this tag is the President's account] the water currently running through the pipes in #CentroHabana [a neighborhood in Havana] is disgusting [the user shares a picture he took of dirty water coming out of a faucet], it has been like that at home since the day before yesterday, I already reported it, but nobody cares @AguasdeLaHabana [this tag is the account of the water supply company in Havana] #Cuba*". (tweet on 10-06-19).

Visibility

Cuban users also interpret their Twitter actions as offering them visibility (i.e., public attention) for their personal and societal problems. The possibility of connecting with Cuban independent media outlets and journalists on Twitter is one reason for this perception. By sharing their denouncements and personal stories with the accounts of independent media outlets, Cubans may have this shared content picked up and published by these entities, which serves to amplify these denouncements and stories to a larger audience. The following is a quote from an interview participant who describes this view: "*You do not feel alone [having a Twitter account]. You know the Cuban independent media is there and that they can visualize your story and your situation if needed*…" (Participant 14, April 2020).

During VO, I found several instances of content created on Twitter by citizens reported and amplified by independent media outlets. One example is the following tweet created by a user who called for a collective denouncement to protest the high Internet prices offered by ETECSA: "*#Cuba. Let's organize and demand @ETECSA_Cuba to listen to us as citizens and to respect us as clients. Next Saturday, May 30th, Cuban Tuitazo. #BajenLosPreciosDeInternet ["Lower Internet*

Prices"] #PreciosJustos ["Fair Prices"] #TarifaPlanaYa ["Internet Flat Rate Now"]" (tweet on 05-23-20)

On May 27th of 2020, the independent digital journal ADN Cuba published an article called "Call for a Tuitazo to demand ETECSA a price reduction" (ADN Cuba 2020), where they included the previous tweet to show that the protest was being organized by Cubans living on the island. This example illustrates how independent media, via their publications, can amplify the discourse that Cubans generate on Twitter.

The possibility of having many Cuban users sharing one's denouncement and opinion is another factor contributing to the perception of Twitter-driven visibility. The following interview fragment illustrates this observation: "*I think the main achievement we get with Twitter … is that whatever you publish has visibility and gets attention, either from the government or the particular [government] organization that you want to contact…Before [Twitter], criticism of a bad government decision… went nowhere… Nowadays, it is different since they cannot evade you anymore. How can they evade you if a bunch of people is blowing up their [Twitter] accounts? … [A]nd sometimes if the denouncement is true, they cover it on national television…*" (Participant 12, March 2020).

Solidarity

Solidarity is another intangible resource that Cubans achieve from the actualization of the affordances they perceive on Twitter. A Cuban user denouncing a personal or social issue finds on Twitter a platform where other citizens can join him/her in denouncing and criticizing the government. As the next participant clearly states, receiving solidarity from other citizens when one criticizes the government is very rare in offline settings in Cuba: "*On social media, and particularly on Twitter, you can connect with other folks. People help you when you have an issue… When you have an issue on the street [he means in an offline setting], it is very hard that people join you to make claims with you…*" (Participant 4, November 2019).

Twitter allows users to denounce an issue and have other users send the same complaint to government entities. Even if in certain situations you can make social and personal

denouncements in offline settings in Cuba, you can rarely get a group of other citizens to support you by directly making the same complaint to government entities. In short, on Twitter, a user can take advantage of a multiplicative mechanism whereby other users solidarize with his/her complaint and make it theirs (i.e., they all complain together). The next fragment is another example of Twitter as a mechanism of solidarity: "*I always tell myself… here [on Twitter] everything is different. I can silence them [i.e., the government] … [because] I can ask my contacts to rally against them and the outcome is different …*" (Participant 6, November 2019)

I found several instances of solidarity during the VO exercise. The following is an example of a user who creates a Twitter thread denouncing the bad working conditions of a group of ETECSA employees in Matanzas (a Cuban province). After creating the thread, the user retweets it with the following comment: "Friends, …, this is happening in #ETECSA #Matanzas. I share this story in solidarity with some employees who cannot make the denouncement on social media. Help them by disseminating this tweet so they can get their denouncement heard" (tweet on 05-22-20).

Knowledge about Democratic Norms and Processes

Access to knowledge about democratic norms and processes is another intangible resource that Cubans attain from actualizing Twitter's affordances. Citizens living in democratic countries learn about the processes and norms that sustain a healthy democracy as they interact with the main institutions of society, such as the media, the education system, and the electoral system. Examples of democratic processes are voting in free elections, belonging to the political party of one's election, and formally contacting an elected official (Carpini 2004). Examples of democratic norms are political tolerance, political trust, and political efficacy (Carpini 2004). In Cuba, however, the government controls these institutions; therefore, they are designed to indoctrinate citizens into anti-democratic behaviors and values. For example, the Cuban government normalizes the existence of both a single party and only state-controlled media. They also legitimize the restrictions they place on the freedoms of speech and assembly. Under these circumstances, Cubans find on Twitter a suitable platform to learn the rules and norms that regulate the relationship between

citizens and the state in democratic nations. This learning occurs as citizens consume the content from and engage in conversation with fellow citizens, users living in other countries, domestic and international pro-democracy organizations, and non-government-run media outlets.

The data analysis revealed that Cubans learn basic ideas about the functioning of a democratic government via their Twitter participation (i.e., they learn about basic democratic processes). For example, the next interview fragment exemplifies a user who has learned the importance of having a multiparty system: "*Twitter creates awareness of the need for a political change in Cuba… [A]nd you realize that what we need is a multiparty election system." "… and you understand that the idea is not to ban the communist party because if you do, you would not be creating a democracy but switching from one dictatorship to another.*" (Participant 17, April 2020).

The following participant described how he learned about the notion of political ideologies on Twitter: "*Yes, I think Twitter has influenced me a lot. I like politics, and I have learned a lot about it. I have changed my way of thinking… I have learned the meaning of being from the Left or the Right. I have concluded I identified with the Right.*" (Participant 19, April 2020).

Twitter participation is a channel where Cubans learn to value the democratic norm of political tolerance and civility (Carpini 2004), which manifests when users recognize the value of listening to opinions that differ from one's positions (i.e., the value that diverse opinions generate around a given socio-political issue). The next VO fragment illustrates this observation. It corresponds to a user's reply stating why he liked Twitter as a social media app: "*Because when you interact and exchange opinions with others with different perspectives, most of the time, you get a more complete picture of the issue under discussion*" (tweet on 02-16-20).

The following was a participant's answer when I asked him to follow up after he mentioned that Twitter had helped him become more tolerant: "*I mean that … [pause] people on Twitter are more intelligent [than the average person] … [Twitter users] try to share information and not only [their personal opinion]… [W]hen you start a debate with someone, usually many other people start giving their points of view … Most opinions are different from yours, but sometimes you realize that they are more logical… That's why I think debates on Twitter allow me to be more informed in the*

end… I change my mind on Twitter quite often… but [even] if I do not change my opinion, at least sometimes I find coherence in opinions that I thought were stupid before" (Participant 21, May 2020).

I also observed that Cubans could find on Twitter a platform to learn the importance of political trust (Carpini 2004). This observation does not refer to an increased trust in the totalitarian government since this kind of trust seems to plummet as people use social media in autocratic states (Bailard 2012). Instead, it refers to trust in opposition leaders, which are a kind of an alternative political force in the Cuban scene. Because of the government-led structured brainwashing and propaganda machines, citizens' views of opposition parties and leaders seem to be negative in autocratic contexts (Morozov and Docksai 2011). The negative opinion of the opposition is a very stark pattern in Cuba. However, some users acknowledge that their Twitter participation has led them to improve their opinion of Cuban opposition figures. The following data fragment is evidence of this finding (see another quote in Appendix 6): "*Twitter allows you to realize that all the criticism that you hear on the streets against the system [the political system] are true… [Y]ou realize that people from the opposition and dissenting voices have a valid point when they criticize this [expletive] system…*" (Participant 6, November 2019).

I also found evidence that Twitter participation could impact users' awareness about the value of holding informed opinions. Citizens who hold consistent and informed opinions on current socio-political issues are pilar for democracy (Carpini 2004). The next interview fragment illustrates how users can get a heightened sense of the need to hold informed opinions as they use Twitter: "*[On Twitter], I have learned to read first… I tried to take my time before expressing any ideas on Twitter … you always find people who claim that you are lying… You have to find evidence before you write something out there… [and people] will be more convinced that you are telling the truth. Therefore, at a personal level, Twitter has helped me try to find better arguments before expressing myself*" (Participant 8, December 2019).

4.2. Social Media and Empowerment in Restrictive Environments (RQ 1)

Research question 1 states: How does the use of social media technology to participate in public discourse empower the people living in restrictive environments to challenge the government's hegemonic ruling? Answering research question 1 based on the results from the interpretive case study requires a generalization from the case study to theory (i.e., generalization from a description to theory) (Lee and Baskerville 2003). According to this prescription, I chose to generate theoretical propositions from the case study results in the form of theoretical templates related to Research Question 1 that can be used as the starting point to study social media-enabled discourse participation and citizen empowerment in other restrictive environments (Avgerou 2019). Chapter 5 (Discussion) offers a condensed answer to research question 1; however, this section lays out the propositions supporting this answer.

The theoretical propositions advanced in this research are helpful for explaining the phenomenon of social media-enabled discourse participation and citizen empowerment. They are statements that provide a lens for explaining the IT-mediated phenomenon of social media-driven empowerment; therefore, they illustrate a theory for explaining (Gregor 2006). As a theory for explaining, this research's propositions focus on explaining rather than predicting; thus, the propositions are not aimed necessarily at being tested (Gregor 2006). Instead, they are propositions that can guide, subject to adaptation (Walsham 1995), a research study about this IT-mediated phenomenon in other restrictive environments beyond Cuba.

I generated these propositions considering how plausible and logical they are as initial guidance to study this phenomenon in other settings beyond Cuba (Avgerou 2019; Klein and Myers 1999). Logical propositions are those for which the conditions needed for their validity in other settings can be logically and reasonably assumed to operate in those settings. References in the literature that suggest the validity of the propositions in other restrictive environments also add to the plausibility of the statements. Using existing literature to back up theoretical propositions derived from the case fits the idea proposed by Siggelkow (2007) that "[o]ne needs to convince the reader that the conceptual argument is plausible and use the case as additional (but not sole)

justification for one's argument." I interpret Siggelkow (2007) as suggesting that generalizations from the case study can be made cogently not only using what we observed in the case setting but also using additional justifications (e.g., evidence found in the literature supporting the argument).

The generalizations from the Cuban case study to theory will be based on literature references and examples taken from authoritarian countries. This approach is appropriate because research question 1 is about the empowerment of people in restrictive environments, specifically regarding their fight against the government's hegemonic ruling (i.e., it is about empowerment regarding human rights and political participation restrictions). Since authoritarian countries are contexts where the state has overwhelming dominance over the socio-political life, they are a suitable source to support the generalization exercise.

4.2.1. Propositions about Citizen Empowering Actions Through Social Media

As citizens use social media to participate in public discourse, they should perceive the different actions they take with these technologies as empowering. Empowering actions will be activities whereby citizens use social media to access, share, and discuss socio-political information in a way that is free (or semi-free) from the control of the authoritarian government. Therefore, I suggest that the affordances for participating in public discourse that citizens in authoritarian settings perceive on social media can be considered empowering actions. What public discourse participation affordances citizens in totalitarian countries could perceive on social media? How can the nine specific affordances I identified in the context of Twitter use in Cuba be abstracted to more generic affordances?

One approach for extending the insights about these nine affordances to other totalitarian contexts is to remove the idiosyncrasies of the case by abstracting them into more general categories (Lee and Baskerville 2003; Siggelkow 2007). This is the approach Avgerou (2013a) followed as she took the specific processes that explained citizens' trust in e-voting technology in Brazil and proposed three generic processes that describe the development of trust in e-voting technology. For example, Avgerou (2013a) found that one process explaining trust specifically in Brazil was citizens' perception of the e-voting technology as the continuation of recent historical

efforts in Brazil to restore democracy. Avgerou (2013a) abstracted this specific case study finding to a more generic mechanism stating that "… trust in e-voting emerges from and relies on government agents' and citizens' democratic engagement."

Similarly, the nine affordances for discourse participation that I identified can be categorized into three generic (more abstract) categories. The affordances of accessing citizen-generated content, accessing multiple non-official sources of news, and accessing socio-political content in real-time fall in a category that I called the affordance of accessing unregulated[7] socio-political content. The affordances of communicating with government officials, the Cuban diaspora, and non-government public discourse gatekeepers fall in a more abstract category that I called the affordance of communicating with key socio-political actors. Finally, the affordance of sharing socio-political content, sharing content to counteract the government's data and narratives, and sharing content in real-time all fall into a general category called the affordance of sharing unregulated socio-political content. These three generic affordances are empowering actions that citizens in autocratic states can benefit from when they use social media. I now postulate three propositions involving these affordances.

Proposition 1: The social media affordance of accessing unregulated socio-political content empowers citizens in restrictive environments in their challenge against the government's hegemony (i.e., it is an empowering action for citizens).

It is reasonable to postulate that citizens in closed regimes will find a channel to access unregulated socio-political content on social media. Totalitarian governments put a great effort in keeping tight control of the narratives about socio-political events and the data about socio-political activities. Typically, these governments use technical and legal structures to prevent citizens from accessing channels devoted to circulating dissenting content such as websites, TV, and radio stations run by opposition voices and independent media. Totalitarian governments can usually

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[7] Unregulated means that the content is not generated, endorsed, or controlled by the government.

block access to these kinds of channels. However, many authoritarian countries allow citizens to use social media apps such as Twitter and Facebook. When this is the case, governments cannot fully censor dissenting voices from circulating content on these channels since they cannot censor users from within the platform. Therefore, social media are platforms where opposition figures, dissenting citizens, and independent journalists can create accounts and circulate critical opinions of the government and information that the government hides for the other citizens who use these technologies to consume.

There is indeed evidence in the literature that citizens from other autocratic countries access unregulated socio-political content on social media. Mutsvairo and Columbus (2012) found that Zimbabweans use Facebook to access the commentary and data about important socio-political events shared by fellow citizens. Similarly, several researchers who have studied the use of Weibo for political purposes report that Chinese citizens find on Weibo content critical of the government, such as government local corruption cases and police power abuse (Chen 2014; Sullivan 2014). For Chinese people, Weibo is a source of information and opinions on politically sensitive events and topics that bypass the informational agenda set by the Chinese mainstream media (Sullivan 2014). In Iran, where Facebook and Twitter are banned, citizens use Telegram to access dissenting socio-political content. Alimardani (2018) reported in Politico Magazine that millions of Iranians rely on Telegram's private group chats to receive their news from non-government-controlled local and diaspora Persian news sources on the platform's public channels. In December 2017, Alimardani's article (2018) reported that AmadNews, a news organization that circulated critical news of the government, had a popular Telegram public channel with more than 700 000 followers who lived in Iran.

Proposition 2: The social media affordance of safely sharing unregulated socio-political content empowers citizens in restrictive environments in their challenge against the government's hegemony (i.e., it is an empowering action for citizens).

I consider that the reasons for Cuban users to perceive Twitter as a safe place to air government criticism also apply to citizens in other autocratic countries with other similar social media platforms. In the Cuban context, users know that it is straightforward for the government to detect and rescind offline manifestations of dissent but harder to devote resources (e.g., time and personnel) to identify and reprimand someone with dissenting opinions online. The case study showed that as Cubans observe many other citizens criticizing the state on Twitter, they feel less afraid of "joining the herd" and expressing their criticism. Therefore, it is logical to assume that citizens in other totalitarian states would also perceive that it is harder for the government to detect and punish them for airing dissenting opinions on social media when compared to other channels (e.g., offline settings, online socio-political forums sponsored by the government). This observation has indeed been made by Bailard (2012) as well: "Information sharing between citizens is one affordance of the Internet that is particularly salient in authoritarian states where individuals may be reluctant to discuss politics or personal opinions with others".

There is evidence in the literature that citizens from other autocratic countries interpret social media as a safe channel to share unregulated content. Mutsvairo and Columbus (2012) report that Zimbabweans feel free to share content on Facebook despite the government's repressiveness towards free speech. Mutsvairo and Columbus (2012) indicate: "On Facebook, stories critical of President Mugabe and his party are shared by activists and general citizens … [W]e were able to talk to citizens who claimed they shared their views without any concerns, also using their real names in that process even though the majority of them said they would not broadcast the same views on TV or Radio." Chinese citizens also find on Weibo a safe place to share data and opinions criticizing the government (at least on certain issues). Weibo is a platform where citizens commonly criticize government corruption events, government policies, and government human rights abuses (Chen 2014; Sullivan 2014). Chinese netcitizens also use Weibo to discuss sensitive political topics using encoded language (e.g., illustrations instead of words, vernacular words with critical messages) (Rauchfleisch and Schäfer 2015). The possibility to use encoded language is another reason that offers users a layer of safety on Weibo (Rauchfleisch and

Schäfer 2015). In short, there is evidence that in China, which is a totalitarian state, Weibo, a social media app, offers citizens a safe platform for circulating data and opinions on at least a subset of all possible politically sensitive events and topics.

Proposition 3: The social media affordance of conveniently communicating with key socio-political actors empowers citizens in restrictive environments in their challenge against the government's hegemony (i.e., it is an empowering action for citizens).

One common characteristic across totalitarian states is their efforts to limit citizens' possibilities to establish links with non-government-controlled entities that might reduce the government's information hegemony. Some examples of these entities are independent media organizations, NGOs working outside of the government's agenda, opposition figures and parties, and the Cuban diaspora members interested in advancing democracy in their homeland. It is common for autocratic states to devote efforts to curtail citizens' possibilities to interact with these pro-democracy entities. However, these organizations maintain an active presence on social media. Citizens should perceive this presence as an easy opportunity to circumvent the government's restrictions to access and share valuable socio-political content with these entities.

There are reports in the literature of citizens from autocratic states interacting with pro-democracy organizations on social media. Mutsvairo and Columbus (2012) report that Zimbabwean citizens use Facebook to route relevant information about socio-political events on Zimbabwe soil to independent journalists living abroad. Mutsvairo and Columbus (2012) remark: "[t]he bulk of [Zimbabwean] online newspapers, independently run by Zimbabwean journalists abroad, use citizens as their main source of news-gathering efforts"). Zheng and Yu (2016) also detailed the case of a Chinese NGO devoted to fighting childhood hunger in rural China and how they used Weibo to recruit citizens to form part of the organization. Zheng and Yu's (2016) research shows how citizens living in an autocratic state can connect and work with non-government entities to tackle social problems that might not be on the government's agenda.

Another example supporting proposition 3's validity in other restrictive spaces is the events in Thailand in October 2020. Thailand is a monarchy where citizens are constrained from freely opposing the discourse and laws enacted by the kingdom. As reported in an article by Scribner (2020) in The Diplomat, Thai citizens protested a government-mandated ban on gatherings and were able via Twitter to connect to pro-democracy citizens in Hong Kong. The latter showed solidarity with the Thai people and powered their protest with more social media visibility. Hong Kong Twitter users started to use the hashtag #StandWithThailand. Some Hong Kong pro-democracy advocates even staged a protest outside of the Thai consulate to show support for the protests in Thailand.

4.2.2. Propositions about Citizen Empowered Outcomes Through Social Media

I now lay out a series of propositions concerning citizens' empowered outcomes in restrictive environments derived from their use of social media for discourse participation purposes. The empowered outcomes are the consequences of the social media-enabled empowering actions previously discussed.

Limited Structural Empowerment

Structural empowerment refers to structures and instances indicating that people have authority to make decisions to improve their lives and hold accountable powerful entities (e.g., government, top management) when they do not act on people's behalf (Maynard et al. 2012). Relative to the phenomenon of citizens from restrictive environments using social media to challenge the state's hegemony, evidence of social media-enabled structural empowerment needs to be found in structures or examples justifying that citizens can use these technologies to influence the government and have it act in their favor.

The case study results discussed in section 4.1.2.2 revealed several instances where Cubans used Twitter to demand the government for changes, and the government positively reacted to these demands (e.g., they found a solution for the issue, they acknowledged an issue they had not previously mentioned in official media channels). This finding seems to be replicated

across other autocratic countries, where there is also evidence of the government responding to the denouncements, opinions, and calls for change in citizen-led online forums.

For example, even in a country with a highly controlled Internet like China, it is well documented that Chinese Weibo users sometimes pressure the government into reacting to demands of change about environmental issues as well as fixing situations of corruption and mismanagement by local authorities. For example, Rauchfleisch and Schäfer (2015) found in their research that there is an environmental public sphere on Weibo since issues like environmental pollution and food safety can be openly debated on this platform. Sullivan (2014) and Chen (2014) discuss several examples in China of citizens using Weibo to criticize local government entities' responsibility in specific events and how this criticism led the national government to use official media channels to accept responsibility for the unfolding of the event, and sometimes, to even take corrective actions (e.g., to remove the perpetrating government official from office). Both Sullivan (2014) and Chen (2014) coincide that Weibo is a social media platform where Chinese citizens can expose and criticize local cases of government corruption and mismanagement, which may lead the Chinese government, at its highest rank, to recognize these events and sometimes to respond to citizens' request to solve these local issues. Leijendekker and Mutsvairo (2014) also report that the Zimbabwean government responds in official media channels to information that citizens discuss on the Internet, especially on Facebook.

In essence, there seems to be a strong indication that citizens in restrictive environments can use social media to have the government reacts to their demands and enact desired changes. One clear thing is that this influence is limited. Thus, the general finding is that an influence exists but is limited. Proposition 4 captures this idea. Data needs to be collected and analyzed to determine the extent of the influence and understand when it works (e.g., for what issues) and how much it works (e.g., to what extend the issue gets solved). I suspect that the answer to this question is particular to each restrictive environment (i.e., the extent of the influence will be different in Cuban than in Venezuela).

Proposition 4: Citizens' actualization of the social media affordances for public discourse participation is a source of limited structural empowerment for citizens in restrictive spaces. The structural empowerment is evidenced by the occasional and usually partial solutions to socio-political issues that the government enacts responding to citizens' social media-driven denouncements.

Psychological Empowerment

The nature of the citizen goals that Cuban users described they attained from their Twitter-driven participation points to the usefulness of looking for empowered outcomes using the notion of psychological empowerment (Zimmerman et al. 1992). Psychological empowerment contemplates the possibility that an empowered person may have no real power in the political sense, but that s/he may have the motivation and self-efficacy for making efforts to gain such an objective power (Zimmerman 1990). Psychological empowerment is related to people's perceived possibility to influence the social and political systems important to them (Zimmerman et al. 1992).

One of the components of psychological empowerment is the person's perception of self-efficacy (Perkins and Zimmerman 1995; Zimmerman 1990). Self-efficacy is the person's judgment of his/her capabilities to organize and execute courses of actions that can lead him/her to achieve desired outcomes (Bandura 1982). In relation to the notion of empowerment, self-efficacy is a person's belief in his/her abilities to define goals and act upon them to improve his/her community (Perkins and Zimmerman 1995). It is a sense that one's participation and involvement in the issues of the community will have an effect (Pigg 2002). Contextualized to citizens in restrictive environments challenging the government's hegemony, self-efficacy is the person's belief that opposing and criticizing the government's policies and actions will lead to desired outcomes (e.g., a reduction of the state's hegemony). Referring to the effects of self-efficacy in people's emotions and behaviors in unresponsive and punitive social environments, Bandura (1982) posits that people with high self-efficacy in their capability to influence social conditions will tend to engage in protests and collective efforts to change existing practices.

The case study results reported in section 4.1 and existing literature support a connection between the use of social media to participate in socio-political conversations by citizens in autocratic regimes and their self-efficacy to contest the government's power. The case study showed that Cubans experience a boost in self-efficacy as a by-product of using Twitter to participate in public discourse. For example, several interview participants asserted that they thought Twitter made them more capable of contesting the government's power over the decisions made in the country and the narratives constructed about the country's socio-political reality. Moreover, I found dozens of tweets as part of the VO exercise where users express thoughts of improved self-efficacy. For example, it was very common to find tweets with phrases such as "Social media/ Twitter work(s)" and "Twitter is powerful", which contains the message that Cubans believe these technologies make them more capable of challenging the state.

How does using Twitter to participate in public discourse increase Cubans' self-efficacy in challenging the government hegemony? One source of information that can positively inform the perception of self-efficacy is performance attainments (i.e., successfully carrying out an action) (Bandura 1982). The discussion in section 4.1.2.2 presented several examples where the Cuban government positively responded to Tuitazos, collective Twitter-mediated outcries, and individual users' demands. Therefore, as Cubans observe the success of some Twitter-mediated actions, they should increase their self-efficacy regarding their efforts to push back against the government.

Another source of information that informs self-efficacy is vicarious experiences of observing the performances of others (Bandura 1982). This is naturally another route impacting Cuban Twitter users' self-efficacy. Twitter users share their personal as well as others' experiences of how Twitter and other social media apps helped them solve personal issues. Moreover, I observed collective celebrations of the power of Twitter to pressure the state into desired changes, for example, in the aftermath of the Twitter collective denouncements against ETECSA in 2019 and the demand to lockdown the country in March 2020. These vicarious experiences can influence a user to increase the potential for change s/he assigns to social media. Self-efficacy can also

increase via verbal persuasion targeted to convince the person that s/he possesses certain capabilities. In the Cuban context, independent media plays this persuasive role since it is common to find reportages in the main independent outlets (e.g., 14ymedio, Diario de Cuba, AND Cuba) praising the value of social media for its power to pressure the government into making concessions.

The sources of information impacting self-efficacy found in the Cuban context are also available to social media users in other autocratic states. The justification of proposition 4 included references to other countries such as China and Zimbabwe, where netcitizens have the possibility of observing their governments paying attention to and reacting to at least some of their social media-mediated demands. Therefore, performance attainments via social media should also be a source of self-efficacy boost in other restrictive settings. Similarly, there are reports of the independent media in other closed societies praising and overstating the value of social media for citizens in their fight for democracy against the state (Morozov and Docksai 2011; Sullivan 2014). Therefore, media coverage also seems to play a pro-self-efficacy persuasive role in other countries beyond Cuba.

Based on the above discussion, I advance the following proposition:

Proposition 5: Citizens' actualization of the social media affordances for public discourse participation increases their self-efficacy to challenge the government's hegemony in restrictive environments.

Another component of psychological empowerment is the person's cognitive competence to change their environment to his/her benefit and the community (Zimmerman 1990). This competence involves an understanding and knowledge of the factors that influence decision-making processes in one's surroundings; that is, the causal agents of the situation that the person is trying to improve (Perkins and Zimmerman 1995). Empowerment also means that an individual increases his/her ability to challenge existing relations of domination (Drury and Reicher 2005).

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Contextualized to citizens in authoritarian countries challenging the government's hegemony, the notion of competence should entail citizens' skills and knowledge to effectively denounce and criticize the government. It is well known that democratic participation requires citizens to have basic skills such as reasoning, argumentation, and written communication, and knowledge about politics and public life (Carpini 2004). Having such skills and knowledge increases the likelihood that citizens participate in politics in ways that serve their self-interest (Carpini 2004). For citizens in autocratic countries, knowing democratic norms and processes means they are better prepared to identify instances where the government's policies and actions deviate from democratic ideals and to demand corrective actions that target the root cause of the issues, which is usually the totalitarian nature of the political system in the country. Acquiring more knowledge about democratic norms and processes allows citizens to push more effectively against the government's actions and narratives and have a clearer idea of what kind of change they want for the country. Also, better argumentative skills mean that citizens have more chances to put forward sound written arguments to criticize and oppose the government; that is, arguments that can clearly show the government's responsibility in the denounced issues.

The case study results support a connection between using social media by citizens to participate in public discourse and acquiring democratic skills and knowledge. I showed that Cuban Twitter users find in this social media app a place to learn about democracy. For example, they learn about the vital importance of having a multiparty political system and the value of having opposition figures in the country. They also learn the value of some democratic norms, such as being tolerant of fellow citizens with different opinions and the importance of having informed opinions.

Research conducted in other authoritarian states also points to benefits regarding democratic knowledge and skills that citizens can derive from Internet use. Bailard (2012) points out that citizens from countries transitioning from authoritarian rule to a more democratic socio-political organization can benefit from the content they get exposed to on the Internet. Bailard (2012) indicates that one of the main benefits for citizens in these contexts is the possibility to learn

how citizens in democratic countries interact with their governments. This learning motivates netcitizens from closed societies to demand their government to act in more democratic ways. Bailard (2012) illustrates this learning process as follows: "News stories about elections, protests, demonstrations, and political scandals are … topics that convey information about how democracy functions in other countries. However, even information regarding more mundane day-to-day topics, such as women in the workplace or the workings of the criminal system, may … further [illuminate] how democracy functions differently in … advanced countries."

In China, Rauchfleisch and Schäfer (2015) report that Weibo users learn about democracy by paying attention to US elections. Chinese users hold Weibo debates about the election candidates that usually contain references to the benefits of democratic elections and their value as a political institution (Rauchfleisch and Schäfer 2015). In these debates, it is common to observe users expressing their discontent with China's election system and their desire to hold elections that move their country toward democracy (Rauchfleisch and Schäfer 2015).

The links that citizens from authoritarian countries keep with diaspora members on social media also offer the former group an opportunity to learn about democracy. People in the diaspora use social media to share socio-political information and opinions with those in the homeland (Leijendekker and Mutsvairo 2014). There is evidence that citizens in autocratic states do indeed use the knowledge they get from diaspora members about the characteristics of a democratic government as a framework to criticize and demand changes to their governments (Bailard 2012).

Based on the above discussion, I advance the following proposition:

Proposition 6: Citizens' actualization of the social media affordances for public discourse participation increases the democratic skills and knowledge they possess to challenge the government's hegemony in restrictive environments.

Another component of psychological empowerment is the person's perception of control over important resources needed to change their environment to his/her benefit

(Zimmerman 1990). Empowered people perceive that they have domain-specific control over important resources that they need to perform successful actions to change the environment (Perkins and Zimmerman 1995). People also feel empowered when they have access to the resources that they need to enact change. Some resources are material (e.g., goods and finances), but others are nonmaterial (e.g., networks of relationships, public attention) (Pigg 2002).

The case study results indicated a connection between the use of social media to participate in public discourse and the access to nonmaterial resources valuable to challenge the government's hegemony. In section 4.1.2.1, I showed that Cuban users find on Twitter a platform to gain access to several nonmaterial resources such as denouncement legitimacy and solidarity from fellow citizens.

One intangible resource that social media enables users to access across autocratic countries is information about government policies and actions that the government selectively hides. A common trait of authoritarian states is to hide data about events and situations that could damage their reputation and start a public outcry. Social media is a good channel to access this sort of sensitive information that the government does not want citizens to know. As citizens use social media to access this kind of content, they greatly diminish government control over knowledge. Social media channels in closed regimes are platforms where citizens can regularly find sensitive and valuable information to assess the government, such as human rights abuses, corruption schemes, the negative economic or social impact of specific policies, and signs of periods of economic collapse (Leijendekker and Mutsvairo 2014; Sullivan 2014). The observation that social media-enabled access to information about government policies and actions that the government selectively hides replicates a more general pattern called mirror holding discussed by Bailard (2012). In non-democratic nations, the Internet provides individuals with more information about their governments than they would otherwise have access to (Bailard 2012). Compared to official media channels, the Internet offers a more accurate and comprehensive mirror for individuals to reflect on their government's performance (Bailard 2012).

Public attention (i.e., visibility) is another intangible resource that users in closed regimes can access via social media. For example, in China, Weibo is a platform where citizens' denouncements of local government official scandals have higher chances to gain the attention of government official media outlets (Chen 2014; Sullivan 2014). The "[i]nformation transmitted by Weibo can constitute [sometimes] an accountability mechanism in the form of online public opinion…" (Sullivan 2014). Chen (2014) and Sullivan (2014) discuss various examples where Weibo-based citizen-led journalism generated political pressure on the Chinese government via online public opinion.

Based on the above discussion, I put forward the next proposition:

Proposition 7: Citizens' actualization of the social media affordances for public discourse participation allows them to access valuable intangible resources that support them challenging the government's hegemony in restrictive environments.

Another component of psychological empowerment is the person's motivation to exert control over his/her environment to make it better (Zimmerman 1990). A person also feels empowered when s/he feels motivated to be involved in future actions to alter the social reality to his/her benefit (Drury and Reicher 2009). As stated by Drury and Reicher (2009), "[the] sense of being able to shape one's world is necessarily passionate and exhilarating". Feeling positive affective reactions that galvanize the pursuit of change is also a component of psychological empowerment (Drury and Reicher 2009; Maynard et al. 2012).

The results of the case study evidence that Twitter-mediated participation can be motivating for Cubans. One source of motivation for people to engage in difficult tasks, for example, opposing a tyrannical and repressive government, is experiencing satisfaction when performing the tasks (Bandura 1982). I found that Cubans find the use of Twitter to participate in socio-political conversations satisfying. One reason for this perceived satisfaction is that Cubans approach Twitter with repressed desires of freedom; hence, they interpret their participation as freeing. They consider that Twitter participation allows them to virtually experience the freedom of speech, the

freedom to access a free press, and the freedom to associate with others. Participants conveyed a sense of satisfaction when they mentioned having such perceptions of freedom. The next fragment is a clear indication of that:

"… and it truly feels good to tell the truth out loud and feel free from doing so … It feels like removing the hand that is preventing you from speaking … [like removing] a pressure that you feel inside" (Participant 7, December 2019).

Another source of motivation that Cubans find on Twitter is the experience of positive emotions emerging from actualizing some of the participation affordances they perceive in this app. Cuban users experience positive emotions related to the sense of justice, fairness, and revenge that emerge from using Twitter to oppose the government's tyrannical domination. The next two data fragments evidence this observation:

"*Twitter allows me to fight against injustices. I fight against what's unfair and any [government's] wrongdoing*." (Participant 5, November 2019).

"*Thanks, Twitter… Thanks for allowing me to get information with obstacles…Thanks for allowing me to relieve my angst, for letting me take revenge for years of silence and take off my gag …*" (Twitter thread on 12-11-19)

The boost in motivation to keep the fight against the government's hegemony that citizens in restrictive environments can experience from using social media can be expected to occur in other settings beyond Cuba. Despite the socio-economic and political differences across totalitarian regimes, one common thread is their efforts to exert tight control over citizens' actions in the socio-political arena. However, citizens in autocratic states can use social media apps to read socio-political content, exchange content with fellow citizens, and connect and organize with others to demand (at least virtually) the government for desired changes. Therefore, as social media allow citizens to do things that the government limits them to do in the socio-political realm, it is expected that citizens will feel a reaction of recovered freedom when they notice that social media allow them to overcome these limitations in the virtual space. In summary, citizens'

perception of liberation and justice related to their social media use should be universal for citizens across totalitarian states.

Based on the above discussion, I put forward the next proposition:

Proposition 8: Citizens' actualization of the social media affordances for public discourse participation increases their motivation to challenge the government's hegemony in restrictive environments.

The final proposition addresses the process whereby the actualization of social media affordances lead to psychological empowerment. The psychological empowerment dimensions discussed in propositions 5 to 8 require users in restrictive environments to interpret the results that taking advantage of social media has for their efforts to oppose the autocratic government. The realization of what is favorable for their life as citizens who oppose the government from using social media needs users to observe other citizens' and the government's reactions to the content circulated on social media. It also requires conversations with other users and collective labeling of what they have achieved vis-a-vis their power struggle against the government. In short, since it is not evident for users in restrictive environments what their participation's real effect on the government is, they need to engage in the process of constructing meaning about this effect. One construct that neatly reflects the process of meaning construction for understanding unclear situations is sensemaking (Weick et al. 2005).

Sensemaking helps meaning to materialize in concrete ideas and interpretations (Weick et al. 2005). In this case, users in restrictive environments, after talking to each other and observing the impact of what they do in social media, would use labels to characterize this impact. For example, they could conclude they have achieved more "legitimacy" and "visibility" for their denouncements of the government. They could also conclude they have attained certain "freedoms" in the virtual sphere that they are denied offline. All these labels would be the result of collective sensemaking around the effects of their social media-mediated participation. Therefore, I submit the next proposition:

Proposition 9: The result of actualizing social media affordances for public discourse participation leads citizens in restrictive environments to feel more psychologically empowered after engaging in collective sensemaking to construct idiosyncratic meaning about the effects of the content they generate on social media on the autocratic government.

4.3. Conditions in Cuba and Citizens' Use of Twitter to Participate in Discourse

Research question 2 states: How do the societal conditions in a restrictive societal environment shape the use of social media technology for discourse participation purposes? This section discusses the answer to research question 2 applied to the Cuban context by spelling out how Cuba's restrictive socio-economic and political conditions shape citizens' use of Twitter to participate in public discourse. Figure 5 is a graphical outline that answers this question and depicts a framework that describes how the use conditions experienced by Cuban users inform the strategies that they apply to actualize Twitter affordances. The next subsections address the components of the framework depicted in Figure 5 by discussing what contextual conditions shape Twitter use, what use patterns Cuban users followed to actualize the discourse participation affordances, and how the use conditions inform these patterns.
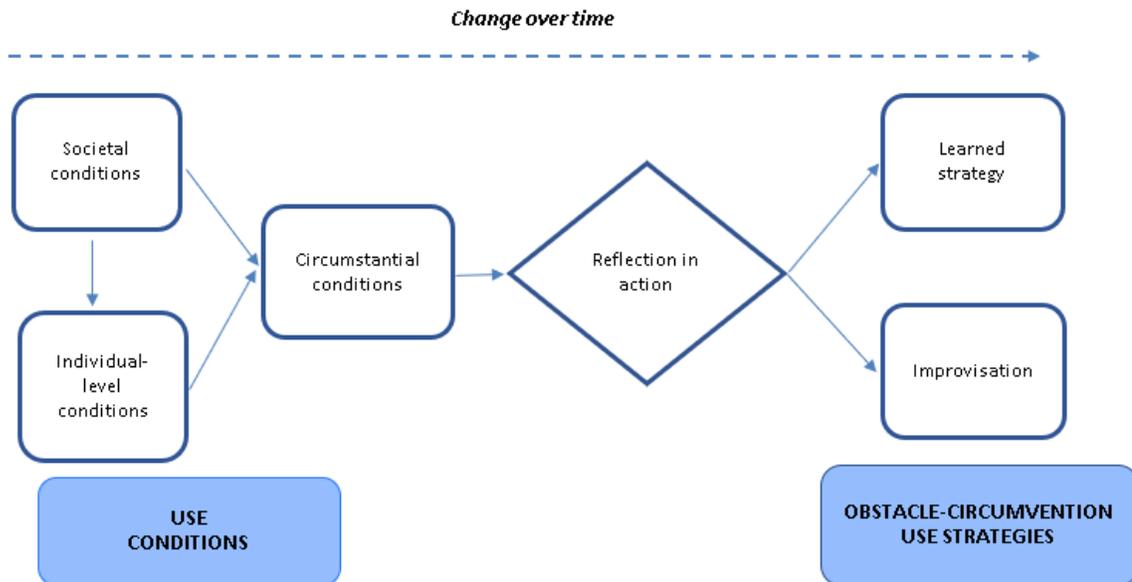
Figure 5: Social Media Use Conditions and Use Strategies

4.3.1. Obstacle-Circumvention Use Strategies

The data analysis revealed that the most evident influence of Cuba's societal conditions is how they drive Twitter users to take actions beyond the simple use of this technology's features to access, discuss, and share socio-political content. The societal conditions in Cuba make it difficult for users to actualize Twitter's affordances; therefore, part of the process of affordance actualization is characterized by users' efforts to bypass hindering conditions such as state's online censorship and harassment, and economic difficulties to buy Internet data and properly functioning technological smartphones. I found out that in Cuba, actualizing Twitter's affordances for discourse participation involves not only users taking advantage of Twitter's features such as the tweet, retweet, and reply, but also steps to circumvent use obstacles. To summarize, the societal conditions in Cuba shape the use of Twitter for discourse participation purposes by leading users into an involved process of affordance actualization that entails the appropriation of expected Twitter features (i.e., tweet, retweet, hashtag use) together with steps needed to overcome use obstacles.

The data analysis did not reveal any use pattern reflecting contextual influences in how Cubans appropriated expected Twitter features such as the retweet, the like, the hashtag, and the timeline. This sort of influence might exist, but there were not revealed by the data analysis. In contrast, the data analysis clearly showed that Cubans adopted strategies to bypass use difficulties as part of their efforts to actualize Twitter's affordances for discourse participation. Only identifying a subset of the IT use patterns enacted by users in practice is expected in IS research (Orlikowski 2000). What use patterns the researcher identifies depends on what users the researcher gets exposure to, during what circumstances, and using what research tools (Orlikowski 2000). That is why my description of how Cubans actualize the affordances they perceive on Twitter does not exhaustively describe everything these users do with Twitter in practice. It seems that during the interviews, Cuban Twitter users were chiefly motivated to describe the quandaries they faced to

participate in public discourse via Twitter. Therefore, this is likely the reason why the use patterns I identified are related to circumventing difficulties.

Because the use patterns I identified are built around the aim of overcoming obstacles, I called these strategies "obstacle-circumvention use strategies". The obstacles faced by Cubans are conditions connected to the socio-economic and political systems in the country. Therefore, by outlining the strategies that Cubans adopt to minimize the obstacles faced while using Twitter, I found a way to elucidate how Cuba's contextual conditions shape the actualizations of Twitter affordances. I now discuss the obstacle-circumvention use strategies revealed by the data analysis and the societal conditions that lead users to adopt them. This discussion will serve to partially describe the process of affordance actualization and how contextual influences impact it.

Obstacle-Circumvention Use Strategy 1: Censorship Avoidance

One of the strategies I identified was censorship avoidance. The most common manifestation of this strategy is using a VPN app to access Twitter content censored by the government. Cuban users regularly find tweets on their timeline with links to content from sources censored by the government, such as Cuban independent media outlets and Cuban and international pro-democracy organizations. These links to censored content need to be accessed via a VPN app. To use a VPN app while consuming content on Twitter, a user needs to copy the link to the blocked content found on Twitter, open the VPN app, and then open an Internet browser to search for the blocked website. After consuming the censored content, the user may go back to Twitter to continue participating in public discourse, and s/he may tweet his/her opinion about it or reply to other users' comments about it. As it can be seen, using a VPN app to consume Twitter content implies a discontinuity (disruption) of the user-Twitter interaction.

The following is a quote from an interview where the participant describes the need to use VPN apps while consuming content on Twitter:

"*Censorship is another issue. I have a VPN browser that I have to use constantly. There are many independent media newspapers that you can see on Twitter, but you cannot*

access their content… Sometimes I copy a link to the clipboard, and then I go to the [VPN] browser

to copy the link… I feel like I need to read the news completely [the participant refers to the news

headlines he finds on Twitter], so I use the VPN… That's the way it is. It isn't only to open Twitter

and start trashing the government. Here in Cuba, everything takes time and effort…" (Participant

10, December 2019)

I also found out that some Cubans are aware of the possibility of using VPN apps to

overcome censorship; nevertheless, they decide not to use them because of the technical

challenges it implies. One participant made this point in an interview: *"Well, I do not use VPN*

because it slows down the connection a lot. As I told you, I have mutual connections with several

independent journalists, then, what I do is to ask them via DM to send me the article that I want…

and that way is easier because they [the government] have all those sites blocked; therefore, I

cannot access them, I mean, I could access them using VPN, but I do not use it [a VPN app]

because it slows down the connection" "… I prefer to ask someone to send it [the blocked content]

to me. Either a journalist friend or some of the people I know on Twitter who live outside Cuba…

They send it to my email, and that's it" (Participant 1, October 2019)

In contrast to using a VPN app, this user does not apply a censorship-avoidance

strategy directly based on an IT solution. Instead, this participant's approach to avoiding censorship

is to take advantage of his social connections on Twitter.

As it will be shown throughout this section, applying the obstacle-circumvention

strategies usually come with an affordance actualization cost (i.e., a negative outcome). For

instance, as evidenced by the last participant's quote, activating a VPN app makes the Internet

connection slower than it usually is, making it more challenging to use the Twitter app properly. As

the next quote illustrates, activating a VPN app also increases Internet data consumption, a very

undesirable outcome for Cuban users: *"It [i.e., activating a VPN app] has consequences. When you*

open Psiphon [a VPN app], then the firewall app that I use to control the Internet data gets

deactivated, and all the data traffic goes away [this means that all apps in the cellphone start using

Internet data]." (Participant 3, November 2019). This participant also mentioned that activating a

VPN app while using Twitter is time-consuming and annoying: "That's what we have to do to read blocked content, but it is annoying… [L]eaving Twitter and spending time using the VPN makes it harder to focus on Twitter… I spend an important part of my time connected to Twitter going through this quandary of activating the VPN." (Participant 3, November 2019).

Table 15 presents a summary of the censorship avoidance strategy. This table includes the conditions explaining why users adopt the strategy (column 1), specific ways in which users adopt it (column 2), Twitter features and features of other technologies that users take advantage of to pull off the strategy (columns 3 and 4), and undesirable consequences from applying it (column 5). Each of the obstacle-circumvention use strategies I discuss in this chapter has a summary table like Table 15. However, to keep the length of the dissertation manageable, I only present in the body of the document the summary table for the censorship avoidance strategy as an illustrative table. All other tables are included in Appendix 7.

Table 15. Example Summary Table of an Obstacle-Circumvention Use Strategy

Conditions triggering the strategy	Illustrative manifestation of the strategy	Supportive Twitter feature	Other supportive IT	Negative consequences of the strategy
Legal conditions in the country, which enables the government to block content online	VPN-driven censorship circumvention	-	VPN app	Slow Internet connection down Increase Internet data consumption Time-consuming Annoyance
	Tapping into Twitter connections to access censored content	DM feature	Apps for personal communication such as email apps and WhatsApp.	Time-consuming

Obstacle-Circumvention Use Strategy 2: Action Postponement

Another strategy I identified was action postponement (see Appendix 7 for a summary table of the strategy). The identified conditions leading users to adopt this strategy are current (or expected future) low Internet data availability and experiencing a slow Internet connection (which hinders video streaming and attaching audiovisual content to tweets).

One manifestation of this strategy is when users put off the consumption of content that implies using a large amount of Internet data until they have access to a Wi-Fi connection (e.g., until they visit one of the public Wi-Fi spots available in Cuba). When users encounter Twitter content that they deem too data-burdensome, they sometimes save it on the Twitter bookmarks and retrieve it later for consumption when they can establish an Internet connection via Wi-Fi. Wi-Fi is faster and cheaper in Cuba than cellular Internet data because it is rated based on connection time rather than on megabytes consumed. Consequently, waiting to access a Wi-Fi connection is a suitable option to overcome the obstacle of consuming data-taxing content on Twitter via Internet data. In short, the higher speed and lower prices of Wi-Fi connections make them favorable for users to do prohibitively expensive activities via cellular data. I now present a data fragment illustrating this strategy (see another quote about this finding in appendix 6):

"[W]hen I want to consume something large on Twitter, such as a video, I do not do it using my cellphone data. I wait and watch it when I visit a public park with available Wi-Fi or when I visit a friend who has Wi-Fi at home with Nauta Hogar[8].... [One] advantage of Twitter is the option to save, to bookmark the publication containing the video that you want to watch. Once you save it, you can watch it when you have time, when you are able to connect to a Wi-Fi" (Participant 2, October 2019).

Another illustration of the action postponement strategy is when users decide to wait until a future time to include self-created audiovisual content in their tweets (i.e., pictures and videos taken by the user). Users have learned to select moments when the Internet connection via cellular

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[8] Nauta Hogar is a Home Internet service offered by the government to citizens who live in certain areas and have the technical requirements to set up home Wi-Fi connection. Only a small percentage of the population have access to this service.

data is as stable and fast as possible to upload audiovisual content to Twitter. Users select both future specific times (e.g., overnight hours) and days (e.g., weekdays) to tweet self-created audiovisual material. The next data excerpt exemplifies strategy 2 (see another quote about this finding in Appendix 6):

"It was happening to me once and again until I realized that uploading a video or an image of a certain size to Twitter is very hard via cellular data… The connection is too slow… When I want to upload an image, I now know I have to stay up until 1 a.m. and try it at that time… You have to explore and try many things, that's part of the trouble we Cubans experience." (Participant 6, November 2019).

Action postponement waiting for favorable conditions carries negative consequences. The most evident consequence I found was Cubans' perception that this strategy leads to low-quality public discourse participation; that is, late and unsuccessful participation. The next quote describes this perception:

"I do not like the Wi-Fi idea. Sometimes I do it, but if I have Internet data, I prefer to use it even if that means that I will be without Internet [connection] for some days … There are situations where you need to load [on one's timeline] the pictures of the government repression episode, see the pictures, make a comment, and quickly share them… That 'connect and disconnect' idea is not good for your understanding of the events that occur, and in my case, disconnecting the Internet data can be fatal… [now the user explains to me that he usually has difficulties establishing an Internet connection. He mentions that sometimes it takes him around an hour to connect]" (Participant 10, December 2019).

Applying this strategy may also lead users to feel unsatisfied and discouraged. The following answer was offered by a participant when I asked him to comment on whether he saw any negative participation impact related to the need to delay uploading pictures and videos to Twitter: *"I feel frustrated knowing that it is important to upload a picture of a highly overpriced item that the government is selling or of something that is going on in your neighborhood, but realizing*

that you have to do it later and make many attempts, [and] waste Internet data. It is not easy. You feel like not doing it anymore." (Participant 15, April 2020).

Obstacle-Circumvention Use Strategy 3: Online and offline switching

Online and offline switching is another obstacle-circumvention strategy (see Appendix 7 for a summary table of this strategy). The identified conditions leading users to adopt this strategy are current (or expected future) low Internet data availability and experiencing a slow Internet connection.

Sometimes online-offline switching occurs as users take advantage of the Twitter app cache. This strategy consists in turning on the Internet data on one's cellphone, checking Twitter to load the content from the timeline on cache, and disconnecting from the Internet. Once offline, the user reads all the tweets in his/her timeline stored in cache memory. Also, offline, the user retweets and comments some of the tweets s/he loaded on cache and writes new tweets that will be sent once s/he connects back. The Twitter app enables actions that the user does offline to be saved as a draft. Then, once the user goes back online after turning the Internet data on, s/he opens the Twitter app and uploads the tweets and comments that s/he created offline. The following interview fragment illustrates this strategy (see another quote about this finding in Appendix 6):

"Thankfully, the [Twitter] Android app … allows you to store a lot of data because the storage capability on cache is quite large. Therefore, all the tweets that you loaded [before] are stored there [on cache], and you can read them even when you are offline. You cannot send tweets or receive notifications while being offline, though. But, yeah, thankfully, you can write tweets offline, and once you close Twitter, it gives you the option to save them as drafts. Then, once you connect to the Internet, you select the option to add tweet, and it gives you the option to add the content saved as a draft, and you can send your tweet." (Participant 13, March 2020)

Switching between online and offline use also manifests when a user puts off consuming a video that s/he finds on Twitter until s/he gets offline. For example, sometimes users decide not to watch the video online while on Twitter but choose to download it, watch it offline, and

then come back and talk about it on Twitter. Usually, an app is used to download the video in low quality to keep the Internet data consumption low while downloading the content. The next interview fragment illustrates this strategy: *"I often find videos that others share on Twitter that I want to watch and give my opinion about it. However, those videos are usually heavy on megabytes, and you know it is very important to save data because the Internet is very expensive. Then, I use an app to download the video with a low resolution, and then I watch it quietly once I disconnect. If it [the video] was about something that I care about a lot, then I might comment on it once I go back to Twitter"* (Participant 9, December 2019).

Adopting the strategy to switch online and offline may have several negative consequences for the users. As the following fragment shows, one negative aspect is the perception that opinions expressed on Twitter may be inaccurate and outdated. *"Sometimes I write a tweet or a tweet reply, and a save it on the bookmarks when I am offline… [B]ut it might take me some time to be able to connect back again. Sometimes I cannot do it on the same day… Then, when I connect back and send the tweet [the tweet that he created while being offline], I might be giving an opinion that is inaccurate because the events changed and I didn't know, or I might be retweeting something that is fake, but I initially thought it was true… These things have happened to me. It's not ideal. It feels like you are contributing with poor information. It feels like you are late [to participate]."* (Participant 13, March 2020). From this participant's answer, I can infer that other negative consequences of adopting this strategy are missing the real-time nature of Twitter and increasing the time needed to complete a full circle of participation (e.g., reading about a socio-political event; then, giving one's opinion and debating with other users about it). Lastly, applying this strategy may result in the user finding it difficult to connect back to the Internet and go back on Twitter to continue with his/her participation. Various participants describe that it is very common for a user to have trouble connecting back to the Internet once s/he disconnects.

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Obstacle-Circumvention Use Strategy 4: Proxy Twitter use

Proxy Twitter use is another obstacle-circumvention strategy used by Cuban users (see Appendix 7 for a summary table of this strategy). The identified condition leading users to adopt this strategy is current (or expected future) low Internet data availability. This approach refers to interacting with Twitter content through another app. One way in which proxy Twitter use can be enacted is by using Twitter via the Telegram app. As I will now describe, using this strategy is reserved for users with above-average IT knowledge. The Telegram app is an instant messaging app (very similar to WhatsApp). Telegram allows users the possibility to use bots, which are Telegram accounts managed by a computer program. Bots allow Telegram users to perform many automatic tasks, and one of them is to connect and pass commands to other apps. Telegram bots offer users the possibility to sign into their Twitter accounts and manage their Twitter content from the Telegram app. When a Telegram user takes advantage of such bots, s/he can get his/her timeline tweets on a Telegram's chat window and send tweets by typing the content in this window. I now present an interview fragment from one of the two participants who mentioned this strategy (a fragment from the other participant can be read in Appendix 6):

"Some time ago, I was using Twitter via Telegram because there was a bot that allowed me to tweet from Telegram, and I didn't need to open the app [The Twitter app]. But recently Twitter blocked that functions amid security concerns" (Participant 2, October 2019).

After a follow-up question about the Telegram-Twitter integration, the user answered the following: *"On the Telegram app, you can search a bot called Tweetix, and it allows you to log into Twitter. After that, anything that you write on the Telegram interface posts on Twitter. You can also see [on Telegram] the [Twitter] publications from people you follow. It [The bot] offers you several options."* (Participant 2, October 2019).

One advantage of using Twitter via the Telegram app is saving Internet data. The two users who apply this strategy mentioned that it consumes fewer megabytes of Internet data than Twitter because Telegram is a messaging app. Another advantage is being able to consume content from both apps while only having one app opened. Telegram is also a valuable channel for

Cubans to consume socio-political content since many independent media share their content through this app too. Therefore, applying this strategy is a good opportunity to profit from both apps in an Internet data-efficient way.

One negative consequence of using Twitter via Telegram is the worry of being "caught" by Twitter engaging in automated actions through a third-party app that violates Twitter automation rules. Another negative aspect of applying this strategy is that users perceive it entails losing access to both Twitter's friendly user interface and many specific Twitter functionalities. The following quotes evidence the disadvantageous effect of using Twitter via Telegram: *"The Telegram thing is a compromised solution. It is ok, but you lose a lot of functionalities. You do not have the Twitter interface, you do not access to your [Twitter] lists, you can't do [Twitter] pools. It is one thing you do to save Internet data …"* (Participant 2, October 2019).

"*It is more difficult [using Twitter via Telegram than the original Twitter app] … You have to read the tweets in a chat window, [also] the images do not show up, all you see is a link that you have to click to open them … Everything is more complicated … There is nothing easier than opening the Twitter app and having everything you need to use readily available … Telegram is a messaging app; therefore, Twitter needs to adjust to the environment of a chat app … In addition, you are always worried that the [Twitter] developers cancel your account with the argument that you are using it in an undesirable way. [By applying this strategy] [y]ou are using Twitter via a third-party app, and they do not always like that [now the user tells me the story of how he got a previous Twitter account canceled a few years ago for using Twitter via a third-party app]*" (Participant 6, November 2019).

The proxy Twitter use strategy can also be executed via the Gmail app. As the following participant's experience illustrates, users can choose to read some of the content they receive in their timeline via the email notifications they get in their Gmail app. This strategy does not allow the user to read all the content s/he receives in the Twitter timeline or create any Twitter content (e.g., tweet or retweet). However, it enables the user to keep consuming some socio-political content via Twitter when his/her Internet data availability is low.

"*Sometimes I have few megabytes of Internet data; therefore, I only read the tweets that I get via Gmail, which consumes less Internet than opening Twitter. I have Twitter set up that way. I configured it to receive an email notification with the tweets sent by some account … It is less than ideal because you are not actually using Twitter, but at least I keep myself informed of what's going on Twitter, and I wait until a more favorable time to open it [Twitter] …*" (Participant 12, March 2020).

Obstacle-Circumvention Use Strategy 5: Selective access to most relevant content

Another strategy adopted by Cuban users is selective access to the most relevant content (see Appendix 7 for a summary table of this strategy). The identified conditions leading users to adopt this strategy are current (or expected future) low Internet data availability and slow Internet connections.

This strategy, mainly targeted to save Internet data, consists of either taking advantage of Twitter features or users' accumulated experience with Twitter to devise ways to interact on Twitter only with the content they value the most. One Twitter feature that can be used to pull off this strategy is the notifications feature. A user can activate notifications from preferred accounts and then log in to Twitter only to check the content posted by these accounts rather than checking all the content available on the timeline. I found out that, occasionally, some users choose first to check content from the notifications area; then, if the amount of Internet data available allows it, they go to their timeline and check other content. The following data fragment illustrates this strategy (see another quote in Appendix 7):

"*[I]f I feel like saving Internet data or the connection is too bad, I only check the notifications, and I do not even bother with my timeline. I do not like to do it, but sometimes there is no choice. Why am I going to be connected trying to scroll down in my timeline when the connection is so bad? In that case, I limit myself and only see the notifications… But there is no question that you are missing out. The timeline is full of good content you cannot see in your notifications*" (Participant 16, April 2020).

Based on the previous fragment, it is evident that one negative aspect of applying strategy 5 is that users miss out on the experience of navigating the Twitter timeline. It prevents the user from reading, sharing (i.e., retweeting), and discussing (i.e., replying and receiving replies) the content on his/her timeline. Thus, this strategy limits the socio-political content that the person interacts with and the actions that s/he can take with Twitter.

Another way that Twitter features are used to get exposure to the most relevant content and save Internet data is by taking advantage of Twitter lists. One participant described this strategy as follows: "*I also save [Internet] data by creating lists with the content I prefer. This way, if I want, I only check the list and the tweets from the accounts in there [in the list] … I have a list with a few independent newspapers, and sometimes I focus on it. As I told you, it depends on my finances, the time I have available …*" (Participant 6, November 2019).

Selective access is not only achieved by taking advantage of the Twitter features but also by learning from the accumulated experiences using Twitter. As the following participant indicates, a user may learn from prior experiences when to best log into Twitter to find the most relevant socio-political content: "*I have realized there is a time in the day that is best to find the people I like to talk the most on Twitter. These users publish the kind of content that I prefer, … [T]hose whom I like the most for debates... I try to connect during those hours, that is, around 11:00 a.m. or around 11:00 p.m. ... That's one more way of saving [Internet data]. You log in when the [latest] tweets are about the content that you prefer, and that spare you from scrolling down to see earliest tweets [of the day] … [Y]ou interact with the information that's most important for you*" (Participant 21, May 2020). In short, this participant learned the times of the day when he could find the content that he valued the most on Twitter; then, he tried to log in during those hours, which is another approach to maximize content value while minimizing Internet consumption.

Obstacle-Circumvention Use Strategy 6: Surveillance-avoidance strategy

Cuban users also deliberatively devise surveillance-avoidance strategies (see Appendix 7 for a summary table of this strategy). The identified condition leading users to adopt this strategy is the

legal framework in the country, which enables the government to surveil people's online activities to find dissenters and punish them.

Cubans are aware of the government's efforts to identify citizens with dissenting views and ideas of political change. Cubans have direct evidence that surveillance takes place on Twitter. They perceive it when government Twitter-paid writers attack them and try to silence them on Twitter. They also notice it when they get in trouble at work or with family members because of their Twitter activities. I observed multiple tweets from users denouncing those two issues: being attacked and threatened by government-paid writers and getting in trouble at work because of the publications they make on Twitter.

One specific surveillance-avoidance strategy applied by Cubans was to have some of their socio-political conversations with other Twitter users in private. This strategy manifests when a user chooses to discuss specific issues, events, and topics with another user by using the direct message (DM) option on Twitter. The user applying this strategy replies in private to another user who posted some content on Twitter. The data collection revealed that a user might choose to hold a conversation in private if it is about a sensitive topic. My experience, both collecting data for this research and as a Cuban native, suggests that some sensitive topics are personal criticism of current and historical political figures (e.g., members of the Castro family, sitting Ministers), calls to change elements of the political system (e.g., single political party), and calls for and support of offline manifestations.

I now present an interview fragment where a participant brought up the use of the DM feature as part of his action repertoire: "*I also use the DM. Because you know, certain topics here can capture the government's attention, and you can feel the consequences in your personal life… Especially in my case, since I use my real picture, and I have a family… [W]hen one of my contacts tweets an opinion about a sensitive political topic, sometimes I want to reply to that person, to either agree or disagree with him, but I do not give my opinion about it in public. I send him a DM and tell him, 'Look, brother, this is what I think about that'… Some people do not like to talk in private and do not answer you when you DM them [participant laughs]. I know the idea with social media is to*

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express yourself in public but, well, I already have a group of people who understand me and know why I write in private, and sometimes I use that method with them..." (Participant 14, April 2020).

I can infer some drawbacks from applying the strategy of surveillance avoidance via the DM feature. First, as hinted by one participant in an early interview fragment, not many users are willing to engage with someone who uses this strategy: "*Some people do not like to talk in private and do not answer you when you DM them…*" (Participant 14, April 2020). Moreover, if the application of this strategy becomes pervasive among Cuban users to the point that most users start applying it frequently, then Twitter might transform from a platform for discussing politics in public to one of the many channels that Cubans have always used to discuss politics in private (e.g., family and friend meetings). Another drawback I can deduce is that the application of this strategy might not feel right for Cuban users and should be a source of dissatisfaction for them. Cubans perceive Twitter as a platform for expressing themselves as freely as possible. Therefore, applying this strategy is another unwanted restriction to their free right to express themselves that could elicit the well-known feeling of being silenced that Cubans have always experienced.

A second surveillance-avoidance strategy followed by some Cuban users is to create a second anonymous account in addition to their real account. The interview and the virtual observation data revealed that some users choose to have a second account without using their real names and pictures. Notice that having both a real and an anonymous account is different from only having the latter type of account. As the next data excerpts will show, some users tackle the surveillance issue using an additional anonymous account to engage with content considered sensitive for their real (not anonymous) accounts.

"*One of the greatest problems is censorship and the control that you know the government wants to have on people. They punish you for thinking differently … I decided to create a second anonymous account without my name… I use that one [the anonymous account] when I want to say something to a government official without fear. To offer my support for a peaceful manifestation organized by UNPACU [The Cuban Patriotic Union, a Cuban opposition organization]...They watch for those things online [the participant means that the government*

watches for people online organizing and supporting offline manifestations] … That's the way they

got the kids who were defending SNET… I use this account [the real one] to express my opinion

and denounce many of the wrong things that happen on the street, but to talk without fear, I use

the anonymous one." (Participant 16, April 2020).

The following fragment collected from the virtual observation also offers evidence of the existence of dual account holders. The text is a tweet reply where the user offers advice to another user who tweeted a comment confessing that he was afraid of expressing certain opinions on Twitter: *"Create a parody account. Those accounts are popular now! Here [with the real account] you say what you feel is safe and over there [using the parody account] you go unhinged"* (tweet reply on 05-15-20).

A parody account is one where a user impersonates a Cuban government official. Owners of parody accounts shame, ridicule, and criticize the impersonated official and regularly engage with the politically sensitive topics mentioned earlier.

A close examination of the strategy to simultaneously hold a real and an anonymous account highlights its potential drawbacks. First, keeping two accounts may imply a more significant Internet data consumption. This should be an undesirable burden for Cuban users, given the financial troubles in buying Internet data. Secondly, this strategy may go against the desire for legitimacy that many Cuban users want to achieve via their Twitter participation. As I discussed when affordance 8 was presented, one of the most evident motivations for Cubans to generate legitimate discourse on Twitter is to increase the possibilities that fellow Cubans trust the generated discourse and engage with it (e.g., share it, discuss it). If most of the discourse on Twitter comes from anonymous accounts, the legitimacy of the discourse may drop since I assume that users find content generated by real accounts more truthful and legitimate than information created by anonymous users. Another potential negative consequence of this strategy is that it may encourage users to stop using their real account (i.e., leave it opened without using it) and only keep the anonymous one active. The virtual observation data enabled me to identify the cases of two users who abandoned their real accounts and only kept using the anonymous one. Therefore, it is

reasonable to posit that one risk from having the two types of accounts is that it may encourage

users only to keep using the anonymous one as it offers them more freedom of expression.

4.3.2. Conditions that inform the affordance actualization patterns

Societal Conditions

The description of Cuban users' obstacle-circumvention use strategies to actualize Twitter

affordances highlighted several societal conditions that shape Twitter use in Cuba. Table 16

summarizes these conditions and matches them with their relevant use strategies.

Table 16: Societal Conditions that Shape Twitter Use in Cuba

Societal condition	Description	Related obstacle-circumvention use strategy
Poor-quality (i.e., slow and unstable) Internet connection	Users experience regular difficulties using cellular Internet connections. This issue manifests in: - Users' inability to establish an Internet connection, a phenomenon commonly called among users as "experiencing an Internet blackout." - Users' inability to keep an Internet connection once it was established, which represents the phenomenon of connection lost. - Users' inability to properly load the Twitter app (e.g., content load very slowly on the Twitter timeline) or to use other Internet-based apps together with Twitter (e.g., VPN apps).	Postponement of action Online and offline switching Selective access to most relevant content
Expensive Internet data plans	Buying Internet data is expensive for Cubans. From the beginning of the Internet data era in Cuba (December 2018) until May 2020, the cheapest data plan cost ranged between 125 to 175 Cuban pesos for 400 and 600 megabytes of data, respectively. According to official data, in December 2019, the average salary in Cuba was $ 1067 Cuban pesos. Thus, buying the cheapest data plan	Postponement of action Online and offline switching Selective exposure to most relevant content Twitter proxy use

	represents around 11% of the average salary in Cuba. The expensive Internet access has the following implications: - A user may be unable to have Internet data for several days or weeks in a row. - A user may spend most of their time experiencing Twitter with little Internet data available. That is, they may spend most of the time using Twitter in a very frugal way.	
Prohibitive smartphones prices	Buying, upgrading, or replacing (in case of loss or damage) a smartphone is an expensive prospect for Cubans. For example, in October 2019, the store price of a commonly available smartphone in Cuba, a 2017 Huawei FIG-LX 2, was 6000 Cuban pesos (way above the average salary of 1067 Cuban pesos). Even in the black market, a price for such as a phone had a prohibitive price (between 2500 and 3000 Cuban pesos according to virtual observation data). These exorbitant prices make it harder for people to afford a smartphone to access the Internet and social media apps. These high prices also affect people who are already Twitter users via their smartphones in the following ways: - They may have no option but to use an old smartphone to connect to the Internet, which worsens the effect of the poor Internet connections existing in Cuba. - If they lose or damage their smartphone, they may be unable to buy a new one for months. In fact, I observed two users who went through this situation.	For users who possess old smartphones with the corresponding burden in connectivity they imply, some useful use strategies are: Postponement of action Online and offline switching Selective exposure to most relevant content
Restrictive legal system	The legal system in Cuba is fully directed by the Cuban Communist Party (i.e., PCC for its initials in Spanish), which in turn oversees the actions of all government entities (e.g., Ministries, government officials). With the legal power concentrated on the PCC, laws can be enacted to deter citizens from opposing Cuba's political system and criticizing its leaders. One illustration of such a law is decree 370, a resolution that became effective in July 2019. This law enables	Censorship-avoidance strategies Surveillance-avoidance strategies

| | the government to check people's activities online and take legal actions (e.g., 3000 Cuban pesos fine) against citizens that they consider should be silenced.

Full power over the legal system also means that the PCC can enable government institutions to engage in paralegal activities to deter dissent. For example, the Ministry of Communications can censor the online access to any website that they consider damaging to the PCC interest. Another example is the case of government-paid Twitter writers (e.g., cybersoldiers). These people are forced as part of their job to create Twitter accounts and harass citizens who circulate critical content of the government on social media. A final example of a paralegal activity is the surveillance and occasional persecution of dissenting netcitizens engaged by the Ministry of the Interior (more specifically, employees of the Intelligence Department of this Ministry) | |

I now discuss an interesting finding about the societal conditions listed in Table 16. I noticed that these conditions might affect Cubans' interactions with Twitter in an interrelated (i.e., dependent) fashion, which means that either the presence of one condition or the attempt to overcome it could trigger the presence of other conditions. Figure 6 provides a graphical representation of the interconnected effect of the societal conditions in Cuba on how users take advantage of Twitter to participate in public discourse.
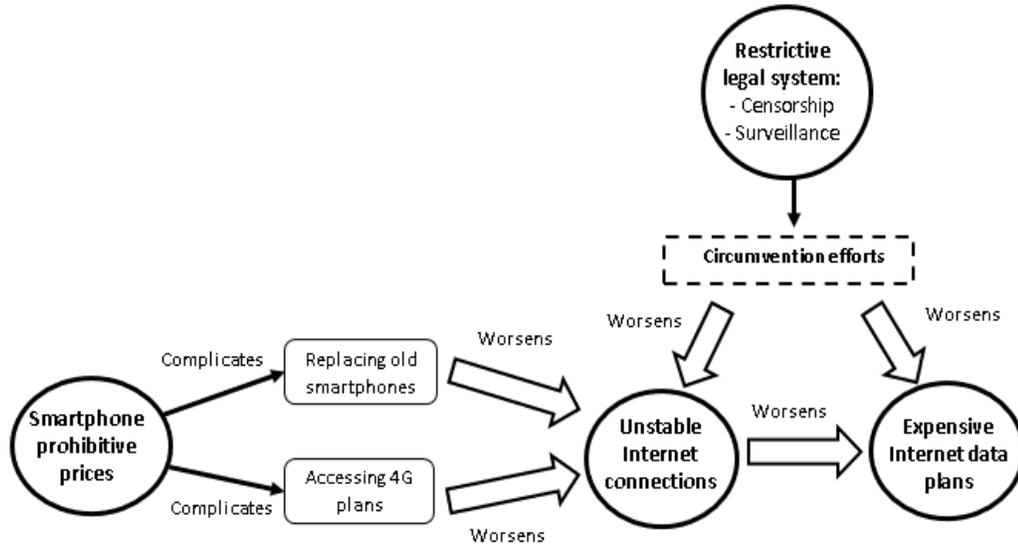
Figure 6: The Interconnected Effect of Societal Conditions in the Cuban Context

The interconnected influence of the societal conditions is evidenced when users' attempts to overcome censorship leads to increased Internet data consumption and a slower Internet connection. For example, as discussed in the previous section, one of the most noticeable drawbacks of activating a VPN app to access censored content is that doing so slows down the connection speed and increases the megabytes of data consumed. Another illustration of the combined influence of the societal conditions is the observation that strategies applied to circumvent surveillance (e.g., to create an additional anonymous account) lead to more Internet data consumption (e.g., more data is needed to load the timeline content of the additional account). In summary, it can be seen that Twitter use strategies applied by Cubans to solve obstacles arising from the legal system (e.g., online censorship and surveillance) are hindered by the country's economic and technological infrastructure situation, namely, by the high price of the Internet data and the slow and unstable Internet connections.

The interrelation between societal conditions is also evident when the manifestation of one condition leads the user to experience the negative effects of another condition. One example is the negative effect of inadequate Internet connections on users' Internet consumption. Cuban users lose megabytes of data in their failed attempts to establish a connection as well as

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when they connect but are still unable to use the Internet properly (e.g., when the Twitter app does not load all the content). As the following virtual observation fragment reveals, poor cellular Internet connections tend to lead to Internet data waste, which makes the expensive Internet access issue more relevant.

"*These [expletive] connections are a problem. It has been several days now I can't get to use Twitter normally. Half of the time I can read my timeline, read the notifications, or even tweet. I waste time and megabytes of data, and I do nothing. It is disheartening and hopeless #ETECSALadrona [ETECSA is a thief]*" (tweet on 04-12-20).

The prohibitive prices of smartphones in Cuba also worsen the impact of other conditions. Hight smartphone prices imply that many Cubans are unable to replace their old smartphones. The data collection revealed several instances where users describe their old cellphones as a factor that worsens the issue of unstable Internet connections. Therefore, the high cost of buying a smartphone may aggravate the issue of poor connectivity. The next tweet reply, where a user replies to another user's tweet who complained about the Internet connection issues, neatly describes this phenomenon: "I am also like that since yesterday [having a difficult time to connect]. It seems like it is something big [i.e., the connection issues seem to be explained by a big technical failure]. And my situation is even worse; my connection is very slow almost every day because this cellphone is already three years old" (tweet reply on 11-13-19).

Having an old cellphone may also prevent users from connecting to the Internet using a 4G connection. Since October 9th, 2019, ETECSA is offering smartphone users the possibility to connect to 4G in certain areas of Cuba. However, the user's smartphone must satisfy certain technical requirements to allow a 4G connection. These conditions are less likely to be satisfied in the case of users with old cell phones. Not being able to connect via 4G is a missed opportunity to access a faster and cheaper connection since data plans for 4G connections are cheaper than 3G offers. For example, in December 2019, 250 Cuban pesos amounted to 1 GB of 4G data and a bonus of 1 GB of 3G data for users who were able to connect to 4G but only amounted to 1GB of 3G data for users who could not. In summary, the high smartphone prices that prevent some Cuban

users from buying more modern devices make it harder for them to minimize the effects of expensive Internet data plans and the unstable Internet connections in Cuba.

Individual-level Conditions

The societal conditions discussed so far have explanatory potential to outline, in a general fashion, how Cubans interact with Twitter to actualize the affordances for participation in public discourse they perceive in this technology. These societal conditions are helpful to explain the kind of strategies that Cuban users as a group take with Twitter to participate in public discourse. However, the data analysis unveiled that spelling out how a specific user interacts with Twitter requires us to focus on characteristics and conditions particular to the user. I call these conditions "individual-level conditions". Individual-level characteristics are relevant because the societal conditions in Cuba do not apply homogeneously to all users. Besides, some factors act at the person's level, for example, technology skills. I now discuss individual-level factors that the data analysis highlighted as important. There are undoubtedly other individual-level characteristics that could be useful to describe use patterns, but I address those that emerged from the analysis of the collected data.

One individual-level factor that emerged as important was the _user's capability to buy Internet access_. Although all interview participants agree that Internet data plans are very expensive relative to Cubans' purchasing power, not all users are affected equally by this societal condition. The data analysis emphasized two variables that could explain users' individual differences in dealing with the higher Internet price: income and whether the person receives Internet top off from someone in a foreign country (e.g., a relative, a friend). As the following interview quotes indicate, income may play an important role in how much the person is Internet-data restricted, i.e., how much the high Internet prices affect him/her. Although both of the following participants stated in their interviews that they used Twitter wisely to save Internet data, the second participant is obviously less restricted by the high Internet prices.

"[A]nd I buy the 600 megabytes plan. That's nothing if you do not use it carefully. I wish I could buy more megabytes, but my salary doesn't allow it, you know, I work for the

government… I have to stretch out these [Internet] megabytes as much as I can each month." (Participant 5, November 2019).

"Another factor that affects us a lot, well, it does not affect me that much, but it does affect other people is the Internet price. It is a very expensive service. To give you an idea, I can afford to buy the 4 GB plan for 750 Cuban pesos every month because I work for the private sector. That's above the salary of many people in this country. A Cuban who is thinking about buying a 4 GB plan may say, 'If I buy it, I won't be able to buy food'" (Participant 1, October 2019).

Another stark difference among Cuban users regarding their possibilities of having Internet data available is whether they can receive Internet data top-off from someone in a foreign country. People in foreign countries can use websites such as www.ding.com and www.csqworld.com to buy cellular Internet data for Cuban Internet users. As the following data fragments illustrate and as I could repeatedly observe during the VO, not receiving support from someone outside Cuba makes the costly Internet service a more significant issue.

"@ETECSA_Cuba @PresidenciaCuba These new prices are abusive. This isn't to benefit the Cuban people. Be transparent [expletive]. This is to benefit Cubans who receive top-off from a foreign country. They [The new prices] do not work for me since I pay the Internet with my hard-earned money #BajenLosPreciosDeInternet [Lower the Internet Prices]" (tweet on 11/24/2019).

Another individual-level condition that influences how affordance actualizations occur is the *technical characteristics of the user's smartphone*. As discussed earlier, some users with older cellphones report having many difficulties with the speed and stability of the Internet connection. In the next tweet, which I already presented earlier, the user links her quandaries with Internet connectivity to the old age of her cellphone: "*I am also like that since yesterday [having a difficult time to connect]. It seems like it is something big. And my situation is even worse. My connection is very slow almost every day because this cellphone is already three years old*" (tweet on 11-13-19).

A cellphone that does not have the technical requirements to use 4G connections is another individual-level source of difference in how users interact with Twitter and actualize its affordances. Being unable to use a 4G connection implies that the user is more affected by the unstable connections and the high Internet prices since 3G connections are slower, more unstable, and more expensive than the 4G alternative. Twitter users who cannot access 4G connections for lacking the smartphone with the required capability are aware of their disadvantage and sometimes voice their frustration: "*When are the data plans going to improve for people who use 3G? My cellphone does not support 4G, and I cannot afford to buy a new one @ETECSA_Cuba #BajenLosPreciosDeInternet [Lower the Internet Price]*" (tweet on 12-16-19).

The user's geographical location also shapes how a user interacts with Twitter. Both the interview and virtual observation data reveal the cases of users whose geographical location makes it particularly difficult to have good Internet connections. The following interview fragment exemplifies this finding:

"I live in Punta Brava [a twon in Havana]. The cellular base station that handles the 3G connection in Punta Brava is more than a kilometer away from where I live… The [Internet] connection is not good here at home …." (Participant 10, December 2019)

In addition to the user's location relative to the closest Internet tower base, another geographic dimension that matters is whether the person lives in one of the zones where 4G connections are available. Users in selective neighborhoods throughout Cuba (mainly neighborhoods and towns in urban areas) were able to use 4G connections since October 9th, 2019. As I have discussed already, the 4G connection is faster and cheaper than the 3G alternative. However, as the following interview participant shows, as of May 2020, the availability of 4G connections remained restricted: "*That's why I told you to have this conversation in the evening [the participating is referring to a suggestion she made me]. Connections here are very bad. The 3G is a headache, especially in the afternoons. They say they are now installing the 4G connections. I wish. They first said they [the 4G connections] would be ready at the beginning of this year. But you know everything is slow here.*" (Participant 17, April 2020)

A user's IT skills also influence how s/he can take advantage of the Twitter affordances for participation. The most evident example is the possibility to apply the strategy of Twitter proxy use via the Telegram app. As described in section 4.3, pulling off this strategy requires a skillful user. In fact, only two of the 21 interview participants mentioned the use of this method. As I learned from their interviews, these two users had academic and professional experience in the IT field.

The scant use of Twitter lists among Cuban users also indicated the importance of skills in how affordance actualizations occur. I first became aware of the connection between IT skills and the use of Twitter lists by reading the replies to the following thread created by one of the users I observed: "*Do you guys know what Twitter lists are and their benefits? [the user creates a thread talking about this topic]*" (tweet reply on 05-18-20). Most users replied to this tweet stating that they did not know about lists and justified their lack of use of this feature with reasons around the ideas of "lists are an advanced feature" and "I am still learning. I just know few Twitter features". Only one of the interview participants mentioned using lists as part of an affordance actualization strategy (i.e., the selective access to the most relevant content strategy).

A final illustration of the effect of a user's IT skills on how Twitter affordances are actualized is the case of a user who mentioned that he knew a trick to increase the megabytes of Internet data that one gets from buying an Internet data plan. Every Internet plan offered by ETECSA comes with a bonus of 300 megabytes that the person could use to navigate domestic websites only. One of the interview participants mentioned that he (and other people he knew) could use software to hack the system and use these bonus megabytes as Internet data too: *"[F]or each [Internet] data package that you buy, ETECSA offers you data that is only to use in .cu domains. These are 300 megabytes that can only be used for domestic websites … [they] are different from the other data in the package. Then, we use some software to convert those 300 megabytes and use them as Internet data too…. These are little tricks that we use here [participant laughs]."* (Participant 8, December 2019).

The last individual-level characteristic I will discuss is the *user's concern about the government retaliation*. In Cuba, similar to any other authoritarian country, citizens tend to be afraid

of speaking out and criticizing the government in public. This fear also permeates Twitter, as I could corroborate from the interview and virtual observation data. The user's concern of retaliation informs the decision to adopt surveillance-avoidance strategies to actualize Twitter affordances. The following example from a participant who mentioned the surveillance-avoidance strategy shows that users' worry of government's retribution informs their choice:

"They [the government] punish you for thinking differently … I decided to create a second anonymous account without my name… I use that one [the anonymous account] when I want to say something to a government official without fear." (Participant 16, April 2020).

In contrast to these users, I found other users less affected by this concern. In fact, some participants explicitly mentioned in the interviews not being afraid of speaking out their minds on Twitter. I also observed this behavior among several of the users I followed in the virtual observations as they often discussed sensitive political topics without apparent refrain.

There are several reasons to explain why the concern of reprisal varies among Cuban users. One is the obvious biological difference among humans regarding experiencing fear when threatened. Another reason is how much the person depends on the government for financial support. It is common to observe users citing "working for the government" as a reason for self-censoring. In addition, three of the 21 interview participants mentioned being concerned with the repercussions (e.g., psychological, economic) that government retaliation could have in their family.

Circumstantial Conditions

The data analysis unveiled that the societal and individual-level conditions are still insufficient to explain how Twitter affordance actualizations occur. What determines how the user eventually interacts with Twitter are the proximal conditions at the moment of actualization, which I call circumstantial conditions. Circumstantial conditions are shaped by both the societal and individual-level conditions; however, they represent the intractable combinations of these higher-level conditions that manifest when a user and Twitter interact in use. As the next data fragments will

illustrate, users decide how to use Twitter depending on how specific societal and individual-level conditions manifest specifically at the moment of use:

"[W]hen you realize that, for example, a picture … that you will post on Twitter is going to be important, that your denouncement will be important, … you really want to post it … [B]ut knowing that making the denouncement may take away 300 megabytes because it takes me so long to upload the picture, then I start doubting and thinking it through… [A]nd it all depends on much data I have left, how long I have to wait to get paid at work, whether my brother who lives in Spain will top off my [Internet] account soon." (Participant 11, December 2019)

From this interview fragment, I realized that several conditions operant at the specific moment of use shape the user's strategy to actualize the desired affordances. This excerpt highlights some relevant circumstantial conditions that this user considers for deciding how to use Twitter. For example, the perceived importance of the content that the user wants to share, the amount of available Internet data, and the prospect of getting more Internet data if needed.

The next participant also mentioned several factors that he considered at the moment of actualization for deciding how to use Twitter; for example, the amount of Internet data available, the Internet connection quality, and the interest he has in the specific socio-political content available to him*: "I do not have any routine [to use Twitter]. What I can do depends on the moment. It depends on the moment of the day and how the connections are … The amount of Internet data that I have and whether I need to limit myself [in terms of Internet consumption] … Also, how interested I am in the information. If it is a video that I feel I need to watch, I try to watch it …"* (Participant 4, November 2019).

In summary, the circumstantial conditions may change from one actualization moment to the next because they reflect the continuous changes over time that occur in how societal conditions manifest (e.g., continuous fluctuations of the Internet connection quality) as well as changes in conditions particular to the user under consideration (e.g., how much money the person has to buy Internet more data if needed). Circumstantial conditions also reflect other micro influences such as the time of the day and the day of the week when the attempted actualization

occurs and the perceived importance that the user assigns to the specific socio-political topic that s/he wants to address with her/his participation.

The notion of circumstantial conditions and their influence on the specific ways that users interact with technologies has been sketched in other IS research. Anderson and Robey (2017) refer to circumstantial conditions when discussing the concept of affordance potency. They define the concept of affordance potency as "the strength of the relationship between the abilities of the [user] and the features of the system at the time of actualization…" (Anderson and Robey 2017). They indicate that "… [a]t each moment of actualization, the current state of the system's features, the abilities of the [user], and the environment come together to produce the potency of the affordance. (Anderson and Robey 2017)". Anderson and Robey (2007) highlight the moment of actualization and its specific conditions (i.e., what I called the circumstantial conditions) as important in determining how the IT will be used (i.e., how the IT affordances will be actualized). They suggest that the potential that a perceived IT affordance can be taken advantage of is relative to the specific conditions operant at the time of actualization (Anderson and Robey 2017).

4.3.3. A framework describing Twitter use for public discourse participation in Cuba

This subsection summarizes the ideas discussed in 4.3.1 and 4.3.2 and connects them to the framework presented in Figure 5. The first important proposition from the model in Figure 5 is that both the societal and individual-level conditions inform the circumstantial conditions. The societal conditions outlined in Table 16 undoubtedly shape the circumstantial conditions because societal characteristics systematically manifest in the interactions between Cuban users and Twitter. For example, suppose we observe several interaction episodes between a Cuban user and Twitter. In that case, we will reliably notice that these interactions are influenced by societal conditions such as Internet connection issues and the user's awareness (and potential worry) of government surveillance. Societal conditions inform rather than determine the circumstantial conditions because they do not always manifest in each episode. Some societal conditions may not be relevant at specific moments, e.g., connections may be good sometimes, the user may not be

concerned about government surveillance when denouncing specific issues that s/he does not consider sensitive.

Individual-level conditions also explain circumstantial conditions. For instance, take the case of a user with distinctive individual-level characteristics such as a low financial capability to buy Internet access, living in an area with poor connectivity, and having concerns about freely expressing opinions on a subset of topics perceived to be sensitive. Any specific interaction between this user and Twitter that we observe will likely show that these distinctive individual-level characteristics influence the user's decision on how to use Twitter. However, because some individual-level conditions may not be relevant at specific moments, e.g., a user who regularly struggles to buy Internet data may have a lot of data available at certain times, I posit that these conditions inform rather than determine proximal use conditions.

Why is it worth considering circumstantial conditions if they depend on both societal and individual-level conditions? The answer lies in noticing that societal and individual conditions can combine in myriad ways at each actualization moment. Each actualization moment may be characterized by different manifestations of higher-level conditions, and the idiosyncrasies of the moment matter in how the user chooses to actualize Twitter affordances.

The second important proposition of the model in Figure 5 is the connection between circumstantial conditions and the users' Twitter-mediated actions. It is sensible to submit that the conditions faced by the user at the specific moment of use would impact how s/he would end up using the technology. In their research, Anderson and Robey (2017) found that users' difficulties at the concrete moment of actualization influence their decision to find ways to work around these obstacles. In a similar vein, I posit that the circumstantial conditions that a Cuban user faces determine what obstacle-circumvention strategy s/he adopts (if any) to overcome the difficulties found when attempting to use Twitter.

The concept of reflection in action (Burton-Jones and Volkoff 2017) could help us understand how users act based on circumstantial conditions. Reflection in action is the process whereby technology users decide how to actualize the affordances they perceive in technology

while trying to attain a compromise between several desired goals (Burton-Jones and Volkoff 2017). Reflection in action tends to be characterized by the frequent and effortless reflection that occurs in the moment of action as a user interacts with features of the technology and tries to get satisfying levels for several goals (Burton-Jones and Volkoff 2017). For example, Burton-Jones and Volkoff (2017) illustrate that reflection in action could occur as users of an Electronic Health Record system try to generate accurate data that simultaneously have a format consistent with data from other sources.

The data analysis revealed that Twitter users reflect, at the moment when they interact with Twitter, about the best actions to take to achieve discourse participation goals (e.g., read news about an event and give their opinion about it) and other aims (e.g., keep Internet consumption low, avoid the consequence of government surveillance). Thus, Cuban users reflect to figure out satisfactory ways of using Twitter to satisfy cost-related goals (e.g., keeping internet consumption and connection time low, avoiding government reprisals) and discourse participation goals. Cost-related goals are related to the need to overcome use obstacles. Therefore, in the context of Twitter use for participation purposes, reflection in action is the process whereby a user decides what use strategy to adopt to overcome the obstacles associated with the circumstantial conditions and achieve the desired participation outcomes.

The output of the reflection in action is a plan of action for the user to achieve the desired participation outcomes (i.e., an actualization plan). I found two categories of action plans: learned action templates and improvisations. Examples of learned action templates are the obstacle-circumvention use strategies discussed in section 4.3.1. Participants described these strategies as ways of achieving participation outcomes with Twitter that they previously learned. Therefore, I labeled these strategies as learned templates. When facing certain circumstantial conditions, a user may apply a learned obstacle-circumvention strategy that s/he previously found conducive to the desired participation goals under those circumstances.

Sometimes the circumstantial conditions may not map to previously learned strategies. In this case, the user needs to do improvisations, i.e., a use strategy not previously

learned. Boudreau and Robey (2005) use the term improvised learning to refer to a pattern of use that was neither planned nor anticipated. Boudreau and Robey (2005) refer to improvisations as use patterns that "…emerge out of different situations, depending on the needs at hand and the individuals present." I became aware of improvisations as I analyzed the interviews and noticed that participants sometimes mentioned that they discovered a strategy by a trial-and-error approach, that is, by improvising. The following fragment illustrates this finding: "*It was happening to me once and again until I realized that uploading a video or an image of a certain size to Twitter is very hard via cellular data… The connection is too slow… When I want to upload an image, I now know I have to stay up until 1 a.m. and try it at that time… You have to explore and try many things, that's part of the trouble we Cubans experience.*" (Participant 6, November 2019).

This participant describes how he needed to explore and try several use options until he could find a satisfying use strategy. By improvising, this user discovered that action postponement (i.e., obstacle-circumvention use strategy 2) was a good option for adding audiovisual material to his shared tweets. The following example is another good illustration of the trial-and-error nature of some of the actions that users take with Twitter, which substantiates the existence of improvisation as a Twitter use pattern.

"*The other day I was touching here and there because I had heard it was possible to save the tweets inside Twitter … [S]ome time ago [to save a tweet], I copied the tweets that I wanted to look at later in the clipboard and then I saved them in notepad, or in a text message because I did not know better… But then I discovered that you click the bookmark, and then you can save them all*" (Participant 10, December 2019).

Improvisations are a logical users' response in the Cuban context because, as discussed in previous sections, the circumstantial conditions that Cubans face when they approach Twitter tend to be quite unpredictable. Therefore, it is logical that users will face conditions they have never experienced before in the Cuban context. As new conditions manifest that do not map to previously learned strategies, users need to resort to improvisations. Whereas Boudreau and Robey (2005) indicate that improvisations are informed by the user's goals and motivations at the

moment of use, in this research, I found that they are also shaped by how different societal and individual-level material conditions manifest in such a moment.

There is a clear analogy between the patterns of IT use put forward by Boudreau and Robey (2005) and the actualization patterns I discovered. Boudreau and Robey (2005) indicate that improvised IT use serves as a transition to another use pattern they called reinvention: an IT use practice devised by users to accomplish their goals despite technical problems with the technology and knowledge limitations on how to use it. Analogously, I found that as users improvise use practices to overcome the obstacles imposed by the circumstantial conditions, these practices can transition into more planned and durable use strategies.

4.3.3.1. Changes over time

A final proposition captured in the model depicted in figure 5 is the role of the changes that the use conditions, and consequently the use strategies, exhibit over time. The study of the Cuban Twittersphere revealed a clear indication that the societal use conditions laid out in Table 16 have been changing over time. These changes are represented by the arrow on top of the model shown in Figure 5. As societal conditions change, the relevance of some of the individual-level conditions that I discussed in section 4.3 may also change. Therefore, we may observe more (or less) variability from user to user in terms of their possibility to buy Internet access and smartphones with acceptable technical quality, the importance of their geographical location, and their concern of government retaliation. By the same token, as macro and individual-level conditions change, the proximal conditions experienced by Cuban users when attempting to use Twitter should also change. I identified changes in the societal conditions that I now discuss in this section.

One societal condition listed in Table 16 that changed over the observed period was the Internet data prices. This factor showed a tendency to become more favorable for Cuban users (i.e., prices have shown a tendency to reduce). For the first year that cellular Internet data was available in Cuba, the cheapest data plan was 600 megabytes for seven Cuban convertible pesos (CUC), which amounts to around 86 megabytes of data per CUC. On December 4th of 2019, the government made new plans available. Under this new offer, seven CUC amounted to 600

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megabytes of 3G data (the same as the initial offering) and 600 megabytes of 4G data. It is important to notice that although this option apparently doubled the amount of data, only users who could establish a 4G connection could profit from the additional 600 megabytes offered. The new offer launched in 2019 also included a low-cost plan of 400 megabytes for 5 CUC. The data yielding of this option is worse than the 600 megabytes alternative since it amounts to 80 megabytes per CUC rather than 86. However, this low-cost plan seems like a good option overall since it offered users who did not have seven CUC available the possibility to buy Internet access with less available money. To sum up, overall, the possibility for Cubans to buy cellular Internet data has slightly improved over time.

The possibility of accessing Wi-Fi connections, which are cheaper and faster than cellular Internet data connections, seems to be expanded for some Cubans, especially those who live in urban areas. In October 2019, the simplest alternative to connecting to the Internet via cellular data was to connect to a Wi-Fi spot in a public park. On the other hand, by the end of data collection in May 2020, more users mentioned they had installed home Wi-Fi. This development results from a government program called Nauta Hogar that allows users to buy access to home Wi-Fi. Nauta Hogar is available for users who live in urban areas where the government has installed the required communication infrastructure to enable this service. Nauta Hogar was not mentioned in the interviews by any participants; however, towards the end of data collection, I noticed more users stating that they used Nauta Hogar to connect from home. It became more common to find Cuban Twitter users stating that they waited to connect via Nauta Hogar to watch videos online and fully read the articles they found on Twitter. In contrast, at the beginning of data collection, users mainly mentioned Wi-Fi spots in public parks as the alternative to cellular Internet data for consuming heavy audiovisual material.

Government online surveillance has become more structured and prevalent in the Cuban online sphere; therefore, the trend has been for the negative influence of the legal system to worsen over time. When cellular Internet data started in Cuba in December 2018, there was no legislation to criminalize citizens who dissent online. Although the government has always

persecuted and punished online and offline dissent, whether there is a legal framework behind their actions or not, at least for the first months after citizens started using cellular Internet data, the government had to resort to paralegal activities to curve dissent. However, on July 4th of 2019, the government enacted decree 370, a piece of legislation that enables them to check citizens' activities online and take legal actions (e.g., a 3,000 Cuban pesos fine) against people who circulate information online that they deem contrary to the government interest. By putting a legal framework behind their actions against dissenting content, the government increased their chances to curve online dissent as people should be more discouraged to engage in actions of this nature.

Government online censorship has also worsened over time as they have progressively engaged in new forms of more advanced censoring actions. At the beginning of data collection, the most evident form of censorship that users reported was the government blocking the website of independent media outlets and pro-democracy organizations. As already reported in this research, the consequence of this kind of censorship was the need for users to use VPN apps to access the links to blocked content that they find on Twitter. However, during the second semester of 2020, as I was writing this dissertation, I became aware of new and stronger forms of censorship applied by the government: social media and Internet shutdowns. One instance of this new form of censorship took place on October 10th of 2020, when the government blocked access to the Telegram app and some popular VPN apps used by Cubans. This blockade extended for several days until it finally ended, and users could use these apps again (14ymedio 2020).

A second example of the more vigorous forms of censorship carried out by the government occurred on November 27th of 2020, the day a large group of artists and ordinary citizens held a public protest outside the Cuban Ministry of Culture building. As the protests grew in intensity, the government restricted access to Twitter and Facebook, and some users even reported having problems connecting to the Internet. I explored Twitter on November 28th and read reports from many users indicating that they had problems opening the Twitter app or seeing content in their timeline. Some Twitter users also reported not having Facebook access. After the November 27th protest, it became a pattern for the government to engage in Internet and social

media crackdowns when social unrest was predicted to happen or was actually happening. For example, on January 27th of 2021, when a small group of artists attempted to reignite a new manifestation outside the Ministry of Culture building, the government shut off the cellular Internet data for several hours. This action prevented many users (but not everyone) from connecting to the Internet altogether, and even some who were able to connect reported problems opening Twitter and Facebook.

Another factor that showed a very drastic negative change was the economic conditions in the country. The worsening of the economic situation has an evident impact on Cubans' possibilities to use Twitter for discourse participation because the poorer the economic condition of the average user, the less likely s/he can buy Internet data to use Twitter. The first noticeable economic change occurred in September 2019, when the government announced the beginning of an oil crisis that they called the "circumstantial situation". The second important economic change happened with the COVID 19 pandemic, which led to the Tourism activity (the country's main source of revenue) coming to a halt. The third event of economic importance I observed was the Economic Reordering Task, an initiative enacted by the government in December 2020 to do an economic overhaul that removed the Cuban Convertible Pesos as a currency, enabled the US Dollar to circulate as legal currency, increased the prices of products and services, and increased the average salary in the country. The net outcome of the Economic Reordering Task was an unrestrained shortage of basic food products and an uncontrolled black market where food items were sold at inordinate prices.

The common thread between the three cases of unfavorable economic events I have mentioned is that as the price of food, medicine, and transportation go up (especially in the black market); the average Twitter user finds it harder to meet his/her basic needs, which naturally affects her/his ability to buy Internet data. Therefore, since December 6th of 2018, the day Cubans were allowed to access the Internet on their cellphones, various events have negatively impacted the economic possibilities of the average Cuban citizen to buy Internet data, which consequently makes it harder for them to use Twitter for participating in public discourse.

In this subsection, I have explored the change over time of several factors impacting how Cubans use Twitter to participate in public discourse. My purpose was not to compile a comprehensive list of all relevant factors that change over time and discuss them. In fact, other conditions changed during the studied period and likely also affected Cubans' Twitter-driven discourse participation. The purpose of this subsection was to emphasize the limitation of any cross-sectional study targeting the phenomenon of citizens' social media-mediated participation in public discourse. As the use conditions change over time, users will change their perspective on what kinds of outcomes can be achieved with the technology and how to use the technology in practice to achieve these outcomes. Therefore, cross-sectional analyses will point to patterns of social media use and use outcomes that may be valid only temporarily. A longitudinal study where the changes in the use conditions are studied over time might offer a more complete understanding of the phenomenon of social media-enabled participation in public discourse. For example, I identified a positive trend in the price that Cubans pay for Internet access; however, I also found that both the economic situation in the country and the government censorship have shown a trend to handicap Cuban Twitter users. How would the favorable and unfavorable trends interact over time to shape how Cubans use Twitter to participate in public discourse? The effect of Cubans' Twitter-mediated participation in public discourse on how the power relation with the government changes needs to be found in the continuous coevolution of the use conditions that citizens face.

4.4. Conditions in Restrictive Environments and Citizens' Use Social Media (RQ 2)

In this section, I followed the same approach I described in section 4.1 to generalize the results obtained from the Cuban case study. Therefore, I generalize the findings discussed in section 4.3, which apply to Cuban citizens using Twitter, to theoretical statements. These statements are generalizations that attempt to remove the particularities of the Cuban context to describe, in other restrictive environments, the use patterns followed by citizens to take advantage of social media for public discourse participation purposes. Although Chapter 5 (Discussion) offers a condensed

answer to research question 2, this section presents the propositions supporting the answer to this question.

Proposition 10: The process of actualizing the affordances for discourse participation that users in restrictive environments perceive in social media requires users to devise strategies to circumvent use obstacles.

This proposition means that the process of affordance actualization will be characterized by necessary steps that users will need to take to overcome use obstacles and other steps they will take to realize the specific potential for actions they were pursuing (e.g., steps involving the social media app features to access and share content).

For example, take the case of a Twitter user in Cuba who desires to express her/his opinion about an article published in an independent newspaper. First, such a user would need to activate a VPN to read the news articles (i.e., step to circumvent obstacle), then, s/he would use the retweet feature to both share the link to the article with other users and write her/his opinion about it (i.e., step to take advantage of the social media app features).

In this dissertation, I have cited evidence from authoritarian countries other than Cuba, where citizens take actions to overcome use limitations when using social media. For example, I have referenced several examples of social media users from other autocratic states taking concrete actions to overcome censorship and surveillance. We can always expect social media users in authoritarian regimes to adopt strategies to circumvent these two issues, although the particularities of the actions would depend on the conditions of each context. For example, although using VPN apps to access censored content should be universal across restrictive environments, creating alternative anonymous accounts to circumvent surveillance, a strategy Cuban Twitter users adopted, might not apply to other scenarios.

Depending on the context, users in restrictive environments might need to devise strategies to bypass conditions other than censorship and surveillance. For instance, they might need to tackle issues related to the cost of Internet use and the technical issues, such as accessing

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good-quality Internet connections and possessing smartphones with the technical requirements for using social media apps smoothly.

Proposition 11: In restrictive environments, social media users who approach these technologies to participate in public discourse devise optimization strategies to minimize the economic and Internet connectivity obstacles they face.

Four of the six obstacle-circumvention use strategies identified in the case study (section 4.3) manifest a common theme: they are designed to optimize Twitter use (i.e., do as many actions as possible in a reasonable time) given limiting use conditions. These strategies are triggered by either the goal of saving Internet data while using Twitter (data usage optimization) or making the best of Twitter, given the quality of the connection (connection quality optimization). I consider that this pattern will be present in other restrictive environments beyond Cuba. The rationale for this generalization is that, by definition, people in restrictive environments are technologically and economically disadvantaged for using Internet-based technologies. Therefore, it is reasonable to expect that people in other settings will also value applying optimization strategies to take advantage of social media. Naturally, the particularities of the strategies should vary across different restrictive spaces.

Proposition 12: The strategies that social media users adopt to bypass the restrictive societal conditions involve the use of the features of social media together with other technologies (i.e., they manifest technological co-presence).

Proposition 12 indicates that the process of overcoming the restrictive societal conditions is an endeavor where social media features are jointly used with the features of other technologies. The obstacle-circumvention use strategies identified in the case study illustrated that Cubans use Twitter in tandem with other technologies to participate in public discourse. I found that it was common for Cubans Twitter users to achieve actualization outcomes via the joint utilization

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of Twitter features and other technologies. For example, one case that revealed the interconnection of Twitter and other technologies when actualizing the Twitter affordances was the need to activate VPN apps to consume censored content. Another example was the joint use of Twitter and apps to reduce the quality of pictures and videos before attempting to upload audiovisual content to Twitter. The Twitter proxy use strategy via the Gmail app was another illustration of joint use, i.e., the joint use of the Twitter and Gmail apps.

I posit that the joint use of social media and other technologies is expected to manifest in other restrictive societal environments because it is a particular case of a well-known pattern of IT affordance actualization, namely, the technological co-presence of multiple technologies (Bloomfield et al. 2010). In social settings, the successful actualization of the affordances that a user perceives of an IT artifact is usually supported by utilizing other IT artifacts and the support of other actors (Bloomfield et al. 2010). Describing how particular IT-related action possibilities are actualized (or not) in a given social setting requires looking beyond the individual user and machine dyad (Bloomfield et al. 2010). Bloomfield et al. (2010) tell us to remain aware of the potential support that a user who attempts to actualize the affordances of a target IT can derive from the copresence of other people and IT artifacts. The essence of my argument for proposition 10 is that the phenomenon of co-presence would be even more evident in restrictive environments, where users face so many use challenges.

Proposition 13: The use strategies that social media users adopt to overcome specific restrictive societal conditions could negatively impact social media use in other ways.

The case study revealed that the application of obstacle-circumvention use strategies implies some drawbacks. There are two categories of negative consequences associated with using these strategies. First, the time and cognitive effort required to apply them could be psychologically discouraging for users. Secondly, strategies designed to overcome one specific

societal condition could negatively impact other conditions. That is, a workaround to circumvent one restrictive condition might worsen the effect of other conditions.

Anderson and Robey's (2017) work offers us evidence of the validity of proposition 12 in other contexts where social media users adopt workarounds. Anderson and Robey (2017) point out that IT-mediated workarounds could negatively impact achieving the goals that motivated the use of the technology. They illustrate this idea with the example of nurses who used a hack with the Dear Staff feature of an Electronic Health Record system to achieve the goal of coordinating care with other nurses. Although this workaround offered nurses some coordinating capabilities, Anderson and Robey (2017) found that it negatively impacted coordination in other ways. For example, it did not allow nurses to create time-stamped comments. Also, the Dear Staff feature's limitation on comment length forced nurses to omit observations that they thought would have been valuable to other nurses. Moreover, Anderson and Robey (2017) found the workaround to be cognitively and time-wise demanding since nurses reported the need to spend time and attention both understanding the undated comments that others made and figuring out how to write short comments to meet the character limitation.

Considering the results of the case study and Anderson and Robey's (2017) research, it is sensible to expect that in societal environments where multiple conditions negatively affect social media use, the workarounds that users devise to circumvent one condition will negatively impact the possibility they have to achieve desired goals.

Proposition 14: The restrictive societal conditions negatively affect people's use of social media in tandem. That is, the presence of one condition will tend to exacerbate the other conditions.

Proposition 14 generalizes the idea about the interconnected influence of the use obstacles represented in Figure 3. The basic reason for the expected validity of this statement in other restrictive settings is that politics and the economy are tightly intertwined in society. Therefore, it

seems logical to expect that in a society where social media users face multiple legal and economic obstacles, experiencing any one of these limitations will make the user more vulnerable to others.

Proposition 15: The restrictive societal conditions that influence how users take advantage of social media to participate in public discourse change over time. Some changes are positive for users (i.e., they make it easier for them to take advantage of these technologies), whereas others are negative.

Section 4.3.2.1 was devoted to illustrating how the societal conditions that informed how Cubans used Twitter to participate in public discourse changed over time. Cubans experienced changes over time concerning the price they paid to buy Internet access and their purchasing power to pay for it, their possibilities to use WiFi connections to access the Internet, and the quality of the cellular Internet connections they enjoyed. In addition, the legislation and strategies enacted by the government to censor and surveil citizens who used social media to express themselves freely also changed, showing a trend to become more restrictive.

There is evidence from authoritarian countries other than Cuba of citizens facing changing societal conditions that affect their possibilities to use social media to participate in socio-political conversations. As societies in autocratic regimes could be instances of restrictive environments, the results I will now discuss should serve as evidence of the plausibility of statement 5 in other restrictive contexts.

There is evidence that authoritarian governments' legal and paralegal strategies to curb citizens' use of social media to engage in socio-political talks tend to become more limiting over time. For example, in China, the number of social media apps available for citizens has reduced over time. Twitter and Facebook were allowed in the country until 2009, but only online domestic social media sites were legal after that year. The Chinese government's capability to surveil netcitizens also shifted to higher levels over time (Chen 2014). One illustration of this change was the mandate the government dictated in 2012 requiring the domestic social media platform

Weibo to start verifying the identities of users (Chen 2014). Over time, the Chinese government has also greatly increased its capability to use artificial intelligence and human censors to remove online content contrary to the government's interests (Chen 2014; Sullivan 2014).

The technical and economic possibilities of citizens in autocratic regimes for taking advantage of the Internet in general, and more particular, of social media apps, follow the same positive global trend that in the rest of the world. In 2014, Sullivan (2014) reported that both Internet penetration and the proportion of Internet users who accessed the Internet via smartphones increased in China. A similar positive trend occurred in Zimbabwe, where Internet penetration increased from 0.4% to 15.7%, and the number of mobile users went up by more than 30 folds from 2000 to 2011 (Leijendekker and Mutsvairo 2014). In short, even in restrictive environments such as the societies of autocratic regimes, people tend to find it easier over time to access the Internet and social media apps.

5. DISCUSSION

This chapter starts with Table 17, which presents a summarized answer to both research questions.

Then, sections 5.1 and 5.2 offer expanded answers to these questions. The other sections in this

chapter address research and practical contributions, limitations, and future work.

Table 17. Condensed Answers to Research Questions

Research question	Summarized answer
How does the use of social media technology to participate in public discourse empower the people living in restrictive environments to challenge the government's hegemonic ruling?	Social media enables citizens to take actions related to consuming and producing socio-political content that they find hard to take in offline settings. Taking these actions gives citizens limited structural power against government hegemony (i.e., the government sometimes positively answers citizens' social media demands). More importantly, these actions result in citizens' psychological empowerment, manifested in a boost in self-efficacy, motivation, resources, and knowledge relative to the efforts that citizens undertake to challenge the government's hegemony.
How do the societal conditions in a restrictive societal environment shape the use of social media technology for discourse participation purposes?	Citizens will tend to experience chaotic and limiting use conditions at the specific moment when they approach social media to participate in public discourse activities. Therefore, the process of actualizing social media affordances for discourse participation will be characterized by the application of strategies to circumvent use obstacles. There will be strategies designed to bypass the punitive legal system as well as optimization strategies designed to address Internet cost and connectivity issues.

5.1. Extended Answer to Research Question 1

Figure 7 presents a framework that summarizes the theoretical propositions discussed in section

4.2 and answers research question 1.

First, social media offers citizens in restrictive environments affordances for discourse

participation (the leftmost square in the framework). Social media enable citizens to access, create,

and comment on socio-political content conveniently and safely, at least compared to more

traditional channels such as official media outlets and offline settings. Social media affordances for

discourse participation are empowering actions. They represent actions that give citizens the power

to do things that the government does not allow them to do in the offline world. For example, citizens have the possibility to take actions such as reading political opinions from many fellow citizens, finding data that the government hides, and publicly denouncing the government's policies and actions.
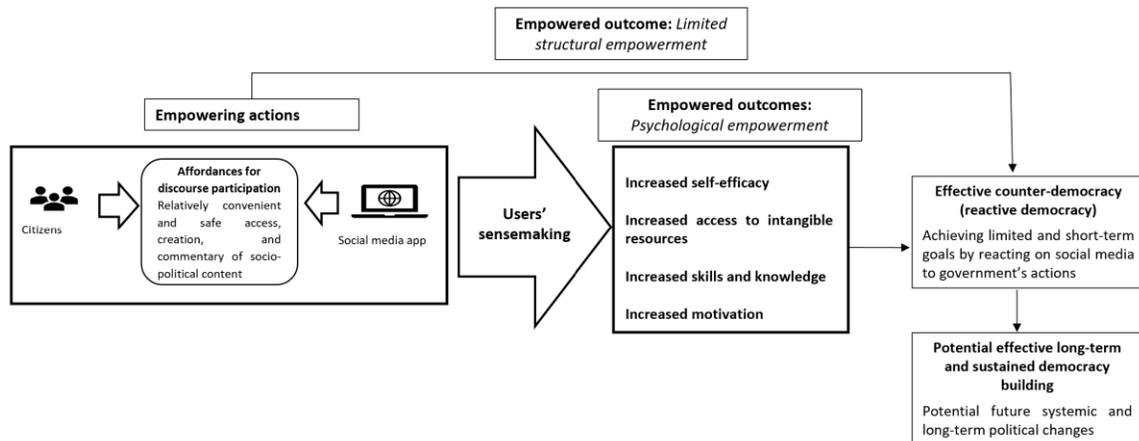
Figure 7: Social Media-Driven Participation and Empowerment

Social media-enabled empowerment for citizens in restrictive environments goes beyond participation (i.e., it goes beyond empowering actions). Empowerment also means that social media offers users possibilities to challenge the government hegemony. I called these possibilities empowered outcomes. These outcomes represent benefits that citizens can attain from their social media participation vis-a-vis their goals to challenge the government's unrestrained dominance and have more participation in the socio-political life.

I posit that citizens can attain two categories of empowered outcomes: limited structural empowerment and psychological empowerment. Limited structural empowerment refers to a real effect that citizens' social media participation has on government discourse and actions. This effect is different from citizens' interpreted and perceived effects (i.e., psychological empowerment). As explained in proposition 4, citizens in restrictive environments can use social media to shape the government's discourse, actions, and even policies in ways that they find it harder to do before these technologies existed. However, the structural power that social media furnish citizens is limited. Systematic evidence from several restrictive environments, including the

case study reported in this work, has shown that citizens' social media-mediated denouncements and opinions may lead an autocratic government to react and amend only limited and concrete issues. For example, common issues that citizens can get a totalitarian government to react to are bringing down a local politician, modifying a newly enacted policy to reduce the negative impact on citizens, and reducing the sentence/punishment of an opposition leader (Chen 2014; Leijendekker and Mutsvairo 2014; Sullivan 2014). However, the systemic problems that limit people's rights, political liberties, and economic freedoms in restrictive environments, such as legal restrictions on freedom of expression, rigged election systems, and legal frameworks that attached economic policies to the interest of the ruling political class, are not amenable to improvement via citizens' social media participation.

That social media use is a source of limited structural empowerment indicates that these technologies are suitable for counter-democracy or reactive democracy; that is, negative political interruptions where citizen-generated online denouncements lead the government to react to citizens' demands (Benkler 2006; Couldry 2015). The evidence from the case study reported in this research and other references in the literature strongly suggests that counter-democracy is the main benefit of social media use in restrictive environments. IT-driven counter-democracy illustrates the reactive power that citizens in restrictive spaces can attain by appropriating digital technologies. IT-enabled reactive power refers to citizens' capability to generate online public discourse opposing an action taken by the government and make the government react to this discourse by changing the action/policy or taking measures to minimize its negative effects (Benkler 2006).

As the ideas captured in propositions 5 to 8 from section 4.2 suggest, some of the benefits that citizens attain from their social media participation fall in the category of psychological empowerment. Social media-driven psychological empowerment for citizens in restrictive environments refers to the motivational and cognitive boost that using these technologies means vis-a-vis their efforts to do reactive democracy. Social media-driven participation in public discourse could help citizens feel energized, cognitively capable, and more resource-ready for taking the

complex challenge of counteracting the government's discourse and actions. In short, the actualization of social media affordances for discourse participation empowers citizens in their reactive democracy efforts because it makes them feel self-efficacious (proposition 5) and motivated (proposition 8) to keep doing counter-democracy. Actualizing these affordances also offers citizens access to intangible resources (e.g., legitimacy) (proposition 7) and knowledge about democracy (proposition 6) that they can use to push back against the government's ruling.

As citizens feel more psychologically empowered (i.e., more self-efficacious, motivated, and with more perceived control over important resources), they are expected to be more effective in doing counter-democracy. Bandura (1982) highlights the value of people's self-efficacy and motivation regarding their efforts to change the system in restrictive environments. He points out that under unresponsive and punitive socio-political contexts, as people increase self-efficacy with respect to their chances to change society, they can move from resignation and apathy to social activism and protest. Bandura indicates that "… [c]onsistent with self-efficacy theory, studies of social and political activism indicate that detrimental conditions prompt forceful action, not in those who have lost hope, but in …[people who]… believe that some changes can be brought about through forceful group action [i.e., people with high self-efficacy]." (Bandura 1982)

The psychological empowerment derived from using social media to participate in public discourse experienced by citizens in restrictive environments is mediated by the process of sensemaking. Users need to engage in the process of constructing meaning about the effect of their social media-mediated actions on the power struggle they have against the government. Sensemaking helps meaning to materialize in concrete ideas and interpretations (Weick et al. 2005). In this case, after talking to each other and observing the impact of what they do in social media, users in restrictive environments would interpret and frame their social media-mediated actions and what they mean to achieve more impact in the country's socio-political life.

Could social media-enabled reactive democracy in restrictive environments lead to sustained democracy-building (i.e., proactive democracy)? Reactive democracy could be a necessary phase that could transform into more fundamental democracy-building possibilities. As

Benkler (2006) indicates, "How else initially to challenge hegemonic structures than through direct, negative challenge?". Collective social media-enabled participation in public discourse could create the first historical precedents in a restrictive environment whereby large-scale citizen participation challenges the government's hegemony, although limitedly. This situation seems to be happening in Cuba, where people notice that the social media protests and denouncements are the first public and large-scale people's government condemnation to ever happen on the island. Moreover, from a psychological perspective, we can argue that citizens' motivation to sustain long-term counteracting battles against the state is best attained if they adopt attainable subgoals that lead to large future larges ones (Bandura 1982). On the psychological benefits of short-term (small) goals, Bandura (1982) states: "Whereas proximal subgoals provide immediate incentives and guides for action, distal goals are too far removed in time to effectively mobilize effort or to direct what one does in the here and now."

Referring to the transformation of reactive intro proactive democracy, Couldry (2015) indicates that IT-enabled negative political interruptions might derive into citizen-driven policy building when IT-driven participation is accompanied by wider societal transformations in motivations, resources, and needs. That's precisely the kind of transformation captured in the ideas laid out in propositions from 5 to 8. In summary, the contribution of social media-driven participation in public discourse to the empowerment of citizens living under restrictive regimes does not seem to be short-term and conspicuous but long-term and subtle. It seems to be mediated by processes of learning, habituation, and motivation. As stated by Sullivan (2014), the implications of social media for citizens in restrictive spaces should not be found in the isolated events where citizens' denouncements on these platforms generate small scale government interventions, but in "… longer-term [processes] by which netizens become accustomed to greater transparency, political participation and demand more systematic mechanisms for accountability…". The change might occur when people who do not have any voice in society find a platform to start perceiving themselves as citizens and adopt a culture of participating in the country's political life by opposing and counteracting the government's actions and ideas.

One final qualification about the framework presented in Figure 7 is pertinent. This framework shows potential effects (i.e., it is a framework of potential empowerment). Therefore, the likelihood and degree to which each effect materializes in a specific restrictive society depend on many socio-political, historical, cultural, and economic factors. Examples of these factors are the historical development of the power struggle between citizens and state (e.g., has the citizens' led counteracting efforts been showing an upward or downward trend in the last decade?) and current socio-political events in the world (e.g., COVID-19 pandemic). Other examples are the economic conditions (e.g., how strong is the private sector in society under investigation?), the level of limitations related to the legal system (e.g., are opposition parties and independent media allowed?), and the IT development in society (e.g., are there digital divides issues?).

5.2. Extended Answer to Research Question 2

Figure 8 outlines a framework that answers research question 2. Similar to the framework proposed to describe the case study findings (Figure 5), the one in Figure 8 proposes that three categories of conditions shape social media use for discourse participation purposed in restrictive environments. First, there are constraining societal conditions. For example, there are conditions related to the legal system and its mechanisms that deter and threaten citizens from opposing the government. There are also economic conditions that make it difficult for users to devote resources and time to use these technologies for democracy-building purposes. In addition, a poor technological infrastructure adds a layer of difficulty to social media use as users do not find it easy to access a good Internet connection and acquire digital devices (e.g., smartphones, Wi-Fi routers). In addition to facing constraints at the society level, each individual user will face particular limiting conditions (i.e., individual-level conditions). Some users will be more constrained than others to profit from social media to participate in public discourse. Because of differences in motivations, skills, knowledge, resource availability, geographic location, economic dependence on the government, network of personal connections, among other factors, users will vary greatly in their

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possibilities to circumvent societal conditions and successfully use social media to participate in public discourse.

Although both the societal and individual-level conditions inform the use patterns that users adopt, this dissertation posits that the circumstantial conditions at the moment of use are what ultimately determine the specific steps users take to actualize the affordances of social media. Circumstantial conditions are the unpredictable ways that the societal conditions and situations particular to the user combine at the moment of use. Given that life in restrictive environments is unstable in itself, this work posits that the circumstantial conditions will be chaotic (i.e., highly variable and unstable) and limiting (similar to societal and individual level conditions).
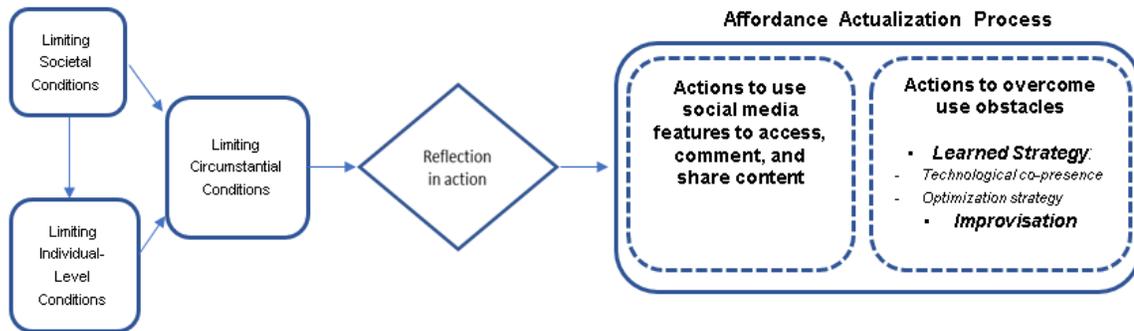
Figure 8: Conditions in Restrictive Environments and Affordance Actualization

Based on the circumstantial conditions, users will engage in the process of reflection in action (Burton-Jones and Volkoff 2017). Reflection in action is the process whereby technology users decide how to actualize the IT affordances while trying to attain a compromise between several desired goals (Burton-Jones and Volkoff 2017). In this context, reflection in action should support citizens in deciding how to satisfy cost-related goals (e.g., keeping internet consumption and connection time low, avoiding government reprisals) and discourse participation goals (e.g., sharing or reading desired content). The output of the reflection in action process is a plan of action for the user to achieve the desired participation outcomes (i.e., a plan on how to actualize the desired affordances).

The plan for action resulting from the reflection in action process will determine how the affordance actualization journey will take place. The actualization of social media affordances in restrictive environments will be comprised of two fundamental categories of actions. First, actions where users are taking advantage of social media features to access, share, and discuss socio-political content. Secondly, actions where users are trying to circumvent use obstacles to be able to realize the first category actions. The circumvention actions could be previously used actions (i.e., learned use strategies) or improvisations. The changing circumstantial conditions may not map to any previously learned use strategy, in which case the user may need to engage in improvisations, i.e., a use strategy not previously learned.

When users take advantage of previously learned strategies, these strategies will likely manifest the phenomenon of technological co-presence, whereby users take advantage of other technologies to support the actualization of the affordances they perceive on social media. Also, these learned strategies are expected to be optimization strategies: they will be designed to optimize social media use (i.e., do as many actions as possible in a reasonable time) given limiting use conditions. Optimization use strategies are triggered by either the goal of saving Internet data while using social media (data usage optimization) or making the best of social media, given the quality of the connection (connection quality optimization).

5.3. Connection Between the Answers to Both Research Questions

How does the connection between the answers to both research questions improve our understanding of citizens' social media use to challenge the state's ruling in restrictive environments?

The answer to research question 1 advances an explanation of how social media use for public discourse participation purposes empowers citizens in restrictive environments in their challenge against the government hegemony. The answer to research question 2 addresses the impact of the societal conditions in restrictive environments in how the use of social media for discourse participation purposes unfolds. The discussion of the answer to research question 2 (see

Figure 8) highlighted that users in restrictive environments need to spend a non-negligible amount of effort and time taking steps to circumvent use obstacles when attempting to realize social media's action potential. It is worrisome that realizing the action potential of social media is involved and difficult because it might indicate a threat to the possibility that citizens' empowerment via social media materializes. In fact, as argued in proposition 12 (section 4.4), the use strategies that social media users adopt to overcome specific restrictive societal conditions could negatively impact social media use in other ways. First, the time and cognitive effort required to apply these strategies could be psychologically discouraging for users. Secondly, strategies designed to overcome one specific societal condition could negatively impact other conditions, for example, by leading to more Internet data consumption and longer connection time.

It seems that social media's empowerment potential in restrictive spaces is negatively influenced because of the costs attached to using these technologies (e.g., emotional costs (i.e., discouragement from sustained engagement) and economic costs (e.g., more money and time spent). These costs may add to the baseline challenges that citizens in restrictive spaces face for using social media for democracy advocacy, such as tangible risks (e.g., losing employment, legal consequences) and emotional costs (i.e., fear of retaliation). How do the extra costs derived from applying steps to overcome use obstacles add to the baseline consequences faced by citizens in restrictive environments? In short, the insights derived from answering research question 2 invites us to consider additional difficulties inherent to the phenomenon of citizens' social media-driven empowerment via participation in public discourse.

A useful reminder to end this discussion is to always consider the impact of the costs and challenges that social media-mediated participation could impinge on citizens against the motives incentivizing them to use these technologies for challenging the state's hegemony. Although the costs are high, we should recognize that motives such as the desire for freedom and justice and the drive to eradicate existing socio-economic predicaments are significant too.

5.4. Implications for Research

Table 18 summarizes the main findings and their contribution.

Table 18: Summary of New Findings and Their Contribution

Finding	Contribution
Social media offers citizens in restrictive environments the possibility to engage in several public discourse participation activities they cannot take in offline settings and achieve desired outcomes with respect to their power struggle against the government	The democratic value of social media technologies goes beyond the democratic quality of the content that users generate with these apps. Citizens in restrictive spaces experience a boost in their democratic participation simply by using social media to access unregulated socio-political information, exchange socio-political ideas with fellow citizens, and exchange content with key socio-political actors (e.g., independent journalists).
Citizens in restrictive environments interpret the affordances of social media as a conduit to attain fundamental freedoms for example, the freedoms to discuss politics and participate in collective denouncements	It extends the needs-affordance-features (NAF) perspective (Karahanna et al. 2018) by proposing a new way in which social media affordances can contribute to users' psychological wellbeing. NAF posits that social media users find in these technologies affordances to fulfill innate psychological needs such as autonomy and relatedness. This dissertation proposes that, because users in restrictive spaces experience political participation and human rights deprivation, they actualize social media affordances for discourse participation and satisfy innate needs that humans aspire to fulfill for their well-being as members of society (i.e., fundamental freedoms related to people's lives as citizens).
Social media-enabled empowerment goes beyond allowing users to participate (i.e., be present) in desired socio-political offline activities and obtaining tangible power (i.e., real decision-making possibilities)	Social media does not only offer users tangible empowered outcomes, but also intangible benefits in the form of psychological empowerment. In restrictive spaces, social media-enabled empowerment could mean that citizens attain subjective empowerment benefits in the form of feelings, beliefs, and skills valuable to challenge the government's hegemonic rule.
The identification of the affordances that social media offers citizens for public discourse participation is a suitable starting point to understand social media-driven citizen empowerment	Sketching an affordance-based approach to study social media-driven citizen empowerment. The approach suggests first identifying specific affordances for public discourse participation that the citizens in the studied context perceive on a social media app. After identifying the affordances, the researcher should spell out how users understand and interpret the benefits they get from taking these actions in their role as citizens who desire to challenge the hegemonic ruling that submits them.

The case study illustrated that conditions such as the quality of the Internet infrastructure in the country and material conditions of users' lives such as their geographical location, their cellphone's technical conditions, and their possibilities to buy Internet data impact how users take advantage of social media.	Foregrounding aspects of the environment, previously neglected in IS research. Previous IS contextual research predominantly considers social and institutional conditions, but less attention has been given to the material aspects of the environment (Avgerou 2019). This dissertation highlighted environmental influences related to the materiality of large-scale technological conditions, the physical aspects of the locations where individuals interact with digital artifacts, and the material conditions of people's lives.
Actualizing the affordances of an IT artifact under restrictive conditions requires us to pay attention to how the features of other IT artifacts interweave with the IT under investigation. Under limiting use conditions, the process of affordance actualization is a combined accomplishment between several IT artifacts. .The process of affordance actualization needs to be analyzed beyond the dyad user-IT artifact	Existent conceptions of IS affordance actualization centers on the target IT artifact and its features. This work's contribution to the literature on IS affordance actualization relies on instantiating the abstract notion of co-presence proposed by Bloomfield et al. (2010) into a mechanism used by Cuban users to support their efforts to actualize the affordances for discourse participation they perceive on Twitter. I described how the process of co-presence takes place in the actualization journeys followed by Cubans.
The limiting conditions in restrictive environments make it difficult for users to actualize the affordances they perceive on social media; therefore, part of the process of affordance actualization is characterized by users' efforts to bypass the obstacles they face. The process of affordance actualization is involved because it entails steps where the user is appropriating the features related to discourse participation actions (e.g., retweeting, writing a comment) and other steps where s/he is overcoming use obstacles.	This finding allows us to characterize the affordance actualization process as comprised of two action categories. Actions where the user directly takes advantage of the IT features associated with the affordance that s/he perceived on the IT artifact and other actions where the user is attempting to minimize use obstacles.
The way users interact with a technology artifact to realize its affordances could be determined by three categories of conditions: those relative to	- The conditions that shape the process of social media affordance actualization can be categorized into three categories: societal, individual-level, and circumstantial.

the user, features of the environment where the interaction takes place, and those relative to the specific moment when interaction occurs (i.e., circumstantial conditions).	- The description of the relationship between the three categories. - The identification of relevant factors to consider within each category.

This dissertation contributes to a better explanation of the phenomenon of social media-enabled citizens' participation in democracy. One target of previous IS research examining the democratic potential of social media has been the degree to which the conversations produced with these technologies fit the ideals of a public sphere, such as whether opinions on social media are based on empirical evidence and use various framings (Dahlberg 2001). Existing works have also assessed the degree to which social media enable citizens to organize during social crises and social movements. This work extends previous research by showing that for people in restrictive environments, the democratic benefits of social media go beyond taking advantage of these technologies for participating in temporal socio-political events (e.g., a social crisis) or using these technologies to produce discourse with high democratic quality. Under the hegemonic control of citizens' actions exerted by the state in restrictive environments, people perceive that simple actions that social media afford them have democratic value. This research showed that citizens in restrictive spaces experience a boost in their democratic participation simply by using social media to access unregulated socio-political information, exchange socio-political ideas with fellow citizens, and exchange content with key socio-political actors (e.g., independent journalists and people in foreign countries). In short, this dissertation offers a new angle to understand the democratic value of digital technologies.

The present work also extends the needs-affordance-features (NAF) perspective (Karahanna et al. 2018). The finding that Cuban users interpret Twitter affordances as a conduit to attain fundamental freedoms related to human and political rights, for example, the freedoms to discuss politics and participate in collective denouncements, contributes to Karahanna's et al. (2018) work. Karahanna et al. (2018) argue that social media users find in these technologies affordances to fulfill needs "… in their everyday life to maintain psychological well-being [i.e., innate

psychological needs such as autonomy and relatedness]". This work has shown that in restrictive environments, social media-mediated actions help citizens enact human rights and civil freedoms, which are also innate needs that humans aspire to fulfill for their well-being as members of society. Thus, this dissertation extends NAF by proposing that, because users in restrictive environments experience political participation and human rights deprivation, they actualize social media affordances for discourse participation and satisfy fundamental social needs related to being a participant in socio-political life.

This dissertation also contributes to the literature on social media-enabled empowerment by sketching an affordance-based approach to social media-driven citizen empowerment. This research uses an affordances lens to understand how social media contributes to citizen empowerment in restrictive environments. As far as the author is concerned, no other IS research has centered on affordances as the primary construct to theorize IT-driven empowerment. The approach proposed in this dissertation suggests first identifying specific affordances for public discourse participation that the citizens in the studied context perceive on the social media app under investigation. These affordances will be action potentials related to accessing, sharing, and commenting on unregulated socio-political content. Then, this research suggests finding out how citizens interpret these actions (i.e., actualizing these affordances) as supportive in their power struggle against hegemonic entities (e.g., an authoritarian state). In other words, this work suggests that after identifying the affordances, the researcher should spell out how users understand and interpret the benefits they get from taking these actions in their role as citizens who desire to challenge the hegemonic ruling that submits them.

This dissertation also extends Leong's et al. (2019) work and contributes to the literature on social media-enabled citizen empowerment by positing that these technologies do not only offer citizens tangible empowered outcomes, but also intangible benefits (i.e., psychological empowerment). In restrictive spaces, citizens' social media-enabled empowerment goes beyond enabling citizens to experience objective power (i.e., the possibility to freely vote for government representatives), but also providing them subjective empowerment benefits in the form of feelings,

beliefs, and skills valuable to challenge the government's hegemonic rule. One of the social media-driven subjective empowered outcomes I discussed is citizens' heightened sense of how important their denouncements are in leading the government to react to their demands (i.e., citizens' increased self-efficacy for counteracting the government). Another subjective empowered outcome I found was the possibility to access intangible resources that citizens could not easily have before using social media, for example, fellow citizens' solidarity, the attention of official and independent media, and knowledge about democratic norms and processes. Finally, another empowered outcome is the citizens' heightened motivation to keep challenging the government, which results from the satisfaction they experience as they use social media to freely speak their minds and call out the government's injustices. In essence, citizens' social media-driven empowerment does not necessarily imply that citizens achieve the concrete outcomes reported by Leong et al. (2019), such as participation in offline mass protests and control over tangible resources needed to participate (e.g., money). Instead, empowerment could be subjective and psychological.

I consider that this research also contributes to the literature on the affordances that social media offer citizens for advancing democracy because it identifies and describes nine affordances specific to a social media app, Twitter, for an important democratic process: citizens' participation in public discourse. Previous research that has used the affordance lens to understand democratic participation does not identify the specific affordances that the social media app under investigation offers users regarding their pro-democracy efforts (Vaast et al. 2017; Zheng and Yu 2016)[9]. As suggested by Strong et al. (2014), it is valuable that researchers identify the specific affordances linked to the technology artifact under investigation because this could serve to identify what matters about a particular IT to a particular group of users. By identifying nine concrete affordances and the specific IT features giving rise to them (column 1 in Tables 5 to 13), we can clearly see how Twitter's material properties matters for Cubans who desire to participate in public

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[9] Although Zheng and Yu (2016) did identify specific technology affordances for collective action in support of the work done by an NGO, they do not connect these affordances specifically to Weibo, the social media technology they studied. Zheng and Yu (2016) discuss the affordances that the NGO members perceive from the combined use of multiple technologies (e.g., Weibo, the organization's website, official media channels).

discourse freely. I consider that as IS researchers, spelling concrete affordances offers us a way to root the benefits of an IT artifact in its material properties and how users with specific motivations perceive them.

This work also contributes to contextual IS research by foregrounding aspects of the environment where users and IT interact, previously neglected in IS research. Previous IS contextual research predominantly considers social and institutional conditions (e.g., users' cultural and conventional understandings, power-related contextual dynamics), but less attention has been given to the material aspects of the environment of IS phenomena (Avgerou 2019). This dissertation has answered Avgerou's (2019) call to pay attention to environmental influences related to the materiality of large-scale technological conditions, the physical aspects of the locations where individuals interact with digital artifacts, and the material conditions of people's lives. The case study illustrated that conditions such as the quality of the Internet infrastructure in the country and material conditions of users' lives such as their geographical location, their cellphone's technical conditions, and their possibilities to buy Internet data have a clear impact on how users take advantage of social media. For example, I found that Cuban Twitter users adopted use strategies, such as action postponement and online and offline switching, in response to limitations regarding these material conditions. In summary, this works contributes to IS contextual research by suggesting what material conditions could be important to consider when studying citizens using social media to participate in socio-political conversations in restrictive environments and how these conditions shape the use patterns that unfold.

This dissertation also contributes to the literature on IS affordance actualization. Existent conceptions of IS affordance actualization centers on the target IT artifact and its features when explaining the process of affordance actualization. Currently, the IS scholarly focus is to describe what features of the target IT artifact are used, how they are used, and whether the performance of these features at the moment of actualization impact the prospect that the affordance gets actualized (Anderson and Robey 2017; Strong et al. 2014). In contrast, I showed that actualizing the affordances of an IT artifact under restrictive conditions requires us to pay

attention to how the features of other IT artifacts interweave with the IT under investigation. Under limiting use conditions, the process of affordance actualization is a combined accomplishment between several IT artifacts. This finding is related to the notion of co-presence, which suggests that the successful actualization of the affordances that a user perceives of an IT artifact is supported by simultaneously utilizing other IT artifacts and the support of other actors (i.e., the co-presence of other artifacts and actors) (Bloomfield et al. 2010). This work's contribution to the affordance actualization literature relies on instantiating the abstract notion of co-presence proposed by Bloomfield et al. (2010) into a mechanism used by Cuban users to support their efforts to actualize the affordances for discourse participation they perceive on Twitter. I described how the process of co-presence takes place in the actualization journeys followed by Cubans users to participate in public discourse via Twitter.

Another contribution of this dissertation to the theory of IS affordance actualization is the identification of two categories of actions that characterize the actualization process. This research showed that, under restrictive use conditions, the process of actualizing the affordances of an IT artifact involves taking actions where the user directly takes advantage of the IT features associated with the affordance (action category 1) and actions to minimize use obstacles (action category 2). Prior IS research had outlined the process of affordance actualization as centered around actions that belong to category 1; that is, goal-directed actions where a user takes advantage of the features that led him/her to perceive the affordance (Anderson and Robey 2017; Strong et al. 2014). For example, Strong et al. (2014) describe the actualization of the affordance of capturing digital data about patients as a process where a user records all the data and notes about patients and interactions with them in the system forms designed for collecting such data. This example and others found in the IS works on affordance actualization focused on detailing the actualization process as one where the user takes advantage of the features directly related to why the affordance was perceived in the first place (Volkoff and Strong 2013). In contrast, in this dissertation, I showed that the actualization of the affordances of an IT artifact could be

fundamentally comprised by a second category of actions: those taken by users to minimize use obstacles and facilitate them to use the features related to the affordance.

The case study revealed that part of the process of actualizing the affordances for discourse participation that Cubans perceive on Twitter is characterized by users' efforts to bypass hindering conditions. In the context of Twitter use for discourse participation in Cuba, the process of affordance actualization becomes elaborated as it involves not only actions from category 1 (those where users take advantage of Twitter's features linked to discourse participation such as the tweet, retweet, and reply), but also steps to circumvent use obstacles (actions from category 2). Sketching the process of affordance actualization into two distinctive categories of actions may offer several advantages. First, outlining the actualization actions where users take steps to minimize use limitations (i.e., actions from category 2) may be an effective way to elucidate conditions that shape IT use. As shown in this dissertation, identifying the strategies followed by Cubans to circumvent use problems facilitated the identification of conditions, at both the societal and individual-user levels, that limited Twitter use. Secondly, identifying actions from category 2 could reveal other means that users find supportive in actualizing the affordances of the target IT artifact, for example, additional IT artifacts.

This dissertation also contributes to better theorizing the conditions that shape the process of affordance actualization. Prior works on this area have posited users' skills, characteristics of the work environment, and the performance of the IT features as determinant factors in how the IT affordance actualization process unfolds (Anderson and Robey 2017; Strong et al. 2014). The contribution of this dissertation consists of organizing the conditions that shape the actualization process in three categories, describing the relationship between them, and proposing new relevant factors to consider within each category.

This research showed that the way users interact with a technology artifact to realize its affordances could be determined by three categories of conditions: those relative to the user, features of the environment where the interaction takes place, and those relative to the specific moment when the user-IT interaction occurs (i.e., circumstantial conditions). Regarding the

conditions relative to the user, I found that in the context of social media use in restrictive societal environments, focusing only on the user's IT skills, as emphasized by prior works, is insufficient. Instead, I found other individual-level characteristics to be relevant in shaping the exact ways that IT use unfolds. For instance, the case study revealed that a user's financial situation, materialized in his/her capability to buy Internet access and possess a smartphone with adequate performance, influences how s/he actualizes the IT affordances. Other characteristics relative to the user that could be influential are how much the user is deterred by the potential negative consequences of using social media and even the user's geographical location (e.g., location relative to available cellular base stations).

Regarding the conditions of the environment, this dissertation showed that we might need to look beyond cultural and institutional rules and norms as determinants of how affordance actualization takes place. That is to say; we need to look beyond environmental, social factors. In the context of social media use in restrictive societal environments, there are other influential environmental characteristics such as economic factors (e.g., structural difficulties that users face to buy IT devices and Internet data), behavioral restrictions from the established legal system, and the quality of the societal telecommunication infrastructure.

Finally, I submit that the third category of conditions to consider is circumstantial factors. Other IS research has emphasized the importance of circumstantial conditions in how users actualize the affordances they perceive on an IT artifact (Anderson and Robey 2017). However, this dissertation contributes to a better explanation of how the concrete conditions of the moment of use affect affordance actualization. Referring to circumstantial conditions, Anderson and Robey (2017) emphasize that at each moment of actualization, environmental characteristics, the user's IT skills, and the performance of IT artifact's features come together to create use conditions with a certain degree of favorability to the potential of actualizing the artifact's affordances. In contrast to Anderson and Robey (2017), I differentiate between use conditions operant at the moment of actualization, which I called circumstantial conditions, and use conditions relative to the environment and characteristics relative to the individual user. Although Anderson and Robey

(2017) submit that circumstantial conditions are relevant in determining how IT affordances are actualized, they conflate individual and contextual conditions with circumstantial ones. For instance, Anderson and Robey (2017) consider users' IT abilities and cultural traditions as circumstantial conditions of the moment of actualization. However, given a user, her/his IT abilities and the environment's cultural traditions do not change from one moment of actualization to the other. IT abilities change from user to user (i.e., they are individual-level characteristics), and the cultural traditions are a feature of the environment that affect all users homogeneously.

In short, this research advances a distinction between three categories of conditions that shape how the affordance actualization processes unfold. Moreover, it proposes that these conditions are related in such a way that environmental conditions and users' characteristics inform the circumstantial conditions of the moment of actualization.

5.5. Implications for Practice

The implications for practice can be discussed considering the benefits that this dissertation's findings could offer citizens in Cuba and other restrictive environments who approach social media apps to participate in public discourse.

One advantage of this dissertation is the possibility that citizens in other restrictive environments could adopt the use strategies applied by Cuban users to participate in public discourse. Giving visibility to these strategies via the publication of this work could lead to their adoption by users in other contexts. For example, the strategies to circumvent censorship and surveillance applied by Cubans in the Twittersphere could also be helpful for people in other autocratic countries. In summary, this work might contribute to the social media-mediated action repertoire that citizens can use to take advantage of these technologies for pro-democracy aims under limiting use conditions.

Another practical contribution of this dissertation for citizens in autocratic regimes is the account proposed for how social media use empowers them (Figure 7). One of the ideas conveyed in the empowerment model depicted in Figure 7 is that using social media to publicly

criticize and denounce the government could lead the government to react and take actions that favor citizens (e.g., actions that satisfy citizens' demands). Knowing that sometimes at least some limited positive outcomes with respect to challenging the government hegemony can be achieved via social media participation could motivate citizens in other contexts to appropriate these technologies with pro-democracy aims. Moreover, knowing the basic ideas captured in the model in Figure 7 could offer citizens a clear understanding of how their social media participation impacts their chances of building a more democratic country. Citizens should know that social media participation in public discourse is not expected to result in short-term substantial power gains over the government's hegemonic ruling. Instead, citizens should view social media as a platform for preparation and learning that can energize them and get them ready with valuable knowledge that they can use to carry out a steady and continuous resistance that could progressively lead to more tangible results. I consider that taking advantage of the independent media outlets and pro-democracy organizations existing in different authoritarian countries could be an effective mechanism to spread the ideas captured in the empowerment framework depicted in Figure 7.

The findings from the case study can also be valuable for social media developers as they could consider including design changes that facilitate users in restrictive environments appropriating these technologies for pro-democracy purposes. Take the specific case of the Twitter app and the difficulties Cuban users face for using it to participate in public discourse. Using the feedback from the case study reported in this work, Twitter developers could devise ways to make it easier for users in restrictive environments to circumvent online censorship. For example, by enabling users to access links to external content without the need to leave the Twitter app. Twitter can also find new ways of facilitating users in restrictive spaces to circumvent state surveillance. In a similar vein, Twitter designers could consider options for users in restrictive spaces to take advantage of the app successfully while using a slow and unstable Internet connection and under data consumption limitations. Although the Twitter Lite app is an option that Twitter already devised for settings with slow connections, it has drawbacks, such as high Internet consumption and the inability to interact with media content, making it unattractive for Cuban users.

This research can also increase the international recognition and the legitimacy of Cuban citizens' efforts for uplifting democracy in their country. The publications and presentations derived from this work will serve to create awareness of the precarious political, human rights, and economic situation experienced by the people of Cuba. They can also be an additional counter mechanism to the well-designed international campaign conducted by the Cuban government to spread their narrative of the socio-political reality to the rest of the world. The Cuban government has had more than six decades to build a false reputation in many parts of the world. This propagandized campaign has been partially successful because it is common to find people worldwide who do not know that Cuba is ruled by a hegemonic authoritarian state that deprives citizens of fundamental freedoms and subjects them to poor socio-economic conditions. In summary, the research output from this dissertation could offer Cuban citizens' efforts to fight against the autocratic Cuban state more visibility and legitimacy.

Finally, this dissertation could create awareness among Cubans and citizens from other totalitarian regimes about the need to constantly change the strategies they adopt to use social media to fight the hegemonic state dominance. As discussed in section 4.3, the Cuban government changes and adapts the legal and paralegal strategies to control people's use of digital technologies to participate in political conversations freely. Moreover, the economic and material conditions that Cubans face to these technologies are also in constant change. The changing nature of Cuba's socio-economic and political conditions points to the need for citizens who approach Twitter to participate in public discourse fluidly. Citizens in restrictive spaces using social media to participate in pro-democracy activities should not feel discouraged as they are faced with the need to devise new strategies to bypass emerging obstacles. On the contrary, citizens should expect these changing conditions and be prepared to tackle them as they arise.

5.6. Limitations

One of the methodological limitations is that data was only collected for citizens who show their real identity on Twitter. This restriction resulted from the protocol established by the IRB for this

dissertation. I consider this to be a limitation because as I was doing the virtual observation of the Cuban Twittersphere, I found a large number of Cuban users with anonymous accounts. These users are less affected by the fear of retribution from the government, and they should be less inhibited to express ideas than users with real identities. These important differences between the two categories of users may imply that they perceive different affordances on Twitter, find Twitter to enable them different citizen goals, and use different use strategies to actualize the affordances they perceive.

A second methodological consideration to bring up is the cross-sectional nature of the study. Based on the collected data, the dissertation is a snapshot of Cubans' use of Twitter to participate in public discourse from October of 2019 to May 2020. However, a longitudinal study of this phenomenon seems more promising because, as discussed in section 4.3, Cubans change over time how they use Twitter to participate in public discourse. Thus, longitudinal research should be the right approach to theorize the changes concerning the socio-economic and political conditions under which Twitter use occurs, the strategies that Cubans adopt to overcome use obstacles, and even potentially, the affordances they perceive on Twitter.

Another limitation is the lack of data about the phenomenon of the digital divide in Cuba, which would include information about the penetration level (e.g., the number of users) and usage level (e.g., frequency of use and time spent) regarding different digital technologies such as the Internet, social media apps (most importantly Twitter), smartphones, among other technologies. A digital divide analysis would also dissect the penetration and usage data across multiple demographics such as gender, geographic location (e.g., province, urban versus rural), education level, profession, among other valuable indicators. The results of a digital divide analysis in Cuba would have complemented this research and improved its theory contribution. For example, although this research discusses how Cuban citizens who use Twitter to participate in public discourse get empowered in their efforts to challenge the Cuban government's hegemony, we do not know what percentage of Cubans citizens participate in this activity. It is reasonable to assume that a critical mass of Cubans should participate in these actions for Twitter's potential

empowerment to render some positive effects. Moreover, the citizens who participate in these activities are expected to do it with a certain intensity and commitment conducive to actualizing the empowerment potential, rather than infrequently and intermittently. Unfortunately, these data were not collected as part of this work; therefore, we cannot advance a complete account of Twitter's empowerment potential and what factors hinder it.

One important caveat about the limitation discussed in the previous paragraph is that collecting digital divide data in Cuba is not simple. Accurate figures about this phenomenon are not readily available. Government-published data is incomplete and inaccurate because the Cuban government 's historical strategy is to adulterate or hide any data exposing socio-economic issues (digital divide problems are evidence of such issues). Furthermore, attempts to collect such data on the ground as an independent entity put those attempting such effort at risk of government retaliation and punishment. Therefore, attempts to overcome the above-referred limitation might be better addressed by conducting a study similar to this one in a restrictive environment other than Cuba. For example, it could be the society of another totalitarian country where more non-government entities (e.g., NGOs and independent media outlets) in comparison to Cuba are allowed to collect socio-economic data.

The account of the impact of the societal conditions in Cuba on the process of Twitter affordance actualization is also limited because it does not include the effect of social factors. In this dissertation, the patterns of Twitter use are explained based on economic, technological, and legal factors operant in Cuba; however, the role of historical and cultural factors is not considered.

Another limitation of this work is that I focused the analysis on citizens using a single social media app, Twitter. Naturally, citizens in restrictive environments use multiple social media apps simultaneously to participate in public discourse. For example, in the Cuban context, people also use Facebook and Telegram for this purpose. Studying other social media apps could result in identifying new social media affordances, new citizen outcomes, and new challenges and circumvention strategies beyond those I identified in this research. Exploring multiple apps in the same study could also offer a useful perspective on how participation in public discourse is

accomplished as users use several social media apps interconnectedly. These ideas are all opportunities for future research.

5.7. Future Research

One direction is to expand the current study to go beyond IT-driven democratization of public discourse and include IT-enabled democratization of collective action, a second area relevant to examining digital technologies' influence in democracy-building in autocratic countries (Leijendekker and Mutsvairo 2014). While writing this dissertation, I encountered anecdotal evidence that supports the value of studying the role of social media in enabling citizens' offline protests. For example, I found out that Twitter seemed to have played a key role in the organization and live development of the November 27th protest in Havana, where more than 250 Cubans, both independent artists and ordinary citizens, gathered outside the building of the Cuban Ministry of Culture to protest (Arego 2020). The goal of the protest was to denounce the human rights violations that the government had been perpetrating against members of the San Isidro Movement, a group of Cuban artists and journalists that focus on publicly denouncing the government's censorship of artistic expression. The anecdotal evidence I observed suggested that Twitter was used by protesters as a platform to share information about how to join the protest and development information about the it, for example, updated information about the interactions that were taking place between protesters and government officials.

Another possibility for future inquiry is to conduct a second case study to allow cross-case analysis, a design known to improve the value of the theory derived from case study research (Eisenhardt and Graebner 2007; Lee and Baskerville 2003). One idea for this second case study is to conduct another research in Cuba focused on how citizens use a different social media app for discourse participation purposes, for example, Facebook, WhatsApp, or Telegram, and compare the results with those obtained in this research. A second idea to conduct the additional case study is to do it in a different restrictive environment and focus on people's use of Twitter or a similar microblog social media (e.g., Weibo in China) for discourse participation purposes.

Another idea for a different research project is to conduct a study that combines the results of applying an empowerment lens as illustrated in this research and data about the digital divide in the society under investigation. Assessment of the digital divide includes evaluating Internet, smartphone, and social media penetration as well as how penetration and use variables are distributed across demographics (e.g., gender, geographic location, education level). As discussed in the Limitations section, combining digital divide data and a theory about the empowerment possibilities of digital technologies allows for a better perspective about the extent to which empowerment hopes can come to fruition in restrictive spaces and what factors need to change for the empowerment potential to be realized.

An additional future research avenue is to collect quantitative data and conduct statistical analyses that can offer stronger evidence for some of the findings advanced in this dissertation. For example, data can be collected and analyzed to find whether, to what degree, and under which conditions citizens' Twitter-mediated discourse leads to a government's response that favors citizens' demands. Quantitative analysis can also offer evidence about the effect of Twitter use for discourse participation purposes on citizens' knowledge about democratic norms and processes. In short, there are many ideas discussed in this research that can be better understood by analyzing quantitative data. Quantitative data can be collected in the form of social media-trace data (e.g., Twitter scrapped data) or users' surveys.

Finally, the interview and VO data revealed an interesting additional research avenue that I could only start exploring in this work because of time constraints. I found out that another potentially helpful way of understanding social media-enabled empowerment was to pay attention to the affordances that these technologies offer two other actors: the government and social media developers. The affordances that social media provide these actors should be considered because they limit the positive outcomes that citizens can potentially draw from social media use. The case study revealed that Twitter offers the government discourse hegemony affordances. For example, the affordance of "censoring users' feedback and criticism on Twitter" (enabled by the use of the

hide-reply and the blocking features) and the affordance of "harassing dissenting voices on Twitter" (enabled by the feature that allows the creation of anonymous profiles).

The case study also pointed to the potentially negative effects for citizens' pro-democracy hopes of the planned affordances that Twitter developers designed in these technologies. Planned affordances are envisioned actions that users with certain expected characteristics (e.g., motivations, aims, skills) will perceive on the features designed in the technology (Anderson and Robey 2017). The interview and VO data coding suggested that Twitter's rules of services and the algorithms that work in the background automatically managing users' interactions might work against Cubans' goal of successfully using Twitter to participate in public discourse. Rules of services and the recommending algorithms are material properties that Twitter developers set up to guarantee that users' interactions on the platform go as they intend. These features are expected to lead users to perceive affordances that benefit developers (i.e., they are thought to trigger planned affordances). I found a few Twitter use patterns that might be accounted for by developers' planned affordances. For example, the Facebookization of the Cuban Twittersphere (i.e., tilting Twitter from a platform to engage in socio-political conversations into a place to meet with friends and have fun). Also, Twitter users' tendency to engage with socio-political content in a cursory and temporarily limited way. This pattern manifests in the observed propensity among users for sharing and liking content that they have not fully read as well as their tendency to engage with viral information rather than with content about more substantial issues.

To summarize, the case study hinted that focusing on the affordances that social media offer other actors beyond citizens might be a more accurate way of spelling out the empowerment potential that these technologies furnish citizens. Figure 9 outlines a framework that could guide this new research avenue. The framework shows that citizens, the government, and social media developers all take advantage of social media's material features differently. The combined effect of their actions is what shapes the success of citizens' efforts to use these technologies with pro-democracy aims successfully. Citizens take advantage of social media to realize affordances for discourse participation. However, the government approaches social media

to realize public discourse hegemony affordances that make it more difficult for citizens to use the technology as they desire it. Finally, social media developers design features and rules to lead users to perceive planned affordances that benefit them (i.e., the developers) but push citizens to engage in behaviors detrimental to realizing the affordances for discourse participation that they perceive in these technologies.
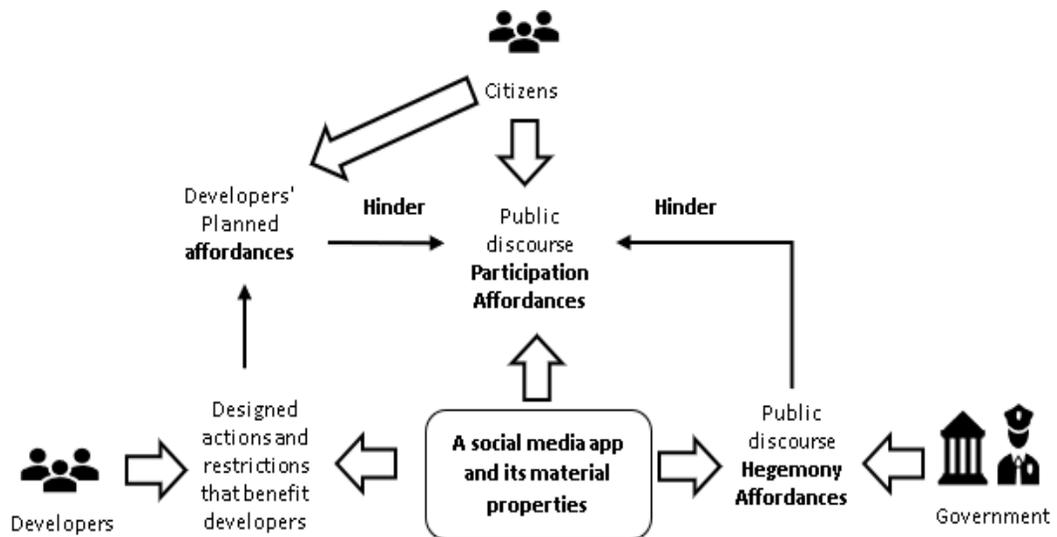

Figure 9. A Multi-Actor Framework to Study Social Media-Enabled Empowerment

REFERENCES

14ymedio. 2020. "Continúa Inactivo El Servicio De Telegram En Cuba Y El Problema Se Extiende a Los Vpn." Retrieved November 5, 2020, from https://www.14ymedio.com/cuba/Miercoles-negro-servicio-Telegram-Cuba_0_2966703314.html

ADN Cuba. 2020. "Convocan a Tuitazo Para Que Etecsa Baje Los Precios," in: *ADN Cuba*. Cuba.

Alimardani, M. 2018. "What Telegram Owes Iranians," in: *Politico Magazine*.

Anderson, C., and Robey, D. 2017. "Affordance Potency: Explaining the Actualization of Technology Affordances," *Information and Organization* (27:2), pp. 100-115.

Arego, A. 2020. "El Movimiento San Isidro Y El Poder De Internet Que Empiezan a Entender Los Cubanos," in: *Diario de Cuba*. Madrid.

Avgerou, C. 2013a. "Explaining Trust in It-Mediated Elections: A Case Study of E-Voting in Brazil," *Journal of the Association for Information Systems* (14:8).

Avgerou, C. 2013b. "Social Mechanisms for Causal Explanation in Social Theory Based Is Research," *Journal of the Association for Information systems* (14:8).

Avgerou, C. 2019. "Contextual Explanation: Alternative Approaches and Persistent Challenges," *MIS Quarterly: Management Information Systems*).

Bailard, C. S. 2012. "Testing the Internet's Effect on Democratic Satisfaction: A Multi-Methodological, Cross-National Approach," *Journal of Information Technology & Politics* (9:2), pp. 185-204.

Bandura, A. 1982. "Self-Efficacy Mechanism in Human Agency," *American psychologist* (37:2), p. 122.

Barley, S. R. 1990. "Images of Imaging: Notes on Doing Longitudinal Field Work," *Organization science* (1:3), pp. 220-247.

Benkler, Y. 2006. "Political Freedom Part 2: Emergence of the Networked Public Sphere," in *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. Yale University Press.

Bloomfield, B. P., Latham, Y., and Vurdubakis, T. 2010. "Bodies, Technologies and Action Possibilities: When Is an Affordance?," *Sociology* (44:3), pp. 415-433.

Boudreau, M.-C., and Robey, D. 2005. "Enacting Integrated Information Technology: A Human Agency Perspective," *Organization science* (16:1), pp. 3-18.

Burton-Jones, A., and Volkoff, O. 2017. "How Can We Develop Contextualized Theories of Effective Use? A Demonstration in the Context of Community-Care Electronic Health Records," *Information Systems Research* (28:3), pp. 468-489.

Bygstad, B., Munkvold, B. E., and Volkoff, O. 2016. "Identifying Generative Mechanisms through Affordances: A Framework for Critical Realist Data Analysis," *Journal of Information Technology* (31:1), pp. 83-96.

Carpini, M. X. D. 2004. "Mediating Democratic Engagement: The Impact of Communicationsoncitizens' Involvement in Political Andcivic Life," in *Handbook of Political Communication Research*. Routledge, pp. 413-452.

Chemero, A. 2003. "An Outline of a Theory of Affordances," *Ecological psychology* (15:2), pp. 181-195.

Chen, W. 2014. "Taking Stock, Moving Forward: The Internet, Social Networks and Civic Engagement in Chinese Societies," *Information, Communication & Society* (17:1), pp. 1-6.

Couldry, N. 2015. "The Myth of 'Us': Digital Networks, Political Change and the Production of Collectivity," *Information, Communication & Society* (18:6), pp. 608-626.

Creswell, J. W. 2013. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, (Third ed.). Sage publications.

Da Cunha, J. V., and Orlikowski, W. J. 2008. "Performing Catharsis: The Use of Online Discussion Forums in Organizational Change," *Information and Organization* (18:2), pp. 132-156.

Dahlberg, L. 2001. "The Internet and Democratic Discourse: Exploring the Prospects of Online Deliberative Forums Extending the Public Sphere," *Information, communication & society* (4:4), pp. 615-633.

Davis, J. L., and Chouinard, J. B. 2016. "Theorizing Affordances: From Request to Refuse," *Bulletin of Science, Technology & Society* (36:4), pp. 241-248.

Deng, X., Joshi, K., and Galliers, R. D. 2016. "The Duality of Empowerment and Marginalization in Microtask Crowdsourcing: Giving Voice to the Less Powerful through Value Sensitive Design," *Mis Quarterly* (40:2), pp. 279-302.

DeSanctis, G., and Poole, M. S. 1994. "Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory," *Organization Science* (5:2), pp. 121-147.

Drury, J., and Reicher, S. 2005. "Explaining Enduring Empowerment: A Comparative Study of Collective Action and Psychological Outcomes," *European journal of social psychology* (35:1), pp. 35-58.

Drury, J., and Reicher, S. 2009. "Collective Psychological Empowerment as a Model of Social Change: Researching Crowds and Power," *Journal of Social Issues* (65:4), pp. 707-725.

Eisenhardt, K. M. 1989. "Building Theories from Case Study Research," *Academy of management review* (14:4), pp. 532-550.

Eisenhardt, K. M., and Graebner, M. E. 2007. "Theory Building from Cases: Opportunities and Challenges," *Academy of management journal* (50:1), pp. 25-32.

Fayard, A.-L., and Weeks, J. 2007. "Photocopiers and Water-Coolers: The Affordances of Informal Interaction," *Organization studies* (28:5), pp. 605-634.

Freedom on the Net. 2018. "The Rise of Digital Authoritarianism," www.freedomhouse.org.

Gainous, J., Wagner, K. M., and Ziegler, C. E. 2018. "Digital Media and Political Opposition in Authoritarian Systems: Russia's 2011 and 2016 Duma Elections," *Democratization* (25:2), pp. 209-226.

Gibson, J. J. 1986. *The Ecological Approach to Visual Perception*. Hillsdale, New Jersey: Lawrence Erlbaum associates.

Gregor, S. 2006. "The Nature of Theory in Information Systems," *MIS quarterly*), pp. 611-642.

Heft, H. 1989. "Affordances and the Body: An Intentional Analysis of Gibson's Ecological Approach to Visual Perception," *Journal for the theory of social behaviour* (19:1), pp. 1-30.

Holeman, I., and Barrett, M. 2017. "Insights from an Ict4d Initiative in Kenya's Immunization Program: Designing for the Emergence of Sociomaterial Practices," *Journal of the Association for Information Systems* (18:12), pp. 900-930.

Human Rights Watch. 2019. "World Report 2019."

Hutchby, I. 2001. "Technologies, Texts and Affordances," *Sociology* (35:2), pp. 441-456.

Karahanna, E., Xu, S. X., Xu, Y., and Zhang, N. A. 2018. "The Needs–Affordances–Features Perspective for the Use of Social Media," *Mis Quarterly* (42:3), pp. 737-756.

Klein, H. K., and Myers, M. D. 1999. "A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems," *Mis Quarterly* (23:1), pp. 67-94.

Knight Center. 2016. "Isoj 2016. Keynote Speaker Presentation by Yoani Sanchez." YouTube.

Kozinets, R. V. 2002. "The Field Behind the Screen: Using Netnography for Marketing Research in Online Communities," *Journal of Marketing Research* (39:1), pp. 61-72.

Lee, A. S., and Baskerville, R. L. 2003. "Generalizing Generalizability in Information Systems Research," *Information systems research* (14:3), pp. 221-243.

Leijendekker, I., and Mutsvairo, B. 2014. "On Digitally Networked Technologies, Hegemony and Regime Durability in Authoritarian Regimes: A Zimbabwean Case Study," *Information, Communication & Society* (17:8), pp. 1034-1047.

Leonardi, P. M., Bailey, D. E., Diniz, E. H., Sholler, D., and Nardi, B. A. 2016. "Multiplex Appropriation in Complex Systems Implementation: The Case of Brazil's Correspondent Banking System," *MIS Quarterly* (40:2), pp. 461-473.

Leong, C., Pan, S. L., Bahri, S., and Fauzi, A. 2019. "Social Media Empowerment in Social Movements: Power Activation and Power Accrual in Digital Activism," *European Journal of Information Systems* (28:2), pp. 173-204.

Lifeline Fund. 2020. "Advocacy in Restrictive Spaces: A Toolkit for Civil Society Organizations." Freedom House.

Majchrzak, A., Markus, M. L., and Wareham, J. 2016. "Designing for Digital Transformation: Lessons for Information Systems Research from the Study of Ict and Societal Challenges," *MIS Quarterly* (40:2), pp. 267-277.

Maynard, M. T., Gilson, L. L., and Mathieu, J. E. 2012. "Empowerment—Fad or Fab? A Multilevel Review of the Past Two Decades of Research," *Journal of management* (38:4), pp. 1231-1281.

Miles, M. B., Huberman, A. M., and Saldana, J. 2014. *Qualitative Data Analysis: A Methods Sourcebook*, (Third ed.). Arizona State University: SAGE Publications.

Miranda, S. M., Young, A., and Yetgin, E. 2016. "Are Social Media Emancipatory or Hegemonic? Societal Effects of Mass Media Digitization," *MIS Quarterly* (40:2), pp. 303-329.

Morozov, E., and Docksai, R. 2011. "Technology's Role in Revolution: Internet Freedom and Political Oppression," *The Futurist* (45:4), p. 18.

Mousavi, R., and Gu, B. 2019. "The Impact of Twitter Adoption on Lawmakers' Voting Orientations," *Information Systems Research*).

Mutsvairo, B., and Columbus, S. 2012. "Emerging Patterns and Trends in Citizen Journalism in Africa: The Case of Zimbabwe," *Central European Journal of Communication* (5:1 (8)), pp. 121-135.

Nagy, P., and Neff, G. 2015. "Imagined Affordance: Reconstructing a Keyword for Communication Theory," *Social Media+ Society* (1:2), p. 2056305115603385.

Oh, O., Agrawal, M., and Rao, H. R. 2013. "Community Intelligence and Social Media Services: A Rumor Theoretic Analysis of Tweets During Social Crises," *Mis Quarterly*), pp. 407-426.

Oh, O., Eom, C., and Rao, H. R. 2015. "Research Note—Role of Social Media in Social Change: An Analysis of Collective Sense Making During the 2011 Egypt Revolution," *Information Systems Research* (26:1), pp. 210-223.

Orlikowski, W. J. 2000. "Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations.," *Organization Science* (11:4), pp. 404-428.

Orlikowski, W. J., and Baroudi, J. J. 1991. "Studying Information Technology in Organizations: Research Approaches and Assumptions," *Information systems research* (2:1), pp. 1-28.

Perkins, D. D., and Zimmerman, M. A. 1995. "Empowerment Theory, Research, and Application," *American journal of community psychology* (23:5), pp. 569-579.

Pigg, K. E. 2002. "Three Faces of Empowerment: Expanding the Theory of Empowerment in Community Development," *Community Development* (33:1), pp. 107-123.

Rauchfleisch, A., and Schäfer, M. S. 2015. "Multiple Public Spheres of Weibo: A Typology of Forms and Potentials of Online Public Spheres in China," *Information, Communication & Society* (18:2), pp. 139-155.

Saldaña, J. 2015. *The Coding Manual for Qualitative Researchers*, (Second ed.). Los Angeles: SAGE Publications.

Sanchez, Y. 2015. "¿Qué Es 14ymedio?," in: *La Otra Mirada*. http://laotramirada.com/que-es-14ymedio-2/.

Scribner, C. 2020. "The Internet as Battleground in Thailand's Covid-19 Tinderbox Moment," in: *The Diplomat*.

Seidel, S., Recker, J. C., and Vom Brocke, J. 2013. "Sensemaking and Sustainable Practicing: Functional Affordances of Information Systems in Green Transformations," *Management Information Systems Quarterly* (37:4), pp. 1275-1299.

Shore, J., Baek, J., and Dellarocas, C. 2018. "Network Structure and Patterns of Information Diversity on Twitter," *MIS Quarterly* (42:3), pp. 849-872.

Siggelkow, N. 2007. "Persuasion with Case Studies," *Academy of management journal* (50:1), pp. 20-24.

Strong, D. M., Johnson, S. A., Tulu, B., Trudel, J., Volkoff, O., Pelletier, L. R., Bar-On, I., and Garber, L. 2014. "A Theory of Organization-Ehr Affordance Actualization," *Journal of the Association for Information Systems* (15:2), p. 53.

Suddaby, R. 2006. "From the Editors: What Grounded Theory Is Not," *Academy of management journal* (49:4), pp. 633-642.

Sullivan, J. 2014. "China's Weibo: Is Faster Different?," *New media & society* (16:1), pp. 24-37.

The Cuban Observatory of Conflicts. 2020. "42 Manifestaciones Públicas En El Mes De Septiembre." Retrieved October 12, 2020, from https://www.observatoriocubano.com/2020/10/01/42-manifestaciones-publicas-en-el-mes-de-septiembre/

Tim, Y., Pan, S. L., Bahri, S., and Fauzi, A. 2018. "Digitally Enabled Affordances for Community-Driven Environmental Movement in Rural Malaysia," *Information Systems Journal* (28:1), pp. 48-75.

Tribuna de la Habana. 2020. "Falsos Médicos En Cuba, La Gran Mentira," in: *Tribuna de la Habana*. Havana.

Vaast, E., Safadi, H., Lapointe, L., and Negoita, B. 2017. "Social Media Affordances for Connective Action: An Examination of Microblogging Use During the Gulf of Mexico Oil Spill," *MIS quarterly* (41:4).

Vaillant, G. G. 2012. "Authoritarian Regimes," *The Wiley-Blackwell Encyclopedia of Globalization*).

Volkoff, O., and Strong, D. M. 2013. "Critical Realism and Affordances: Theorizing It-Associated Organizational Change Processes," *MIS Quarterly* (37:3), pp. 819-834.

Walsham, G. 1995. "Interpretive Case Studies in Is Research: Nature and Method," *European Journal of information systems* (4:2), pp. 74-81.

Weick, K. E., Sutcliffe, K. M., and Obstfeld, D. 2005. "Organizing and the Process of Sensemaking," *Organization science* (16:4), pp. 409-421.

Whitefield, M. 2016. "Study: Cubans Don't Make Much, but It's More Than State Salaries Indicate," in: *Miami Herald*.

Wikipedia. 2019. "Internet in Cuba." December 2019, from https://en.wikipedia.org/wiki/Internet_in_Cuba

Zammuto, R. F., Griffith, T. L., Majchrzak, A., Dougherty, D. J., and Faraj, S. 2007. "Information Technology and the Changing Fabric of Organization," *Organization science* (18:5), pp. 749-762.

Zheng, Y., and Yu, A. 2016. "Affordances of Social Media in Collective Action: The Case of Free Lunch for Children in China," *Information Systems Journal* (26:3), pp. 289-313.

Zimmerman, M. A. 1990. "Taking Aim on Empowerment Research: On the Distinction between Individual and Psychological Conceptions," *American Journal of community psychology* (18:1), pp. 169-177.

Zimmerman, M. A., Israel, B. A., Schulz, A., and Checkoway, B. 1992. "Further Explorations in Empowerment Theory: An Empirical Analysis of Psychological Empowerment," *American journal of community psychology* (20:6), pp. 707-727.

APPENDICES

Appendix 1- Interview protocol for independent journalists' interviews

Q1: Decision to work for 14ymedio:

Professional history

What is your profession?

Why did you decide to work for 14ymedio?

Why to work as an independent journalist if there are safer jobs to do?

Q2: On creating news items:

Access to 14ymedio: When you want to read 14ymedio articles written by other reporters, how do you access 14ymedio content?

Troubles accessing 14ymedio

How do you decide what to report on for 14ymedio?

If you want to report on something that requires gathering data, how do you get these data?

Do you search information on Internet for this purpose?

Do you visit places to get physical information?

Do you get citizen's opinion on the matter?

Do citizens help you getting this sort of information sometimes?

Q3: Challenges:

Besides the difficulties of accessing Internet and the lack of technological devices. What other factors make your work as a reporter more difficult?

Social factors? Economic factors? Personal factors?

Q4: Readers and potential readers:

How would you like your fellow "street citizens" to help you more in your work as a reporter?

How to increase people's interest in consuming 14ymedio?

Do you directly disseminate 14ymedio content to reader? How do you use technology to do so?

Q5: Cuban diaspora:

Do you think people in the diaspora support your work as an individual reporter? How?

Do you think people in the diaspora are a link between 14ymedio content and citizens inside Cuba?

Describe.

Q6: Individual activists and civil rights champions:

Do they help 14ymedio in any way?

Connecting 14ymedio with readers?

Motivating readers to access 14ymedio?

Q7: Censorship manifestations:

How do the Cuban government attempt to prevent you from working?

Technical censorship (blocking of communications, interception of digital communications)

Threats, harassment.

Q8: Final question: Do you think what 14ymedio does is important for Cuba? Why?

Perceived impact of 14ymedio on Cubans on the street.

Appendix 2- Initial interview protocol for Twitter users

Q 1: When did you start using Twitter?

Probes:

- How did you learn about Twitter?

- How often did you used it before December 6th of 2018?

Q 2: What are your reasons for using Twitter?

Probes:

- What benefits do you perceived from Twitter?

- What drives you to spend time and money using Twitter?

Q 3: Describe how you use Twitter on a normal day.

Probes:

- What routine do you follow when you open Twitter with no especial interest in mind?

- What routine do you follow when you open Twitter to know about a specific issue or event?

- Do you use any Twitter feature regularly to find, save, or share information?

Q 4: Do you ever have a strong need of using another app in your cellphone together with Twitter in order to use Twitter successfully (i.e., as you desire it)?

Probes:

- Do you ever use another app together with Twitter to facilitate accessing and sharing content on Twitter?

- Do you search on other websites while you use Twitter?

- Do you use a VPN app together with Twitter?

Q 5: Do you ever consume information you find on Twitter offline (when you disconnect?)

Probes:

- Do you ever download content from Twitter to read or watch offline at a later time?

- Have you ever been unable to consume information you find on Twitter and have decided to consume it offline?

Q 6: Describe recent problems using Twitter.

Probes:

- Situations and factors that prevented you from connecting to Twitter.

- Situations and factors that prevented you from accessing information on Twitter (i.e., once you were logged on Twitter, situations and factor that made it harder to access and read information.)

- Situations and factors that preventing from sharing content or your opinions on Twitter.

Q 7: Have you ever changed any of the Twitter's setting options?

Probes:

Options for managing notifications, privacy, or recommended content.

Q 8: Compare your possibilities for accessing and creating socio-political content before and after Twitter.

Probes:

Before having Twitter, what did you do to access and read diverse political information?

"Diverse" means opinions from people with different political points of view, or news from Cuban independent media and international sources.

Before Twitter, what did you do to express political opinions and debate with other people publicly?

Q 9: Do you think the information you consume on Twitter and the conversations you have on Twitter with other users have changed you in any way?

Probes:

- Have you experienced any change in:

Your beliefs, your point of view of the world, your skills, your knowledge.

Q 10: Do you have any complaints about Twitter? That is to say, something you want Twitter developers to change about Twitter.

Probes:

- Complaints of Twitter as a technology?

- Complaints of Twitter as a platform to share information and opinions?

Appendix 3- Sample of new/modified interview questions for Twitter users

- New question: Could you describe specific actions that you could do in the virtual world of Twitter that would be very hard (or impossible) to do in the offline world?

- New question: Could you describe some of the workarounds and hacks you use to circumvent the hurdles you face to use Twitter as you desire it?

- New question: Do you think these workarounds and hacks you use affect the quality or the success of the outcomes and goals you want to achieve with Twitter? Describe

- Modified question: Do you think that being forced to use Twitter with all the limitations you have mentioned have a negative impact in the quality and quantity of the content you access on Twitter? – How about on the quality of the discussion you have and the effectiveness of the messages you are trying to convey?

- New question: Do you think Twitter has provided you more value as a citizen? Describe

- Modified question: In addition to the high price to buy Internet access, could you describe some other factors that make it harder for you to use Twitter as you desire it?

- Modified question: Mention some factors that make it harder for you to use Twitter and specific actions you take to overcome these factors.

- New question: What does it mean "participate effectively on Twitter" to you?

- New question: Do you think your participation on Twitter has any effect on the socio-economic and political conditions in the country?

- New question: When you participate on Twitter, is your only goal that the change you are requesting occur? If you believe that the socio-political changes that you are requesting may not happen, why do you still use Twitter?

Appendix 4- Full list of first cycle codes

Code	Subcode
Concrete use outcome / consumption	Read about other citizens' life experiences
	Read other citizens' unfiltered opinions
	Find data that the government does not offer
	Read news published by non-official outlets
	Validate the articles published by official media
	Find timely information
	Read breaking news
Concrete use outcome / interaction with important agent	Publicly shame a government entity
	Reaching out to a government entity
	Publicly tell an opinion to a government entity
	Publicly criticize a government entity
Concrete use outcome / interaction with important agent	Support from independent media / Visibility for shared content
	Support from independent media / Amplify valuable content from others
	Support from Twitter / Report government's efforts to control discourse
	Support from independent media / Feeling protected
Concrete use outcome / interaction with important agent	A debate with diaspora members
	Request data to diaspora members
	Learn democracy from diaspora members
	Learn about life in foreign countries
Concrete use outcome / production	Counteract information shared by the government
	Enable others to read my opinion
	Express support for other's opinions
	Amplify others' denouncements
	Share a written opinion backed up by audiovisual information
	Share a written opinion backed up by numbers
	Expose a contradiction in government's actions
	Alert other citizens in a timely manner
Belief	Convenient access to information
	Safe government criticism
Benefit	Discuss politics in public
	Belief/ Protest publicly
	Access public service information
	Access information to assess government's performance
	Belief/ Influence on other citizens
	Belief / Influence on government
	Legitimacy
	Solidarity
	Learning about democracy
Interrupted use	-
Frugal use	-
Another app bypass strategy	-
Feeling good as a citizen	-

Twitter app bypass strategy	-
Targeted information search	-
Negative effect of strategy	Slow Internet connection down
	Wasted Internet data
	Wasted time
	Annoyance
	Perceived missed opportunity
	Participation discouragement
	Risk of contributing with inaccurate opinions
	Low quality participation
	Missing the real time nature of Twitter
	Inability to read all content on one's timeline
	Inability to produce Twitter content
	Reduced potential to debate with others
Use condition	Unstable Internet connection
	Expensive Internet data plans
	Smartphone prohibited prices
	Repressive legal system
	Users' financial situation
	User's smartphone conditions
	User's geographical location
	User's IT skills
	Circumstantial conditions
Reflection in action	-
Improvisation	-
Learned strategy	-

Appendix 5- Second cycle codes codebook

Code	Description	Data example
Affective motives	Emotional and affective drives that attract participant to use Twitter to participate in discourse.	Participant 1, October 2019: "… and many years of disappointment…, in the end, you start accumulating anger… it is too many lies…" "Twitter became a way of venting that anger and telling everyone what you think…, [to show] why they [the government] are not telling the truth." Participant 7, December 2019: "… and it truly feels good to tell the truth out loud and feel free from doing so… It feels like removing the hand that is preventing you from speaking and that removes a pressure that you feel inside"
Beliefs about actualization outcome	Participant's perception of the consequences and effects derived from her/his participation.	Participant 6, November 2019: [the participant describes a service issue he experienced with a ETECSA] "I visited several [ETECSA] commercial stores to complain, and they all said they did not know how to fix the issue…Then, I decided to use Twitter to complain directly with people higher in the company hierarchy…As you can see, it was via Twitter that I got an answer to my complaint. Coming to the office was not going to help. That's one of Twitter's benefits" Participant 8, December 2019: "Before [Twitter] a complaint of the poor service provided by a government entity did not get anywhere … Nowadays, that's all different. A social media criticism is investigated, and they talk about on national television …, even better, sometimes they [the government] take actions"
Beliefs about actualization process	Participant's perception of what is like to use Twitter	Participant 3, November 2019: "What happened was that, once I discovered Twitter, I stopped checking out Cuban independent news websites such as CiberCuba, Diario de Cuba, and all other tons of websites out there. Twitter spoon-feeds me all the news items. I do not have to think about where to better find news that I am interested about… and it [Twitter] gives me quick access to what I want… I can read the news headlines on Twitter, and if I am interested, I click the link to read the whole news…"

Country-level obstacle	A pattern that indicates the existence of obstacles that affects Cubans as a group in general. It is usually a government policy that explicitly restricts and shapes what, and how much, Cubans can do on Twitter	Participant 7, December 2019: "[N]ot to count the bad conditions of the Internet connectivity in this country…Sometimes you disconnect from the Internet and when you try to connect back minutes later, you cannot connect … On several occasions, I have been waiting for an hour or more to establish an Internet connection". Participant 10, December 2019: "Censorship is another issue. I have a VPN browser that I have to constantly use. There are many independent media newspapers that you can see on Twitter, but you cannot access their content…"
Person-level obstacle	A pattern that indicates the existence of obstacles that affect particular users and may not be applicable across multiple users	Participant 5, November 2019: "[A]nd I buy the 600 megabytes plan. That's nothing if you do not use it carefully. I wish I can buy more megabytes, but my salary doesn't allow it, you know, I work for the government… I have to stretch out these [Internet] megabytes as much as I can each month" Participant 11, December 2019: "[participant was discussing difficulties to use Twitter] That also depends on the kind of cellphone one has. I have an old cellphone, from 2015, and the Android OS is the 5.0 version."…." and that is why it is not easy for me to upload a picture to a tweet…"
Obstacle-driven use strategy	A pattern that indicates that participants take a sequence of actions with Twitter to achieve desired participation goals. These actions identify a particular way of using Twitter in an attempt to overcome common use hurdles	Participant 11, December 2019: "[N]ormally what I do is, for example, I connect [to the Internet], open Twitter, wait until all the content is loaded on my cellphone ... and then I disconnect [from the Internet]. Then I start scrolling down to read all the tweets and write opinions. I reply to the tweets that I find interesting, I retweet, and afterward, I connect to the Internet to upload all that content at once. I am not consuming Internet data when I am reading [the tweets], thinking about what to write on a comment, writing a reply to someone. Do you get it? … [When] I have the Internet data off, I check all the information that I find useful … and then I connect later … to send the retweets and everything all together."
Cost of obstacle-driven strategy	A pattern that indicates that users perceive drawbacks when they apply obstacle-driven use strategies	Participant 6, November 2019: "In addition, you are always worried that the [Twitter] developers cancel your account with the argument that you are using it in an

		undesirable way. [By applying this strategy] [y]ou are using Twitter via a third party app and they do not always like that" Participant 1, October 2019: "[B]ut all the videos that you save to watch later on Wi-Fi means accumulated content you haven't consumed. Sometimes I cannot keep up and get behind."
Connected technologies	Obstacle-driven use strategy frequently rely on using Twitter together with other apps to facilitate the achievement of a desired outcome	Participant 8, December 2019: "[O]n each [Internet] data package that you buy, ETECSA offers you data that is only to use in .cu domains. These are 300 megabytes that can only be used for domestic websites … [they] are different from the other data in the package. Then, we use some software to convert those 300 megabytes and use them as Internet data too…. These are little tricks that we use here [participant laughs]." Participant 14, April 2020: "…Twitter is an app that consumes a lot of Internet data, then, for example, to use Twitter in Cuba I use an app that works like a key or a firewall that allows me to keep the Twitter app opened and close all other apps that consume Internet data."
Useful Twitter property	Participant refers to a specific Twitter feature and how s/he uses it to participate in discourse.	Participant 13, March 2020: "[T]hankfully, you can write tweets offline, and once you close Twitter, it gives you the option to save them as drafts. Then, once you connect to the Internet, you select the option to add tweet, and it gives you the option to add the content saved as a draft, and you can send your tweet." Participant 1, October 2019: "In addition, for example, I was using a # some time ago, where I graphically showed the poor architectural conditions in my neighborhood, in my city, …" Note: This fragment refers to a # with a specific phrase that this participant was using to show the poor structural conditions of the buildings in his neighborhood.
Unfavorable Twitter property	Participant gives his/her opinion about a Twitter feature or rule perceived to limit the extent to which s/he can successfully participate in discourse.	Participant 19, April 2020: "I do have a complaint… It is about the blocking option. Twitter is supposedly a platform to talk freely... Cuban government accounts, the account from Cuban ministers, you know… They block because they do not want you to tell the truth publicly… This shouldn't be allowed."

		Participant 10, December 2019: "If I have to reproach something to Twitter is their permissibility with the creation of anonymous accounts devoted to troll other users. Twitter officials allow too many of those accounts to be created. In Cuba, there are a lot of anonymous accounts…These accounts are financed by the government with the explicit purpose of counteracting citizens who denounce on the Internet all the bad things about this country."
Citizen goal	A pattern indicating that a participant's Twitter mediated actions benefits him/her as a citizen	Participant 17, April 2020 (reference to the citizen goal "Publicly discuss politics"): "[W]hen you see a tweet bringing up a specific topic, and then you see a lot of new people replying to the tweet, what you are seeing is something that cannot be done on the street, which is publicly talking politics". Tweet on 05-23-20 (reference to the citizen goal "Influence other citizens"): "With social media, this country is not the same. Many of us now use Twitter to express ourselves freely and expose the bunch of problems we go through. As long as I can share my opinions and debate, I will keep using Twitter to reach out to others and help them change their mindset about Cuba"
Recovered freedoms	A patter indicating that the actions they do on Twitter and the results they obtained as a way to recover, in the virtual space, some basic citizen freedoms they do not have in the offline world.	Tweet on 12-16-19: "I created this account to denounce the atrocities that we live here, to engage in free discussion, something that we can't do on a public square…" Participant 12, March 2020: "[I] joined the campaign to claim for the reduction of the Internet prices in Cuba… [That campaign has] the potential to change the public opinion … [which is] possible thanks to Saturday Tuitazos… [S]ome of us still participate in this campaign…"
Freedom to access free press	A pattern indicating that the information and opinions that Cubans find on Twitter offer them a proxy to the information published by a free press	Participant 12, March 2020: "…. [I]f it wasn't for Twitter, you never learn about where an accident occurred, whether someone was killed in your neighborhood…" "If you do not check Twitter, you never know if something important will happen in your city or where to find a food item that you need…" "… and as I told you, Twitter is a source of political information, entertainment information, and other things you need to know..." Participant 21, May 2020: "I also find [on Twitter] COVID-19 related information that

		concerns my province and municipality. It is good source of information … It takes the role of a TV network that actually helps people … [N]ational TV here informs you of nothing."

Note: Each of the nine Twitter affordances for participation in public discourse and the six obstacle-circumvention use strategies discussed in sections 4.1.1 and 4.3, respectively, are also second cycle codes. However, I chose not to include them in the above table since each affordance and obstacle-circumvention strategy was discussed and illustrated with data examples in sections of the

Appendix 6- Example data quotes as illustrations of research findings

Sample data quote	Finding	Page where finding is discussed
"…and also, there [on Twitter] you can read what others are saying about issues they are having in their neighborhoods, [for example,] where to find food, the lack of medicine they have, the issues with the education in this country … and this helps you realize whether what they [official media] say in national television is correct…" (Participant 9, December 2019).	Affordance 1: accessing citizen-generated socio-political content	61
Tweet from VO exercise: "I heard two rumors [on the street] today: (1) Airports will resume receiving international flights in August (2) Public schools will be closed until September. What have you guys heard about this?" (tweet on 05-02-20).	Affordance 1: accessing citizen-generated socio-political content	61
"Sometimes news come out sooner, I mean, at least that is what I perceive, on Twitter than in other media… I feel like I see things coming out on Twitter before than Facebook .... [E]ven official information, … sometimes I find it in real time on Twitter, and then later, on national television … if they even bother to talk about it on TV." (Participant 11, December 2019)	Affordance 2: accessing real-time socio-political content	64
"Twitter is a way to reach governing officials such as the president and his ministers…" "I feel I have more power because I can tell something directly to government officials, and, even if they do not answer us, we know they read what we write." (Participant 16, April 2020)	Affordance 4: communicating with government entities	66
"You do not feel alone [having a Twitter account]. You know the Cuban independent media is there and that they can visualize your story and your situation if needed…" (Participant 14, April 2020).	Affordance 5: communicating with non-government public discourse gatekeepers	67
This tweet contains a user's request for Twitter to remove the anonymous accounts held by government's paid-Twitter writers:	Affordance 5: communicating with non-government public discourse gatekeepers	68

"What is @Twitter waiting to remove all the Cuban regime trolls? What they do is against your rules. I hope you guys [Twitter] take action because it is disgusting to check out any hashtag and realize it is them [the government] using false accounts to push out a false narrative about Cuba. #Cuba @TwitterSupport." (tweet on 03-21-20).		
"The bad thing is that people have radical views on Twitter. The obvious example is Cubans in the US. They want you to think as they do… Don't get me wrong, people [Cubans] in the US are great, and I have created good relationships with some of them, and we debate, and I learn a lot from what we discuss because they have access to information that a Cuban cannot get easily, but they get upset very easily if you say something and they interpret it as if you were supporting this system [the Cuban government]…" (Participant 1, October 2019).	Affordance 6: communicating with the Cuban diaspora	70
"I did not have the possibility to counteract the information from government followers before [before using Twitter]. Now, when a cybercatfish [i.e., a government paid Twitter writer in Cuban vernacular] spreads false information about Cuba, I can create a thread telling everyone, with specific details and data, why this person is wrong … at least now I can show people that I am not lying, but the cybercatfish is." (Participant 14, April 2020).	Affordance 7: Sharing socio-political content	72
In the following tweet, the user uploads a picture to support her perspective of a current social issue: "[the user tags the account of the Cuban Ministry of Health] Minister! Tell the truth please! We know your hiding data [about the number of COVID patients]. People in Cuban neighborhoods are making endless lines to buy food and hygiene items. I just took this picture in San Hipolito Plaza, Versalles, Matanzas [the picture shows a very large number of people close to each other, lining up to buy food]" How many [COVID]	Affordance 8: Sharing content to counteract the government's data and narratives	73

transmissions are going to occur here? #Cuba #COVID19 (tweet on 04-13-20).		
"[A]lso, when you use Twitter, everything is more direct since you can see the government official accounts and the information is more reliable. I have compared what is being posted on Twitter to what is posted on Facebook, and no way, Twitter is more reliable." "… [E]verything is direct there [on Twitter] and I do not even have to use the VPN to access censored websites since everyone is on Twitter ["everyone" refers to the people and organizations from which this participant consumes content] …" (Participant 20, May 2020).	Belief about the process of affordance actualization: convenient channel to access unregulated socio-political content (compared to Facebook)	76
"[A] positive effect that Twitter has had on me is that I now feel less afraid of criticizing the government. It has allowed me to express myself more at ease. When you realize that there are many people criticizing a minister or a government official, then you tell yourself, 'Relax, they cannot find everyone and punish them'." (Participant 8, December 2019).	Belief about the process of affordance actualization: Twitter is a safe channel to criticize the government	78
The following is a user's reply to another user who tweeted the question on Twitter 'Why do you prefer Twitter?': "Because here I can interact and exchange criteria with other Cubans. And I can see different perspectives. You do not see the same variety of opinions in other social media. And talking politics on the street is dangerous" (tweet on 02-16-20).	Citizen goal / Perceived freedom: freedom to discuss politics	79
"[I] joined the campaign to claim for the reduction of the Internet prices in Cuba… [That campaign has] the potential to change the public opinion … [which is] possible thanks to Saturday Tuitazos… [S]ome of us still participate in this campaign…" (Participant 12, March 2020).	Citizen goal / Perceived freedom: the freedom to protest publicly	81
"I also find [on Twitter] COVID-19 related information that concerns my province and municipality. It is good source of information … It takes the role of a TV network that actually helps people … [N]ational TV here informs	Citizen goal / Perceived freedom: the freedom to access a free press	84

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you of nothing." (Participant 21, May 2020).		
"… [W]hen you start using Twitter, …, you change your way of thinking and how you see things [things that happen in society]" " …[W]hen you read independent media, …, when you consume all that information, you realize the real situation going on in your country…" "Twitter creates awareness of the need for a political change in Cuba… [A]nd you realize that what we need is a multiparty election system." "… and you understand that the idea is not to ban the communist party because if you do, you would not be creating a democracy but switching from one dictatorship to another." (Participant 17, April 2020).	Citizen goal / Perceived freedom: the freedom to access a free press (valuable information to assess the government)	84
The next interview fragment illustrates the case of a participant who claimed that the denouncement she made on Twitter helped her neighbor got the medical attention he needed: "Twitter helped me saved my neighbor's life when he was very sick. We had used all possible channels to get him the help he needed, but only when I made the denouncement on Twitter that he received the right medical attention" (Participant 18, April 2020).	Citizen goal / Influence on the socio-political life / Influence on the government's discourse and actions/ A government entity replying to a citizen on Twitter	89
"Yes, in fact, we do not often see a change after we made claims on Twitter, but at least I have realized that they [the government]…listen to what is going on because… they say on TV 'people, or a group of Cubans, state on Twitter that…'. Therefore, I have noticed that they do not admit that they pay attention to what we demand, or that we push them to change their mind, but at least they acknowledge that they read our demands… I think they do not want to admit it, but we actually have some power" (Participant 15, April 2020).	Citizen goal / Influence on the socio-political life / Influence on the government's discourse and actions/ Coverage of social media demands on official media	89
"Guys, before criticizing the opposition in this country, listen to their message. When you listen to all they have to say, you will find good ideas. I trusted none of them before, but social media have helped me understand that they want the same thing we all want, freedom.	Citizen goal/ Knowledge about Democratic Norms and Processes/ Political trust	103

Our fight is against the dictatorship, not the opposition #ElCambioEsYa [i.e., The Change Must be Now]." (tweet on 04-07-20).		
"[S]ometimes there is a tweet with a video that I want to watch, then, what I do is to bookmark it [the tweet] and I check it later again. I also do that with long threads that I want to read carefully. I bookmark them, and whenever I can go to a Wi-Fi spot, I access them" "…If the thread is long, it may take me a lot of time to read it and to reply to it … I waste time doing that [reading the threads] instead of reading other tweets and writing my own tweets…" (Participant 20, May 2020).	Obstacle-circumvention use strategy / Action postponement (e.g., postponement until Wi-Fi is available)	125
"What have I learned? … Also, that it is better to avoid weekends to use Twitter and the Internet overall. Here in my city, connections are really bad over the weekend. I use it as little as I can on Saturdays and Sundays… Most of my activity on Twitter is on weekdays … especially if I want to use it [Twitter] a lot, if I want to participate in debates… [I]t is also the best time to upload things, you know, pictures and memes and those things." (Participant 17, April 2020).	Obstacle-circumvention use strategy / Action postponement (e.g., postponement until a time when connections are better)	125
"[N]ormally what I do is, for example, I connect [to the Internet], open Twitter, wait until all the content is loaded on my cellphone ... and then I disconnect [from the Internet]. Then I start scrolling down to read all the tweets and write opinions. I reply to the tweets that I find interesting, I retweet, and afterward, I connect to the Internet to upload all that content at once. I am not consuming Internet data when I am reading [the tweets], thinking about what to write on a comment, writing a reply to someone. Do you get it? … [When] I have the Internet data off, I check all the information that I find useful … and then I connect later … to send the retweets and everything all together." (Participant 11, December 2019)	Obstacle-circumvention use strategy / Online and offline switching	127
"There is a Telegram bot, it is a Telegram account, it is "at" something, I forgot the username… [T]hat bot authenticates in your [Twitter] account,	Obstacle-circumvention use strategy / Twitter Proxy use	129

and you can start reading your tweets in a chat window. You can also tweet. The [Twitter] functionalities are restricted; however, if you learn to use it well, you can do virtually everything. The idea [for using the bot] is to have it all centralized … You are using two apps, but only one is opened" (Participant 6, November 2019).		
"Usually, when I open Twitter, I go to the notifications, to the little bell, you know. I read the notifications that came in since the last time and logged in. Then I reply to some notifications or click 'Like' for some of them. After I am done reading the notifications, I go to the start page and read the tweets on my timeline and read the news… "It is a way to keep the Internet consumption low. Actually, there are days I do not go to the timeline at all. That's when I have little Internet [available]. I read the notifications and reply to them, and that's it …." (Participant 13, March 2020).	Obstacle-circumvention use strategy / Selective access to most relevant content	131
"*Well, the DM, I use it for the normal stuff. [participant describes illustrations of common personal communications he has via the DM] … Sometimes, I have used it to tell someone my personal experience with the subject he is tweeting about… I am not afraid of criticizing the government because it is my right as a citizen ... But certain things can get you in trouble … [E]veryone knows these networks are being watched… Therefore, criticizing historic political figures, talking about the crimes they have committed, …, that can get the attention of the government… Hence, for those things, when someone talks about them on Twitter, I send him/her by DM my point of view … and if I have data or any personal anecdotes, I communicate them to that person via that way too. It is my way of contributing with that person and reassure him/her that s/he is right and give him/her more arguments supporting his/her position.*" (Participant 20, May 2020).	Obstacle-circumvention use strategy / Surveillance-avoidance strategy	133

Appendix 7- Summary tables for the obstacle-circumvention use strategies

Components of the action postponement strategy

Conditions triggering the strategy	Illustrative manifestation of the strategy	Supportive Twitter feature	Other supportive IT	Negative consequences of the strategy
Current (or expected future) low Internet data availability Slow connection, which hinders video streaming and attaching audiovisual content to tweets	Put off consuming Twitter content until Wi-Fi connections are available	Bookmark feature (to save the content that one desires to access in the future)	Wi-Fi connection (in contracts to a cellular data connection)	The perception that one is consuming outdated content The perception that one cannot consume content in a timely manner The perception that one has missed opportunities to participate
	Put off uploading audiovisual content to Twitter until a future time	Feature to upload audiovisual content to a tweet	Apps to reduce the size of audiovisual content	Frustration Participation discouragement

Components of the online-offline switching strategy

Conditions triggering the strategy	Illustrative manifestation of the strategy	Supportive Twitter feature	Other supportive IT	Negative consequences of the strategy
Current (or expected future) low Internet data availability)	Cache memory use	Twitter cache memory Bookmark option (enable the user to create content offline, save it, and share it online in the future)	_	Risk of contributing with inaccurate and outdated opinions Missing the real-time

Slow connection (which hinders video streaming on Twitter)				nature of Twitter Increasing participation time
	Downloading videos for offline consumption	Twitter option to share Twitter content with other apps (since this enables downloading content to store in one's cellphone)	App to download videos with reduced quality	Risk of being unable to connect to the Internet at a later time

Components of the proxy Twitter use strategy

Conditions triggering the strategy	Illustrative manifestation of the strategy	Supportive Twitter feature	Other supportive IT	Negative consequences of the strategy
Current (or expected future) low Internet data availability	Twitter use through the Telegram app	Twitter designed capability to integrate to other apps (this capability is part of Settings/Security and account access/Apps and sessions)	Telegram bots designed to automate Twitter actions	Losing Twitter functionalities Losing friendly Twitter interface Worry of getting one's account suspended for violating Twitter rules
	Reading tweets via the Gmail app	Twitter designed function to configure email notifications (this capability is part of Settings/ Notifications/Preferences/Email notifications)	The Gmail app	Inability to read all content on one's timeline Inability to produce Twitter content

Components of the selective access to the most relevant content strategy

Conditions triggering the strategy	Illustrative manifestation of the strategy	Supportive Twitter feature	Other supportive IT	Negative consequences of the strategy
Current (or expected future) low Internet data availability Slow connection (which makes it harder to load timeline content)	Selective exposure enabled by Twitter features	Twitter notification settings (this capability is part of Settings/Notifications/Preferences/Push Notifications) Twitter lists feature	__	Limit Twitter action possibilities (i.e., affordances) to be based only on part of the content available on Twitter
	Selective exposure based on past use experiences	_	_	

Components of the surveillance-avoidance strategy

Conditions triggering the strategy	Illustrative manifestation of the strategy	Supportive Twitter feature	Other supportive IT	Negative consequences of the strategy
Legal framework in the country (which enables the government to surveil people's online activities to find dissenters and punish them)	Surveillance avoidance via DM	The DM feature	-	Less likely that other users engage in socio-political conversations via the DM when compared to public ways Risk of converting Twitter into another private forum for

			expressing opinions
Surveillance avoidance via the additional use of an anonymous account	Option to create an anonymous profile Twitter possibility to add more than one account to the same smartphone app (this capability is part of Navigation Menu/ More/ Add an existing account)	-	Increased Internet data consumption Risk of reducing the overall level of legitimacy on the Cuban Twittersphere Reduction of the number of Cuban citizens with real Twitter accounts

VITA

JOBANY RICO

2003-2008	Bachelor of Science in Industrial Engineering The Polytechnic University, Havana, Cuba
2009-2011	Master of Science in Industrial Engineering The Polytechnic University, Havana, Cuba
2014-2016	Master of Science in Statistics Florida International University, Miami, FL
2016 -2021	Doctor of Philosophy in Management Information Systems Chapman Graduate School of Business Florida International University, Miami, FL

PUBLICATIONS AND PRESENTATIONS

Rico, J., & Hernández, A. G. R. (2010). *Rediseño de procesos de gestión de la enseñanza basado en el análisis de datos.* Revista Ingeniería Industrial, 9(2). University of Bío-Bío, Chile.

Rico, J., & Rodríguez Hernández, A. G. (2012). *Productividad de los trabajadores del conocimiento: una perspectiva teórica.* Revista Venezolana de Gerencia, 17(57). University of Zulia, Venezuela.

Rico, J., Hernández, A. G. R., & Alonso, J. A. V. (2012). *Empleo de la regresión logística ordinal para la predicción del rendimiento académico.* Revista Investigación Operacional, 33(3), 252-267. University of Havana, Cuba.

Rico, J., & Xia, W. (2018). *Incorporating Culture into The Theory of IT Affordances.* Proceedings of the 24th Americas Conference on Information Systems (AMCIS 2018), New Orleans, USA.

Rico, J. (2019). *SNS-induced negative emotions and discontinuance decisions*. Proceedings of the 25th Americas Conference on Information Systems (AMCIS 2019), Cancun, Mexico.

Rico, J., & Cousins, K. (2019). *Information technologies and democracy in a closed society*. Proceedings of the 25th Americas Conference on Information Systems (AMCIS 2019), Cancun, Mexico.

Rico, J. (2021). *How Does Facebook Use Trigger Negative Emotions?* Proceedings of the 25th Pacific Asia Conference on Information Systems (PACIS 2021), Dubai, UAE.