

The Credibility Assessment Process of Political Information on WhatsApp in Brazil

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Abstract

Instant messaging applications (IMA) like WhatsApp are increasingly used for political information and news and have been directly related to the spread of misinformation (Newman, 2019). Although the platform's closed nature differentiates it from open social media, it also has hindered studies exploring political information processing on this platform (Valenzuela et al., 2019; Valeriani & Vaccari, 2018). This study investigates the credibility assessment process of political information on WhatsApp, a central skill for individuals and a main component of information processing. Based on past literature, this study explores the credibility assessment along three fronts: perceived sources, social relationships, and platform affordances.

Data were collected from 134 solicited diaries from 30 Brazilian participants around the 2022 Brazilian General Elections. Following, 14 diarists participated in in-depth interviews. Solicited diaries provided contextualized insight into users' interactions with political content, while in-depth interviews explored underlying motivations and the role of affordances.

Results reveal a predominantly heuristic credibility assessment process, with more elaborated evaluations occurring when users are highly motivated and not constrained by time or context. A pre-assessment phase was also identified, where users decide whether to engage with a piece of political information. Findings also indicate the importance of social relationships and norms for the credibility assessment of information and users' interactions. Finally, WhatsApp's visibility constraints create additional barriers to in-depth assessment.

This research concludes with three focus areas for improved credibility assessment on WhatsApp: addressing platform visibility barriers, promoting information literacy skills compatible with the existing evaluation practices, and fostering a collective misinformation correction.

Keywords: WhatsApp, credibility assessment, political information, diary studies, interpretive methods

Chapter 1 – Introduction

With over 2 billion users worldwide, WhatsApp, like other instant messaging applications (IMA), is intrinsically tied to the daily lives of its users (Kemp, 2024; Nielsen et al., 2019; WhatsApp, 2020b). While its core remains with conversations with family and friends (Kirby, 2018), it has often been utilized for functions outside the personal context. Co-workers communicate more urgent matters through the application, doctors use it to schedule appointments, and small business to build relationships with their customers. More recently, it has started to be used for monetary transactions (WhatsApp, 2023). Among these many uses are news consumption and political talk (Nielsen et al., 2019).

The increase in news and political uses is connected to concerns over spread of disinformation through WhatsApp (Campos Mello, 2018; Davies, 2020; Mukherjee, 2020). In Brazil, WhatsApp was associated with misinformation campaigns by then-presidential candidate Jair Bolsonaro (Campos Mello, 2018). In India, it was connected to lynchings of non-Hindu men, mobile witnessing, and the creation of a network of vigilante groups (Mukherjee, 2020). In Indonesia, President Jokowi centred a highly coordinated astroturfing operation around WhatsApp, aiming to better position himself during the 2019 campaign and affect public discourse (Baulch et al., 2022). Problematic practices within the application have also crossed the equator. The application was used to spread myths and conspiracy theories about the COVID-19 pandemic (Davies, 2020), being chosen by the World Health Organization to host an alert and information service (WhatsApp, 2020a; World Health Organization, 2020). Additionally, the 2020 USA Presidential Elections were marked by the spreading of disinformation on WhatsApp in minority communities, such as Latinos and Indian-Americans (Dave, 2020; Ghaffary, 2020). In Canada, while WhatsApp is still primarily used by minority

communities and Facebook Messenger is the most used application (72% of respondents), 46% of instant messaging users believe they have encountered false information on one of these platforms at least a few times a month (Masoodi & Andrey, 2022).

When political information is shared in these private encrypted spaces, users are left alone to decide what information is credible. In this scenario, evaluating the credibility of information has become a key skill for individuals. Credibility is one main component of information processing and a precedent for decision-making (Alrubaian et al., 2019; Petty & Cacioppo, 1984). How users evaluate the credibility of political information on platforms such as WhatsApp is essential to understanding what they believe, what messages they share, and how they make decisions. Ultimately, understanding how people evaluate the credibility of political information on WhatsApp is helpful to understand the spread and the effect of political misinformation on the app.

While existing research has examined whether users find information received on WhatsApp believable (Baptista et al., 2019; Pont-Sorribes et al., 2020), research on the process and criteria individuals use to assess the credibility of political information in the app is still restricted (Hall et al., 2023; Malhotra, 2023a; Masip et al., 2021). This research aims to fill this gap by exploring the credibility assessment process of political information on WhatsApp.

This chapter looks at the current research on WhatsApp and misinformation, explaining the different uses of the application, particularly the increase in its use for news and political discussion. The following section goes over the main theoretical framework of this study, briefly presenting the concepts of credibility, credibility assessment, and information before introducing the research questions. Lastly, Section 1.3 goes over the layout of the rest of the thesis.

1.1 WhatsApp and Misinformation

WhatsApp is the largest instant messaging application in the world, with more than two billion users (Kemp, 2024; WhatsApp, 2020b). Due to its affordability and accessibility, WhatsApp is used extensively in the Global South, including countries such as Argentina, Indonesia, Brazil, South Africa, India, and Mexico (Kemp, 2024).

For more than half a decade, research has shown that the application is used for political news consumption and political talk (Levy et al., 2018; Swart et al., 2019; Valenzuela et al., 2019; Valeriani & Vaccari, 2018). This tendency is particularly intense in Latin America, Africa, and Southeast Asia (Newman et al., 2023; Pont-Sorribes et al., 2020).

Existing research suggests that users are turning to IMAs for news consumption and political discussion because they feel overwhelmed by the amount of information they receive on open social media, such as Facebook and X (Masip et al., 2021). On the other hand, in closed platforms, such as IMAs, users count on filtering made by people who know or think like them (Valenzuela et al., 2019; Valeriani & Vaccari, 2018). Additionally, people look at these closed platforms to avoid social surveillance and conflict, which they see on social media, especially on the subject of politics (Gil de Zúñiga et al., 2019). For this reason, while they still find news via Facebook (or X), they move to messaging apps to post and engage in discussion (Levy et al., 2018) and activism or to mobilize talk with the people they choose to (Gil de Zúñiga et al., 2019). This allows discussion on topics they would not address in open social media (Levy et al., 2018; Trauthig & Woolley, 2023), including extremist opinions (Valeriani & Vaccari, 2018).

Existing research points to several factors that affect the spread of mis- and disinformation in the app, the first being group participation with unknown individuals or acquaintances. While WhatsApp remains predominantly utilized for one-to-one exchanges or within small groups (Gragnani, 2018), with people mainly participating in groups with known

others (Nielsen et al., 2019), participation in conversations with strangers is a growing behaviour, with almost half of global WhatsApp users belonging to chats comprising weak ties (Nielsen et al., 2019). This figure is even more striking when looked at on a country-by-country basis, with some figures reaching 55% or more in Brazil (58%), Malaysia (60%), and Turkey (65%) (Nielsen et al., 2019). In Brazil, Resende et al. (2018) find groups specifically created to discuss news, political ideologies, and in support of particular political parties or politicians.

Additionally, unlike other social media, where weaker ties often lead to exposure to diverse opinions, messaging applications tend to create groups of users holding similar opinions. This results in homogeneous discussions where information easily spreads without being corrected (Resende et al., 2019; Rossini & Kalogeropoulos, 2023). However, some studies suggest that people encounter cross-cutting information in larger groups (Masip et al., 2021). Furthermore, trust in these close relationships can affect users' perceptions of information received through these applications (Baptista et al., 2019).

Due to this behaviour, despite WhatsApp consisting mainly of encrypted individual conversations and private groups, it presents a network structure where users belonging to two or more groups act as bridges between them and through which content spreads (Melo et al., 2020; Resende et al., 2019). This network facilitates rapid (dis)information spreading, with content from large public groups finding its way into private conversations (Melo et al., 2020).

Finally, WhatsApp's structure, unlike Facebook and X, constrains information monitoring by the platforms themselves, and any fact-checking efforts rely on active user participation. Existing research on social correction in the application has contradictory findings, with some supporting that the practice happens among close ties (Kligler-Vilenchik, 2022; Pasquetto et al.,

2022; Rossini et al., 2020), while others find that social norms hinder this practice (Chadwick, Vaccari, et al., 2023; Kanthawala & Maddox, 2022; Malhotra, 2023b).

In summary, WhatsApp simultaneously affords close, intimate conversations with trusted individuals, which is characteristic of interpersonal communication, and the mass dissemination of content, characteristic of mass communication. Melo et al. (2020) conclude that “WhatsApp opens a paradoxical use of its platform, allowing at the same time the viral spread of content and encrypted personal chat. Together, those two features can be widely abused by misinformation campaigns.” (p. 11)

These characteristics make it uniquely challenging for WhatsApp users to evaluate the credibility of information they receive on the platform, possibly one of the reasons for the easy spread of misinformation. WhatsApp’s closed structure often means that important cues for credibility assessment are missing (Hall et al., 2023). On the other hand, the close nature of relationships on the app can have implications for the credibility assessment process that often relies on the source of the information (Masip et al., 2021). This research argues that WhatsApp is distinct from other social media and that these differences are critical in the credibility assessment process of political information.

However, research on the credibility assessment of information on WhatsApp is limited. Malhotra (2023a) addresses the heuristics used in the credibility assessment of information on bounded social media places and how the affordances of said platforms inform these evaluation strategies. Masip et al. (2021) look at news engagement on WhatsApp through the lenses of affordances and social endorsement, including their effect on news credibility. Hall et al. (2023) investigate how users make sense of WhatsApp’s “forward” and “forward many times” tags and

their impact on the credibility evaluation of information. Yet, there is still the need to describe the whole credibility assessment process within WhatsApp and focus on political information.

1.1.1 WhatsApp and Political Misinformation in Brazil

Brazil stands out as a critical case of WhatsApp's political use showcasing the potential for disinformation to flow across the app. Research over the last decade, has shown that WhatsApp became a central space for political communication and propaganda particularly during election periods, most notable with the 2018 presidential elections. Specifically, former president Jair Bolsonaro's campaign relied on the application to bypass campaign spending laws and spread disinformation.

Nemer and Marks (2025) identify what they call the "human infrastructure of misinformation" within pro-Bolsonaro WhatsApp groups. They describe a division of labour among group participants, with paid "influencers," who create and post disinformation; militant users (the Bolso-army), who manage the groups and amplify the content, by both reinforcing it within the conversations and spreading to other chats; and average Brazilians, who consume this content and distribute it to their own networks. This infrastructure is not only technical, but also supported by the humans who perform labour to create and distribute the content.

Other studies in misinformation, such as Ozawa et al.'s (2023), support this ecosystem view. They emphasize that disinformation campaigns in Brazil rely on uncoordinated and often opportunistic participation from everyday users and right-wing influencers. Ozawa et al.'s (2023), also note that political disinformation rarely emerges out of nowhere, and are instead built on fragments of truth or existing narratives circulating in society, which gives them credibility.

WhatsApp's status in Brazil, an intimate and ubiquitous platform, plays a key role in the ways it has been integrated for political communication. Parreiras (2024) argues that WhatsApp has become a fundamental infrastructure, of everyday life. Further, it has been fully domesticated in Brazil, becoming a mundane technology, that is, incorporated into people's lives and becoming something few notice. This contributes to a communication environment in which political content is integrated into social interactions.

Together, these studies highlight how WhatsApp's technological affordances, communication dynamics and socio-political context have sustained the rise of misinformation in Brazil.

1.2 Theoretical Framework

This study uses communication scholarship on credibility assessment, which emerged from studies on persuasion in the 1940s (Hovland & Weiss, 1951). The most agreed-upon definition comes from Tseng and Fogg (1999), in which credibility is the believability of an object, most often a source, a medium or a message. Most researchers agree that credibility is composed of two or more aspects (Flanagin & Metzger, 2007; Self & Roberts, 2019; Tseng & Fogg, 1999; Wathen & Burkell, 2002). However, there is no agreement on these dimensions, with several studies trying to dissect the concept throughout the decades of study.

Additionally, for communication research, credibility is understood as a perceptive quality (Appelman & Sundar, 2016; Choi & Stvilia, 2015; Hovland & Weiss, 1951; Metzger, 2007; Self & Roberts, 2019; Tseng & Fogg, 1999). That is, it is not intrinsic to the object evaluated but exists in an individual's assessment of that information, source or medium. Credibility assessments are made in relation to the perceiver's existing knowledge and beliefs (Rieh & Danielson, 2007). In this sense, credibility distances itself from the idea of truth. By

focusing on credibility, this research looks at the individual's evaluation of the information and avoids the intricate issue of truth and falsehood.

The process by which users evaluate the characteristics of an object to judge its credibility is credibility assessment. Liu (2004) defines credibility assessment as “a cognitive process by which information is filtered and selected.” (p. 1031) Credibility assessment is a form of information processing focused on evaluating the quality of a source, medium, or information (Choi & Stvilia, 2015). Credibility assessment can also be part of other information behaviours (Rieh & Danielson, 2007). For example, in information seeking, an individual might evaluate the credibility of a source to decide if it is worthwhile to search for information within it.

Several models explain this process, including the Prominence-Interpretation Theory (Fogg, 2003), Wathen and Burkell's Model for How Users Judge the Credibility of Online Information (2002), the Dual Process Model of Credibility Assessment (Metzger, 2007), the Unifying Model of Credibility Assessment (Hilligoss & Rieh, 2008), the MAIN Model (Sundar, 2008), and the 3S Model (Lucassen et al., 2013; Lucassen & Schraagen, 2011). These models characterize the evaluation process as contextual and happening at several depths of elaboration. This research does not choose one of these models to follow; instead, it relies on commonalities from all to support the understanding of its findings.

This research looks at information sciences to define information. Bateson (2015) defines information as “a difference that makes a difference.” This is a subjective and situational approach to information, in which what is information for one person might not be information for another, because it does not make a difference. Hjørland (2007) connects this understanding of information to the action of becoming informed. Much like the definition of credibility, this

view understands that nothing is inherently informational, but being informative is situational, depending on a combination of circumstances (Buckland, 1991).

For this reason, what counts as information and how it is looked at is related to an individual's previous knowledge, background, and biases (Giglietto et al., 2019). Particularly, several information scholars say that what is deemed information is conditional to a particular social group, which includes culture, language, and knowledge structures (Hjørland, 2007). This subjective understanding of information seems appropriate for this research's approach to credibility as a perceived characteristic. In combination, these concepts solidify the interpretivist epistemology of this research.

Given the research context and the language used in the credibility literature, clarifying the difference between information and message is pertinent. Capurro defines a message as a "meaning offer." He suggests that a message contains a desired meaning which is not necessarily understood as intended (Capurro in Zins, 2007). Others talk about the message being a tangible entity. For instance, Haythornthwaite defines a message as the "encoded information or codified explicit knowledge that is disseminated to others" (Zins, 2007). A third focus, already present in Haythornthwaite's definition, is of the message as the vehicle of information, the means through which it is transmitted (Zins, 2007).

Applying these definitions to credibility assessment, a user receives a message but evaluates the credibility of the information. To assess it, they evaluate it at the message level (e.g. presentation, format) and the information level (e.g. agreement with their existing beliefs).

In this context, it is relevant to consider why political information was specifically chosen as the focus of this study. This research was motivated by concerns about the spread of political disinformation during the 2018 Brazilian presidential elections, in which WhatsApp played a

central role. While disinformation may cover a range of subjects, political disinformation is especially impactful due to its potential to harm to democracies and influence electoral outcomes. As Flanagin and Metzger (2014) emphasize, credibility evaluation is a cornerstone within political and civic contexts, where misinformation, selective exposure and polarization can harm deliberative processes. Understanding how the credibility of political information is assessed is, therefore, essential. How the credibility assessment process of political information differs from that of other content is further discussed in the theoretical framework.

Therefore, this project aims to understand how people evaluate the credibility of political information on WhatsApp. This exploratory, descriptive study aims to detail the credibility assessment process, focusing on the paths taken and criteria used by WhatsApp users.

RQ1. How does the process of credibility assessment of political information occur on WhatsApp?

Based on existing literature, this research approaches this question through three fronts. First, understanding that the source is an essential factor in the credibility assessment of information – particularly when individuals conduct quick, superficial evaluations – (Chaiken, 1987; Lucassen & Schraagen, 2011) and that on WhatsApp, sources are often lost or unclear (Chadwick, Vaccari, et al., 2023; Evangelista & Bruno, 2019), it asks how the perceived sources of political information affect the credibility assessment process. Second, it looks at how the social relations created on and supported by WhatsApp impact this inherently social process (Rieh & Hilligoss, 2008; Self & Roberts, 2019). The social dynamics that occur on WhatsApp are one of the main differences in relation to social media (Gil de Zúñiga et al., 2019; Masip et al., 2021). Lastly, to understand the impact of WhatsApp as the context of the credibility assessment process, it turns to affordances theory to look at the practices that form between the

application's materiality and its users (McVeigh-Schultz & Baym, 2015; Nagy & Neff, 2015).

These three approaches are presented in three questions:

RQ2. How do the sources of political information on WhatsApp, as perceived by users, impact the practices and criteria used to assess its credibility?

RQ3. How do social interactions among WhatsApp users impact the practices and criteria used to assess the credibility of political information received on the app?

RQ4. How do WhatsApp's affordances impact the practices and criteria used to assess the credibility of political information received on the app?

This research focuses on WhatsApp, the largest instant messaging application in the world, with more than two billion users spread all over Asia, Africa, Europe, Latin America and the USA (Ahmed, 2023; Kemp, 2024; WhatsApp, 2020b). By looking at WhatsApp, this research supports knowledge of information use in the application, which includes the spread of misinformation. Despite this focus, some findings may apply to other instant messaging applications, private servers (e.g., Discord, Guilded) and other bounded social media places (e.g., Facebook groups) (Malhotra, 2023a) with similar affordances and social norms.

Furthermore, this research is conducted in Brazil. Brazil has the second largest quantity of WhatsApp users, only behind India (Ahmed, 2023). The application has 99% penetration among smartphone users in the country and is an indispensable technology for Brazilians (Paiva, 2023). The country was the stage for several scandals of political information and misinformation spread on WhatsApp (Belli, 2018; Evangelista & Bruno, 2019; Machado et al., 2019).

Brazil's case can inform the understanding of credibility assessment of political information in comparable contexts, such as developing economies where WhatsApp and other

instant messaging applications have a large userbase. Finally, Brazil's experience with WhatsApp disinformation spread, including during the 2018 Presidential Elections, can provide insights and lessons about the use of the application for such matters for other Western and non-Western democracies.

This research produces three practical recommendations by exploring the credibility assessment of political information on WhatsApp in conversation with existing literature. The first recommendation is that WhatsApp should address existing barriers to credibility assessment that often make users less likely to evaluate information properly. The second and third recommendations address education initiatives and campaigns that aim to halt the spread of misinformation, the second focusing on individual information verification strategies, and the third suggesting, supported by findings, that the social nature of WhatsApp can be used to empower users, promote positive dialogue and interaction, including misinformation correction, and set norms of information validations in conversations.

1.3 Layout of the Thesis

Starting from the 1950s, Chapter 2 presents a historical review of credibility research, showing how it emerges from persuasion studies, where the focus was on the source's credibility, often conflated with the medium of communication (Hovland et al., 1954). The chapter continues through the decades of the 1970s and 1980s, when credibility research explored the relative credibility of channels of communication, to the late 1990s and early 2000s, when the focus narrowed to the study of web credibility (Metzger et al., 2003; Self & Roberts, 2019). Within this last period, the credibility assessment models mentioned previously are detailed. The creation of social media in the mid-to-late 2000s increases concerns over the credibility assessment of information. Existing research on online credibility assessment, particularly in social media,

supports the description of four potential issues of credibility assessment: the disruption of traditional gatekeeping, the loss of traditional credibility cues, the increased complexity of sources, and the amplified social and networked nature of credibility assessments.

Based on existing research on WhatsApp and other IMAs, this dissertation argues that these platforms' structural and social aspects create a communication context in which these four issues come to the forefront. Tangential research on IMAs and credibility assessment in other social media is used to emphasize the profound effects that WhatsApp's structure can have on the credibility assessment process.

The theoretical framework returns to the credibility assessment models to frame the goals and research questions. This study focuses on the credibility assessment process and the strategies and criteria used instead of one's final credibility evaluation. The three focuses of this research—sources, social dynamics, and affordances—are explained and justified.

Chapter 3 reviews how the interpretive approach answers this study's goals despite the limitations imposed by WhatsApp's structure and elaborates on the choice of a mixed-methods approach. This research is conducted in two main phases. After a preliminary recruitment survey, volunteer participants completed solicited diaries on the last piece of political information received on WhatsApp and their assessment of it. Later, some participants were interviewed to better detail their process and criteria. The operationalization of the research is described, and data analysis procedures are recounted.

Chapters 4 to 6 present the results of this dissertation and answer the proposed research questions. Chapter 4 focuses on RQ1 and describes the credibility assessment process of WhatsApp through its different phases, heuristics and further motivations for more in-depth credibility assessment. Chapter 5 answers RQ2 and RQ3 by exploring how participants described

source and sharer credibility and their influence in assessing the information. It also discusses the social interactions recounted by participants and how they represent the social norms and dynamics that shape individual relationships with other users and with the information they encounter on WhatsApp. Lastly, Chapter 6 explores how WhatsApp affordances shape the credibility assessment process to answer RQ4.

Lastly, Chapter 7 reviews the main findings of this study and compares them with the existing literature. It examines how the results support or contradict the four credibility assessment challenges discussed in Chapter 2. Later, three practical recommendations focused on reducing misinformation spread on the platform are presented. Finally, it discusses this research's limitations and potential for future research.

Chapter 2 – Literature Review

In the network of people and ideas of digital media, where information can come from anyone and anywhere, people encounter, seek and share a great volume of information daily. While this increasing access can be beneficial, increasing the reach of content and giving voice to underrepresented groups, it also creates challenges for information processes, including filtering, attribution of relevance, and contextualization (Casero-Ripollés, 2018). Among these important processes is the assessment of credibility.

Credibility is one of the most critical aspects of information processing and antecedents to persuasion (Petty & Cacioppo, 1984). Initially focused on source credibility, research shows that the judgement of credibility is a preliminary state in persuasion and attitude change (Hovland & Weiss, 1951; Petty & Cacioppo, 1986).

Thus, the importance of credibility in the study of mis- and disinformation and the acceptance of messages cannot be underestimated. This is particularly true in network media, where evaluating the quality of a piece of information is primarily the user's responsibility (Flanagin, 2017; Metzger et al., 2003) and in instant messaging applications, where end-to-end encryption prevents outside moderation (Evangelista & Bruno, 2019).

This chapter introduces the main ideas and concepts that guide this research. First, credibility is defined. The second section recounts the history of credibility research, culminating in the current challenges that internet users face when evaluating credibility in networked media. The third section demonstrates how WhatsApp presents an ideal communication environment for these challenges, making it a medium where misinformation thrives. From the introduction of this research's main goal and research question, the fifth section returns to credibility assessment research to present the theoretical framework that will guide this research and narrow the scope

into additional research questions. Finally, affordances theory is discussed as part of the theoretical framework, and research on WhatsApp's affordances is discussed.

2.1 Defining Credibility

Credibility has been studied within several disciplines, from psychology and communication to information studies and marketing, which all approach the concept differently and utilize different definitions. Communication and psychology focus on source credibility and how source aspects affect the persuasion of messages, defining credibility as a perceived characteristic (Wathen & Burkell, 2002). In information sciences, the approach has been based on message credibility, and focused on the notion of relevance (Rieh, 2017). In the legal field, credibility is used as a characteristic of a witness, synonymous with veracity, and not of their statements (George et al., 2014; Porter & ten Brinke, 2009).

For this reason, there are many distinct conceptualizations of credibility, which are often object-specific, focusing on either the message, the source, or the media that is being evaluated. For instance, O'Keefe (2016) focuses on source credibility and defines it as "judgments made by a perceiver concerning the believability of a communicator" (pp. 130-131). At the same time, Appelman and Sundar (2016) characterize message credibility as "an individual's judgement of the veracity of the content of communication" (p. 63).

In contrast, the most agreed upon conceptualization of credibility is generalizable to all objects. Tseng and Fogg (1999) define credibility as believability, saying, "Credible people are believable people; credible information is believable information." (Tseng & Fogg, 1999, p. 39) As the authors point out, there is no distinction between the two words in many languages, including Portuguese. This definition is used by many, including Wathen and Burkell (2002), Hilligoss and Rieh (2008), and Metzger (2007).

Most of the literature agrees that credibility is a multidimensional concept, with two or more dimensions that combine to create the perceived credibility of a message, source, or medium (Flanagin & Metzger, 2007; Self & Roberts, 2019; Tseng & Fogg, 1999; Wathen & Burkell, 2002). So far, several studies have proposed the dimensions that comprise source credibility (Pornpitakpan, 2004; Tseng & Fogg, 1999; Wathen & Burkell, 2002), message credibility (Appelman & Sundar, 2016; Kang et al., 2011; Sundar, 1999), and medium credibility (Gaziano & McGrath, 1986). However, there are still divergencies over what and how many dimensions compose credibility.

One concept that bears special attention in defining credibility is trust. Credibility and trust are frequently compared and used interchangeably. Most agree that these concepts are not synonyms, yet researchers still disagree on the relationship between them. According to Tseng and Fogg (1999), credibility is to believability, as trust is to reliability. The latter accounts for how much a person is willing to depend on a source or media or act upon a piece of information. Thus, while trust includes an attitudinal aspect, credibility does not. Differently, for Alrubaian (2019), credibility is an antecedent to trust. In other words, people need to believe a piece of information, a source or a medium to trust it. In this topic, Tseng and Fogg's (1999) approach is also frequently used. Rieh and Danielson (2007) successfully summarize the differences between the two concepts: "Trust frequently refers to a set of beliefs, dispositions, and behaviors associated with the acceptance of risk and vulnerability. Credibility refers to a perceived quality of a source, which may or may not result in associated trusting behaviors." (p. 6)

As it is possible to see in this definition and the others described throughout this section, credibility is understood as an individual's perception of the information, source, or media (Appelman & Sundar, 2016; Choi & Stvilia, 2015; Hovland & Weiss, 1951; Metzger, 2007; Self

& Roberts, 2019; Tseng & Fogg, 1999). In other words, credibility is not an intrinsic characteristic of the assessed object but appears as the individual (perceiver) interacts with a piece of information, source or medium. This definition of credibility is close to Plato's approach of ethos as the audience's ability to recognize the truth in the speaker (Self & Roberts, 2019).

Further definitions and dimensions of credibility are discussed throughout this chapter. Mainly, section 2.2.1 discusses how early research on source credibility defined expertise and trustworthiness as its main dimensions (Hovland et al., 1954), and section 2.2.2 explores the creation of various scales of media credibility throughout the 1970s and 1980s.

The credibility assessment process is a cognitive process through which an individual judges the credibility of a piece of information, a source or a communication channel. To differentiate between the credibility assessment process and the resulting evaluation, in this thesis, this last is referred to as the *object's credibility* or only *credibility*, while for the process the terms *judgment*, *evaluation*, *assessment* and *process* are used.

Several authors propose models for this process, including the Prominence-Interpretation Theory (Fogg, 2003), Wathen and Burkell's Model for How Users Judge the Credibility of Online Information (2002), the Dual Process Model of Credibility Assessment (Metzger, 2007), the Unifying Model of Credibility Assessment (Hilligoss & Rieh, 2008), the MAIN Model (Sundar, 2008), and the 3S Model (Lucassen et al., 2013; Lucassen & Schraagen, 2011). These models are better explained in Section 2.2.4.

While there are many discrepancies between the different models, they agree that the credibility assessment process does not occur in only one way. Instead, it occurs at different levels of elaboration and through different strategies. Contextual factors shape how this process occurs. Context can be understood in the situational sense, the moment of evaluating the

information, with its constraints (time, resources) and goals, and in the broader social and organizational background sense (Rieh & Danielson, 2007, p. 6).

Consequently, the object's credibility is also contextual. In other words, the same information, source, or medium can be evaluated differently by the same person in different circumstances. Rieh and Hilligoss summarize:

(...) Credibility is not always viewed as absolute but rather may be seen as relative with respect to the social context in which information seeking is pursued and credibility judgments are made. (Rieh & Hilligoss, 2008, p. 56)

In conclusion, despite the many disagreements in defining and characterizing credibility, it can broadly be conceptualized as the perceived believability of a source, message or medium by an individual in a particular context. An object's credibility is evaluated through different strategies and using different criteria depending on the context of engagement with it. The definition of credibility, its dimensions, and the assessment process are complex ideas that have input from different disciplines and fields. It has been discussed in ancient Greece and more recently since the 1940s, with many divergences and gaps still existing. In the next section, the history of credibility research in modern times will be described, showing the evolution of the concept and the different approaches taken through the last century.

2.2 A Short Evolution of the Approach to Credibility Assessment

Credibility research started with the work of persuasion studies (Hovland et al., 1954) and continued attached to it for a long time. It has been built slowly around source credibility, then media and finally, focusing on information. Every research phase dealt with challenges and the introduction of other media, from television to the Internet and networked media. This

section dives into the history of credibility research, dividing it into five phases, each with one specific focus.

2.2.1 The 1950s – Credibility Emerges from Persuasion Studies

The origins of the discussion on credibility can be traced back to Plato and Aristotle (Self & Roberts, 2019). While Plato placed credibility in the audience's ability to recognize the truth in the speaker's message and, therefore, trust said speaker, Aristotle situated credibility in the communicator's ability to inspire trust and make the audience believe their message (Self & Roberts, 2019).

However, the systematic study of credibility only began more than two millennia later as an aspect of research on persuasion centred on the hands of Carl Hovland and associates at Yale University. The study of credibility during this period was attached to persuasion, focusing on understanding the effects of different credibility dimensions, such as expertise, on information acceptance and attitude change.

Credibility research focused on the source of a message during the 1950s and most of the 1960s. Although Hovland et al. (1954) and other researchers considered message and audience essential aspects of the persuasive effects of a message, credibility was seen as a characteristic of the communicator, central to the audience's attitudes toward the source. They aimed to evaluate the effect of a source's credibility on information acquisition and opinion change and to determine what makes a communicator credible. For this reason, Hovland et al. (1954) are the first to declare that credibility is multidimensional and name expertise and trustworthiness as its main facets. However, they point out that research could not reliably differentiate between the effects of the two.

At this point, the definition of source encompasses several actors or entities. Hovland et al. (1954) recognize that the source can be individuals, a group of people, or the media. Additionally, the recipient's perception of the source is based on whether they identify the source as the original speaker, a message endorser, or the communication channel. However, despite recognizing these differences, they assume that the same principles apply to all these sources in persuasive communication.

Persuasion research introduced aspects that were later adapted for the study of credibility. For Hovland et al. (1954), audience characteristics also affect the effectiveness of a message's persuasion. Primarily, the persuasiveness of a communicator or message depends on the receiver's adherence to group norms and standards and individual personality factors (p. 14). On a personal level, while some people are more open to receiving these messages, others are more resistant. Two of the main individual aspects that they highlighted were ability and motive. These ideas will be given renewed emphasis in the late 1990s. Unlike Hovland et al. (1954), who describe them as audience characteristics, they are central in the credibility evaluation process.

In sum, during the first fifteen years, credibility was studied under persuasion research and as a characteristic of the communicator of the message. The research focused on the effects of source credibility on opinion change and tried to identify what characteristics of the communicator affected the audience's perception of their believability. Hovland et al. (1954) define credibility as multi-dimensional, composed of trustworthiness and expertise. Other aspects, such as message and audience characteristics, were considered to affect the persuasion process but were not directly related to credibility. From a theoretical perspective, source and channel remained combined in one element, central to the study of credibility assessment (Metzger et al., 2003). In the late 1950s, with television slowly becoming more important,

industry-paid studies started to compare the believability of different media and change the focus of credibility research.

2.2.2 The 1970s and 1980s - Comparison Between the Credibility of Channels

Credibility research in the 1970s and 1980s slowly shifted from a broader approach to information processing and persuasion to the specific study of credibility, including its dimensions and precedents. Two simultaneous paths of credibility research marked the late 1960s and early 1970s. On one side, McCroskey (1966) conducted a series of studies to define a measuring scale for credibility. On the other, the Roper Organization's surveys continuously showed a shift in the perceived credibility of media (Metzger et al., 2003). The results of these studies prompted a new change in credibility research.

In 1966, McCroskey brought about a significant shift in the field of credibility. Instead of assuming, manipulating, and using the source's credibility as the independent variable, his research made it the dependable variable. This marked a turning point in credibility research, sparking a series of empirical studies that attempted to replicate his findings, define the dimensions of source credibility, and create measuring scales (Metzger et al., 2003). According to Self and Roberts (2019), more than 100 scales of source credibility were developed during the 1980s.

On the other side, since the early 1960s, the media industry had been concerned with the relative credibility of different media channels and the perceived credibility of media vehicles. Starting in the late 1950s, the Roper Organization conducted a series of media credibility studies. In 1961, when television surpassed newspapers in relative media credibility, several other industry-led studies were triggered, aiming to either replicate or contradict these findings (Metzger et al., 2003).

In the early 1980s, concerns intensified as the media industry dealt with declining newspaper readership, a sequence of scandals that brought news media into the spotlight, and findings from the Roper Organization Study suggesting a decline in media credibility. This situation contributed to the perception of a media credibility crisis (Self & Roberts, 2019), which stimulated the sponsorship of four major studies on the public's trust in various media and media organizations in the United States in 1985 (Gaziano, 1988). The results of these studies were mixed, leading to questioning the existence of a media credibility crisis (Gaziano, 1988).

Scholars and industry experts were criticized on the methodologies and assumptions underlying these media credibility studies. The source credibility scale studies were criticized for methodological problems, lack of reliability and validity checks, and inconsistencies, and also suffered from the lack of source definition in the existing research that supported the creation of these scales (Eisend, 2006). The four major industry studies were criticized for diverging operationalization (Gaziano, 1988), especially the measures of independent and relative (in comparison with other media) credibility (Metzger et al., 2003).

Newhagen and Nass (1989) attributed the diverging results to the enduring lack of definition of sources in credible research, highly criticizing the continuous confluence between source and media and the inclusion of non-mediated communication in these studies. For Newhagen and Nass (1989), the 1985 pools failed to consider that the receiver may use different criteria to evaluate the credibility of different sources. According to Metzger et al. (2003), prior studies had already proposed that the dimensions of credibility might differ based on the source type. Therefore, media channels and other organizations must be analyzed differently than the conventional sources of credibility research, which usually focus on non-mediated individuals (Greenberg & Roloff, 1974).

These critiques gradually turned research to the study of media credibility separately from source credibility. At first, this research advanced parallel to source credibility, including using interpersonal credibility dimensions to measure media credibility. Soon, researchers noticed this shortcoming and media credibility research was "characterized by increasing precision in measurement over time, with two evident trends: a movement from unidimensional to multidimensional measures, and a movement from measures derived from source credibility to measures developed specifically to address media credibility." (Metzger et al., 2003, p. 310).

The early stages of media credibility research explored factors affecting their perceived credibility. Findings indicated that technological and structural aspects affected the relative credibility of a medium. Television's visual and live nature increased its perceived importance, authority and objectivity compared to newspapers. Furthermore, it was more accessible and required less effort and attention from its audience (Carter & Greenberg, 1965). On the other hand, structural features such as laws and regulations also played a role. Broadcasters in the USA were prohibited from stating their political opinions until 2000 (Metzger et al., 2003). At the same time, unlike newspapers, TV attempted to look unbiased to please a larger and more diverse public and more advertisers.

Summarizing, credibility research in the 1970s and 1980s moved from a source-focused approach, in which source and media were united as one element and in which dimensions from interpersonal sources were used to evaluate all types of communicators equally, to a source-specific focus that considered that people used different criteria to evaluate different sources. With this shift, media credibility research emerged, characterized by the development of independent media credibility measuring scales and dimensions, with early research focusing on the technological and structural aspects of media that affected its perceived credibility. Lastly,

research in the late 80s called for a better theoretical definition of credibility and source, hoping that clarity would help the field advance more consistently.

2.2.3 Late 90s and Early 2000s – The Evaluation of Websites as Sources

In the late 1990s, the popularization of the Internet raised concerns over the large amount of information that users would encounter online, much of which had no connections to traditional sources following publishing procedures. In this new and unknown medium, researchers expected that users would not find the conventional credibility cues used to evaluate information in print, TV, or radio. One of the central questions of the turn of the century was how users assessed the credibility of information online and how its impact on information use and opinions (Wathen & Burkell, 2002).

At first, studies about web credibility compared it to other traditional media and studied the medium's impact source and message credibility. Results showed that the type of source was more impactful than the medium on source credibility and that the perception of medium credibility was positively associated with an individual's reliance on that medium (Flanagin & Metzger, 2000; Johnson & Kaye, 1998).

Other studies explored elements used in the credibility assessment process of websites and their effect on the credibility of the medium (Fogg et al., 2000, 2003). Representative of these studies is the large-scale research project conducted by Fogg et al. (2003), which discovered that the design of a website was the most prominent element. However, different elements were more relevant when evaluating various types of website (Fogg et al., 2000, 2003).

Some studies questioned people's online information verification process. Flanagin and Metzger's (2000) findings indicate that users would perform verification tasks that are easy and only require their opinion, such as evaluating the currency and completeness of information, but

not equally perform behaviours that were more difficult and required action, such as looking for author credentials. Like Fogg et al. (2003), the verification strategies also varied depending on the type of content. While some information was verified in more depth, others, such as entertainment information, were verified with less attention.

A key takeaway from these studies was that users adapted the same elements they used to evaluate traditional media to the Web. Users sought familiarity with this new media, looking for similar or replacement characteristics (Fogg et al., 2000). For example, users still looked to identify the source's trustworthiness but focused on the website's operator. Nevertheless, some source cues were often absent, and users had to adapt their evaluation. For instance, traditional cues of authority of a source, commonly used in the credibility assessment process, were frequently substituted by source reputation and type (Rieh, 2002).

However, two challenges remained on the factors and dimensions of web credibility assessment. First, the introduction of different types of sources online made the definition of sources more complex. Metzger et al. (2003) argue that the Internet is unique because sources, mediums, and messages overlap. They suggest that the Web can be assessed at different levels, such as the Web itself or the machine that contains it, as seen in Sundar and Nass (2001). Researchers disagree on the best approach to this issue. Some call for a clear distinction between source and media and further research to investigate their different factors and how they interacted to create a joint credibility evaluation (Wathen & Burkell, 2002). In contrast, Metzger et al. (2003) suggest that one can perceive and evaluate the Web as the medium, source, or message and therefore, research should approach credibility from all three perspectives. Similarly, Chaffee (1982) argues that users may struggle to differentiate between the source and

medium and the effects of each factor in their credibility assessment of a particular piece of information.

The second remaining question concerns the temporality of the credibility assessment process. Researchers felt that although they knew what elements and criteria were used in the credibility assessment process, they did not know how this process occurs, if individuals evaluate all factors concurrently or if the process is staged, and if so, what aspects are evaluated first (Wathen & Burkell, 2002). In complex media environments such as the Internet, where source, medium and message were often conflated, understanding how people conducted this credibility assessment process became the focus.

Several studies focused on the credibility assessment process, rather than the object's credibility, were conducted to answer these questions. Various models were created from these studies, some focusing on the Web and others encompassing all media. By 2012, more than five models of credibility assessment had been proposed. In the following sections, the most cited models of credibility assessment are described before this chapter continues with the history of credibility research.

Fogg's Prominence-Interpretation Theory. In Fogg's Prominence Interpretation Theory (2003), the credibility assessment process has two steps. First, web users notice an element of the medium or content (prominence) and then evaluate the element (interpretation). This repetitive process of noticing and evaluating aspects of the content and where it is published adds to the final information evaluation. For Fogg (2003), the interpretation step depends on the prominence action; users will only evaluate things they notice.

Wathen and Burkell's Model for How Users Judge the Credibility of Online

Information. In their model, Wathen and Burkell (2002) propose that when entering a website, the user first evaluates its surface credibility through superficial characteristics such as appearance and presentation, usability, and information organization. If the surface credibility suffices, they move on to the following evaluation stage; otherwise, they will leave the website. In the second phase, users will evaluate the message's credibility through aspects that demand more cognitive effort, such as assessing the source of the information and message characteristics. Lastly, the user compares the information received with their cognitive state, deciding if it matches what they already know and is relevant to them.

Metzger's Dual Process Model of Credibility Assessment. Metzger's (2007) Dual Process Model of Credibility Assessment builds on Dual-Process Models of Information Processing, such as the Elaboration Likelihood Model (Petty & Cacioppo, 1986) and the Heuristic-Systematic Model (Chaiken, 1980). These models suggest that information evaluation can take two routes: a heuristic or peripheral path, which is more superficial, and a more thorough, central or systematic path.

The Dual Process Model of Credibility Assessment (Metzger, 2007) applies the notion that people will exert different amounts of effort and focus on different criteria depending on their motivation and ability to evaluate certain information. The assessment process is divided into two phases. In the exposure phase, the user's motivation and ability define the depth of the evaluation in the next phase. In the evaluation phase, the user employs different assessment strategies, the depth of which depends on the results of the first phase. Metzger believes individuals are likelier to follow a heuristic approach to credibility assessment in an information-rich environment like the Internet.

Hilligoss and Rieh's Unifying Model of Credibility Assessment. Hilligoss and Rieh (2008) presented the Unifying Model of Credibility Assessment, which aims to encompass "diverse information seeking goals, tasks, and contexts in everyday life" (Choi & Stivila, 2015, p. 2409). Hilligoss and Rieh's model (2008), such as Metzger's, includes different levels of engagement and has heuristics as a main evaluation strategy. However, instead of differentiating between heuristic and systematic approaches, it proposes that these simultaneously compose the assessment process. In addition, they bring constructs as an element of the credibility judgment.

Constructs are personal definitions of credibility, which affect the importance of different aspects in the credibility assessment. Similarly to Metzger (2007), the second level, heuristics, refers to the rules of thumb that the users apply to evaluate the information. These rules are generic and broad enough to be used in many situations and can help an individual to make the credibility evaluation quickly with little engagement. Interactions are specific to the content and context of the referred information. For Hilligoss and Rieh, all three levels occur during the evaluation process. Additionally, all levels interact and affect each other.

The Unifying Model of Credibility Assessment (2008) highlights the importance of context in the credibility assessment process. The authors propose that context guides the selection of resources and the judgment of credibility.

Sundar's MAIN Model. Sundar proposed the MAIN Model of Credibility Assessment (2008). As with previous models, heuristics are paramount to the credibility assessment process. This model's central idea is that media affordances can trigger the heuristics used in the credibility assessment process. Sundar categorizes heuristics based on the affordances that trigger them: modality (M), agency (A), interaction (I), and navigability (N).

Lucassen and Schraagen's 3S model. Lastly, Lucassen and Schraagen (2013; 2011) presented the 3S model of credibility assessment in 2011 and reviewed it in 2013. The 3S model states that individuals use three strategies to evaluate the credibility of a piece of information. Those with a certain level of domain expertise can evaluate semantic features of the information, such as its completeness and accuracy. If someone lacks domain expertise but possesses information skills, they can analyze surface features such as the design, number of references, and text length. The third strategy is to assess the source of the information based on previous experiences with it. According to Lucassen and Schraagen, individuals can use one or more strategies, depending on their skills and prior experiences. For them, the semantic and the surface strategies can be heuristic or systematic, while the source strategy is primarily heuristic.

These models have important principles in common. First, they bring to the forefront the idea that the credibility assessment process is not a uniform operation but varies in depth, and users pay unequal attention to all information elements. Second, these credibility models are situated and contextualized, bringing the media and the social factors to the center of the process. These two commonalities are revisited and better addressed in the Theoretical Framework (Section 2.4).

2.2.4 Early 2000s to Present - Networked Media

Networked media and the Web's development transform its users' information environment (Metzger & Flanagin, 2015). The production and dissemination of disinformation is decentralized while simultaneously audiences are fragmented (Casero-Ripollés, 2018). While this new information environment has many positive impacts, it also amplifies challenges to credibility evaluation.

Networked media decentralize the production and dissemination of content, promoting more creators and bypassing traditional gatekeepers (Klinger & Svensson, 2015). Consequently, much of the content shared online originates from non-professional sources and spreads quickly through networks of communication channels and users (Casero-Ripollés, 2018). Ultimately, social media converges mass and interpersonal communication aspects that affect information sharing and persuasion (Wathen & Burkell, 2002).

As production and dissemination evolve, consumption patterns also shift, with individuals increasingly personalizing their media experiences (Thorson & Wells, 2016). On an individual level, this often leads to selective exposure (Wojcieszak, 2021). On a collective scale, audiences become more fragmented (Chadwick, 2013)

These behaviours are not new, but networked media amplify pre-existing communication processes and make them more visible to researchers (Flanagin, 2017; Thorson & Wells, 2016). Between the technological and the behavioural characteristics of networked media, concerns emerge over an individual's ability to evaluate the credibility of a source, medium or piece of information. The following four sections discuss four potential challenges over credibility assessment online and how research has approached each one of these problems so far.

Disruption of Traditional Gatekeeping. The massive amount of information and sources in the new media environment makes the traditional gatekeeping model untenable (Williams & Delli Carpini, 2004). While traditional gatekeepers such as media elites still exist and play a role in filtering and quality control of content, they lose control over the flow of information, with other actors gaining scale (Casero-Ripollés, 2018; Flanagin, 2017). Social curation and algorithmic filtering gain prominence with support from new media affordances (Casero-Ripollés, 2018; Thorson & Wells, 2016). Furthermore, information

consumers can bypass traditional gatekeepers and go directly to the source, many of whom do not have quality control over their content (Westerman et al., 2014).

The lack of gatekeeping affects the credibility assessment of information in two ways. First, individuals are increasingly responsible for evaluating the credibility of information, filtering through an overload of unorganized information without endorsement cues from reliable gatekeepers (Flanagin, 2017; Metzger et al., 2003; Sundar, 2008). With the increasing amount of information, users cannot possibly engage with every piece of content to evaluate it, so they often turn to heuristics and superficial characteristics (Metzger, 2007).

Second, the decentralized production and dissemination of content form the ideal conditions for the spread of disorganized, incomplete or inaccurate information, including that that purposely spreads false information (Flanagin & Metzger, 2014; Jungherr & Schroeder, 2021). A large amount of information and sources challenges the proper identification and evaluation of sources by information users. for the information users to evaluate if the source is who they say they are (Flanagin & Metzger, 2014). Furthermore, it can be challenging to differentiate information with varying objectives (commercial, informational), which may affect the criteria individuals apply when assessing information (Metzger & Flanagin, 2013).

Loss of Traditional Cues of Credibility. Context is essential to the credibility assessment (Rieh & Hilligoss, 2008). Outside of its original setting, people may evaluate the credibility of information differently from the intent of the source. For example, satirical messages can be misunderstood when shared out of context, leading to the spread of misinformation (Giglietto et al., 2019). It is particularly concerning then that in networked media, information is frequently decontextualized.

danah boyd (2010) suggests that network media affords both persistence and replicability of information. While the recordings may remain, they are often consumed outside their original context, fostering the decontextualization of information (boyd & Papacharissi, 2010). Additionally, information is subject to modification and recontextualization, which may change their meaning (boyd & Papacharissi, 2010; Casero-Ripollés, 2018).

Replicability processes may modify or remove essential cues for the credibility assessment, such as the newness of the content. Additionally, information may become disconnected from its source, an essential cue in the credibility assessment and where the user can gather more information (Rieh et al., 2014).

Sources are Complex and Layered. As seen, source has always been a convoluted context. Yet, what people understand as sources is increasingly complex online and, to a greater extent, in network media. Users can assign the role of the source to many entities along the path between the creation and consumption of content (Sundar, 2008). Metzger et al. (2003) state that online sources are layered (e.g., content creator, an intermediary, the website hosting it), and users can recognize one or more of these layers as sources. Additionally, sources can be murky because they are multiple or hybrid. Sources are not only individuals or single organizations; multiple actors can work collaboratively to create content, which can also be modified by other actors after its creation (Metzger et al., 2003; Self & Roberts, 2019).

Any number of these sources can be used to assess information's credibility, and often, their source credibility can vary drastically. People deal with trustworthy intermediaries who share questionable media outlets and other contradictions. Sterrett et al. (2019) find that people are willing to forward news they receive from trustworthy public figures, even if it comes from an unknown media outlet.

Not only can information about the source be partially lost in the dissemination process, as explained in the previous section, but network media also potentializes the use of anonymous sources. Flanagin (2017) states that source ambiguity occurs when information about the message's creator is unavailable, incomplete, or unclear. Under these circumstances, the credibility assessment is made in suboptimal conditions based on insufficient information or other indicators (Flanagin, 2017).

Lastly, according to Giglietto et al. (2019), authority, one of the central components in evaluating the source and its messages, becomes contextual in digital media. Online sources often lack authority indicators (Wathen & Burkell, 2002). With the lack of traditional markers of authority, people start relying on "enthusiasts," people with no credentials but who present many of the same characteristics of traditional authorities: topic mastery, good writing, and technical knowledge. These people are granted credibility through users' personal experience with the knowledge they provide (Meztger et al. 2010). Furthermore, Olaisen's (1989) and Rieh's (2002) findings suggest that group belonging also plays an important part in authority attribution.

Credibility is Networked and Social. Lastly, an additional concern in contemporary research pertains to the social and networked character of the credibility assessment process (Self & Roberts, 2019). Historically, the evaluations of information credibility have been significantly influenced by other information consumers and opinion leaders. Individuals often rely on the perspectives of multiple peers or the insights of a singular trusted authority to ascertain the credibility of information, minimizing the effort expended in the assessment process (Chaiken, 1987; Metzger et al., 2010). In networked media, this aspect is enhanced.

With the absence of traditional gatekeepers, cues of credibility, and the ambiguity of sources, individuals seek outside sources of knowledge. Taraborelli (2008) refers to this as an

externalization of the trust assessment process. People leverage the social connections digital media provides to tap into collective intelligence, utilizing social and group-based strategies for credibility assessment (Flanagin, 2017, p. 457). These peer-to-peer credibility practices have become integral to digital media materializing through comments, ratings and algorithms.

Furthermore, group identification and belonging are essential to credibility assessment because different social mechanisms guide individuals to follow group norms (Cialdini & Trost, 1998; Metzger & Flanagin, 2015). As expressed by Gil de Zúñiga et al. (2019), “online media might also play an important role in the construction of group identity, because they facilitate the development of shared experiences and views” (p. 4). Information users are more likely to find similar others considered more trustworthy.

Self and Roberts (2019) propose that all these challenges shift the process of credibility judgment to a networked approach in which messages are evaluated in relation to a network of accepted ideas by the individual or the groups to which they belong. The complexity of sources leads to a contextual approach in which they are perceived as nodes in networks of information producers and consumers. Credibility evaluations, primarily online, where the context may be missing, the source is murky, and consequences are low, are guided by networks of people, topics, and surface cues (Self & Roberts, 2019, p. 439). More importantly, information is evaluated using familiar networks of ideas and the fit of the information argument with the user's network of opinions.

2.3 Potential Issues of Credibility Assessment on WhatsApp

WhatsApp and other instant messaging applications are understudied examples of networked media where the credibility evaluation process can vary. As seen in the Introduction, the application is used for various activities, from connecting close others to discussing news and

politics, business-related practices, and hobbies-related conversations with strangers. While research on WhatsApp does not directly examine how the credibility assessment process of political information occurs on this platform, as far as known, existing studies point to structural, technological, and social aspects of the platform that are known to affect credibility evaluation in other media.

In the following few sections, the previous credibility evaluation challenges proposed above are discussed concerning WhatsApp. First, how end-to-end encryption disrupts traditional forms of gatekeeping and social and personal curation substitutes it. Second, WhatsApp affordances limit credibility-related cues, which can be especially worrying when users are less likely to look for more information. Third, the lack of cues and the strong presence of intermediary source levels may affect the perception of sources and how they affect the credibility assessment. Lastly, WhatsApp's environment foments trust between users, which may affect how much individuals will scrutinize the information they receive on the platform.

2.3.1 Disruption of Traditional Gatekeeping

WhatsApp provides a clear example of the disruption of traditional gatekeeping. Unlike Facebook, Instagram and other open social media, WhatsApp's end-to-end encryption obstructs algorithm selection and journalistic curation. While news outlets have profiles in the app, and some use it to share news content, these trusted sources get the same visibility as regular users (Boczek & Koppers, 2020). This way, most information is disseminated without professional gatekeeping within WhatsApp.

Instead, users select and promote content. Gatekeeping on WhatsApp occurs through social and personal curation (Thorson & Wells, 2016). Personalization is a significant feature of WhatsApp that makes users perceive it as a relevant and strategic news source (Masip et al.,

2021; Valenzuela et al., 2019). Users can join and leave conversations, silence, archive and block users and group chats (Garcia & Vivacqua, 2021). In the app, users expect to get relevant information from known others who know what might interest them.

Personal and social curation on the messaging application becomes a bigger problem when combined with the homogeneous communities fostered in the app. Although it is still contentious if groups with unknown users focused on a common interest (Rossini & Kalogeropoulos, 2023) or groups of close ties (Masip et al., 2021) afford homogeneous and often polarized information, either of these cases points to WhatsApp as being an environment where users receive much content that supports their existing biases (Santini et al., 2021).

Additionally, the closed encrypted structure of WhatsApp blocks any external content moderation by either algorithmic or human checkers. Content moderation depends solely on the users who are part of a conversation (Santini et al., 2021). Group admins on WhatsApp have some moderation powers, such as excluding messages, kicking out members, and only allowing admins to send messages. However, moderation practices vary drastically, impacted by the admins' values and ideologies (Shahid et al., 2024).

Lastly, WhatsApp lacks a news feed and does not afford discoverability. In other words, users cannot encounter information from reliable sources or stumble upon cross-cutting information. New features of WhatsApp, such as the channels, may change that.

The lack of traditional forms of gatekeeping on WhatsApp, in combination with what has replaced it, social and personal curation, is reflected in the spread of misinformation on the platform (Nobre et al., 2022). On WhatsApp, users are solely responsible for evaluating information credibility while creating and sharing it through the application (Masip et al., 2021). For this reason, misinformation spreads, escaping moderation.

2.3.2 Loss of Traditional Cues of Credibility

Evangelista and Bruno (2019) call WhatsApp a "near-sighted environment," underlying its structural barriers to verifying information. The app is encrypted, and its conversations are self-contained. Additionally, when a message is forwarded on WhatsApp, no metadata is shared (Hall et al., 2023). Consequently, unless the message clearly states the source or the information or provides a link, users cannot trace the origin of a piece of information or track the path through which it has travelled within the app (Melo et al., 2020). This opacity is particularly concerning in contexts where astroturfing efforts can influence users, such as the election cases in Brazil and Indonesia (Baulch et al., 2022; Evangelista & Bruno, 2019).

Additionally, research has already shown that information is often decontextualized when shared in the application, including messages without any information about their source or author or hyperlinks to the original content (Machado et al., 2019; Pellegrino, 2018). In Brazil, the information does not even try to present any authority; instead, it uses rumours that evoke emotional responses from users (Machado et al., 2019).

On the other hand, the information sharer is identified as one of its sources on WhatsApp, becoming an essential part of the credibility assessment process (Kligler-Vilenchik, 2022). Ultimately, on WhatsApp, important source cues for the credibility assessment process can be lost, while impactful social heuristics are inherent to the application.

Meanwhile, WhatsApp tries to curb the spread of misinformation by adding the tags "Forwarded" and "Forwarded many times" to messages. These tags are supposed to work as a cue for assessing the credibility of the information, as the end-to-end encryption blocks the creation of content labels, as it happens on Facebook and X. Unfortunately, the usefulness of

these tags is questionable, as some users find tagged information more valuable, while others are unaware of their meaning (Hall et al., 2023).

The lack of credibility cues in WhatsApp emerges as a more significant concern when users cannot or will not reach beyond the app to search for more information. On the one hand, some users cannot afford the cost of data, but they still receive much information on WhatsApp due to zero-rating plans (Evangelista & Bruno, 2019). These users usually avoid searching for additional context about the messages, as even clicking on a link will cost them. Conversely, users can be restrained by all sorts of limitations, from lack of time to lack of interest. This way, information shared on WhatsApp is most likely evaluated only with cues shown in the app, which can be minimal due to decontextualization.

2.3.3 Sources are Complex and Layered

Many of the issues discussed above contribute to the complexity of understanding sources on WhatsApp. Due to end-to-end encryption, essential information about the origin of a message often gets lost, essentially erasing its original source (Chadwick, Vaccari, et al., 2023). At the same time, the person sharing the message, the sharer, often assumes the role of a perceived source, adding another layer in evaluating credibility (Kligler-Vilenchik, 2022).

Research on perceived sources of information on WhatsApp is still scarce, especially when compared to the ones looking at the actual sources of information on public groups (Bursztyn & Birnbaum, 2019; Machado et al., 2019; Resende et al., 2019). Kligler-Vilenchik (2022) identifies that news-centred WhatsApp groups discuss source credibility on several levels, including journalistic outlets, specific journalists, and even politicians, who sometimes were the sources of the information. Meanwhile, Kanthawala and Maddox (2022) find that users

frequently relied on heuristics associated with both the sharer and official sources to evaluate the content.

Users may also recognize WhatsApp itself as the source of the information, as medium and source have always been conflated on this topic. For instance, Pont-Sorribes et al. (2020) find that WhatsApp is perceived as having intermediate credibility. This conflation complicates even more the credibility assessment of the information.

In summary, the complexity of source identification on WhatsApp comes from its structural features and user practices. End-to-end encryption, absence of metadata, frequent lack of source cues, and reliance on the sharers of the message fragment the credibility assessment even more, with users having to grasp all perceived sources in their evaluation process.

2.3.4 Credibility is Networked and Social

As discussed in the Introduction chapter, WhatsApp research still diverges on the nature of the conversations fostered on WhatsApp. On the one hand, researchers talk about one-to-one conversations or small groups characterized by close social ties and familiarity between members (Gragnani, 2018; Resende et al., 2018). On the other hand, WhatsApp is known to be the site of many groups that come together due to similar interests and political opinions (Gil de Zúñiga et al., 2019; Pasquetto et al., 2022). Familiarity and similarity - two key relational dynamics among group members – play a crucial role in the credibility assessment process (Metzger et al., 2010). These concepts will be explored more later in this chapter.

Within small, close-knit conversations, whether on one-to-one chats or groups, users experience more proximity and connection to others than in other social media. This stronger connection fosters amplified trust between members, shaping how information is evaluated (Evangelista & Bruno, 2019). That can lead to people accepting information from close others

without much consideration (Chadwick, Vaccari, et al., 2023). However, close relationships and private environments can promote social correction (Tandoc et al., 2019). This has been identified in contexts such as Brazil (Rossini et al., 2020; Vijaykumar et al., 2022) and Israel (Kligler-Vilenchik, 2022). However, cultural aspects can shape these practices, for instance, social corrections are limited in India (Malhotra, 2023b).

At the same time, WhatsApp facilitates the creation of homophilic groups, where individuals with similar perspectives come together (Pasquetto et al., 2022). Gil de Zúñiga et al. (2021) state that IMAs cultivate shared experiences and reinforce group identity. In these groups of like-minded people, sharing is frequently selected, with individuals often fearing social repercussions (Gil de Zúñiga et al., 2019). Isolated from cross-cutting opinions, these groups become more polarized and less trusting of diverse views (Cesarino, 2020) – although Pasquetto et al. (2022) find that homophilic political groups on WhatsApp can also be used effectively for misinformation debunking.

Masip et al. (2021) call WhatsApp a “confidence environment” that makes it difficult for users to engage critically with problematic or antagonistic content, especially when it challenges beliefs and values (p. 1068). In such environments, the familiarity of close social ties or the similarity in homogenic groups may foster a shallow evaluation of the credibility, based solely on the sharer.

Lastly, WhatsApp also features concrete forms of social endorsement that can be used as cues in the credibility assessment. Messages can be forwarded from other conversations, and the act of sharing can interpret as endorsement by the sharer. Within chats, users can express their approval of information through the reply mechanism or readily available reactions. These small interactions confer credibility to the information by way of a third person.

As a medium that combines the persuasive power of interpersonal communication and the reach of mass media, WhatsApp introduces unique challenges to evaluating information shared within it. Despite its growing prominence, there is still limited research specifically exploring the credibility assessment process on WhatsApp or similar messaging applications. Studies have primarily addressed peripheral aspects: for instance, Pont-Sorribes et al. (2020) examined the perceived trustworthiness of WhatsApp as a medium. Others have looked at how the affordances of the application affect news engagement and perceptions of credibility on WhatsApp (Masip et al., 2021), or explored credibility in bounded social media places (Malhotra, 2023a). Lastly, some studies have focused on specific features of the application and their roles in the credibility assessment of information (Hall et al., 2023). However, substantial gaps remain. The platform's closed nature limits data collection (Caetano et al., 2018), and the inherently individual and often unconscious nature of credibility evaluation makes studying this process particularly challenging (Sundar, 2008). Consequently, a comprehensive understanding of how users assess information credibility on WhatsApp is still needed.

In this context, recognizing that instant messaging applications like WhatsApp are fundamentally different from open social media and that these differences can have profound impacts on the credibility assessment of political information is critical. This research, therefore, seeks to address these gaps by exploring how people assess the credibility of political information shared on WhatsApp, contributing to a deeper understanding of the platform's impact on users' information behaviours and decision-making.

2.4 Theoretical Framework

This study returns to the credibility assessment models to guide the understanding of this process. The literature presented in this chapter underscores the significance of focusing on the

credibility assessment process of information rather than the final evaluation process. Metzger and Flanagin (2015), for instance, call for an inventory of "the various cues, heuristics, and strategies that people use during credibility assessment within and across various online environments and information-seeking contexts" (p. 461). By investigating the underlying factors and strategies that influence individuals to believe in political information on WhatsApp, this research aims to identify the reasons leading to misinformation acceptance and sharing. These findings can then be transformed into recommendations for educational programs, policies, and technical changes, thereby mitigating this pervasive problem.

Instead of choosing one model of credibility assessment to fit this research into, the exploration of this process is done based on learnings from many of them, focusing on the two main commonalities between them: the depth of the assessment process and the context in which it occurs. These aspects are particularly important for studying WhatsApp because the application itself presents a unique aspect of context in which the credibility assessment is made and where strong ties can lead to a quicker, less comprehensive evaluation of the information.

2.4.1 Evaluation Depth

First, the credibility assessment models of information described in Section 2.2.4 propose that the depth of the information evaluation is as important as the factors that affect it (Hilligoss & Rieh, 2008; Lucassen et al., 2013; Metzger, 2007). The idea of varying depths in credibility assessment comes from information processing frameworks, notably the Elaboration Likelihood Model (Petty & Cacioppo, 1986) and the Heuristic-Systematic Model (Chaiken, 1980). These models propose that individuals often lack the mental capacity to conduct a detailed evaluation of every piece of information. Consequently, they use cognitive shortcuts or quick evaluations to engage with the information. The Heuristic versus Systematic Processing Model (Chaiken, 1980)

proposes that information users can evaluate the information systematically, devoting cognitive effort to evaluate the message's arguments and conclusion, or employ heuristic strategies, using simple rules-of-thumb and focusing on more accessible message cues, such as surface characteristics and the source. Correspondingly, the Elaboration Likelihood Model (Petty & Cacioppo, 1986) suggests a continuum between two routes of information processing to persuasion: a central route, in which the individual deeply engages the message and a peripheral route, that relies on superficial cues, including the credibility of the source, the quantity of arguments, and affective associations.

Similarly, the different credibility assessment models present that this process can vary in depth. Lucassen and Schraagen (2011) suggest that every credibility assessment includes a heuristic aspect, as complete certainty would eliminate the trust or credibility aspect of the evaluation, making a complete systematic assessment impossible. Hilligoss and Rieh (2008) state that both heuristics and interactions are present in every assessment process, but an individual may use one more than the other depending on their motivation. Metzger (2007) suggests that an initial phase of the credibility assessment determines the depth of the evaluation.

Other models present the depth of the process as iterativeness. For Fogg (2003) and Wathen and Burkell (2002), the evaluation is done in small repetitive evaluations of individual information elements. Hilligoss and Rieh (2008) propose a differentiation between credibility assessment and credibility judgment, in which credibility assessment is an iterative process composed of several credibility judgments. The deeper the assessment process, the more evaluations a person will conduct.

Additionally, based on the dual process models, motivation and ability are central to the credibility assessment models. For Fogg (2003), someone able and willing to do an in-depth

evaluation of the information will execute more sequences of prominence and interpretation until they are satisfied with their assessment or other constraints impede the process's continuation. For Metzger (2007), ability and motivation guide the exposure phase of the model and affect how detailed the evaluation phase will be.

In conclusion, the models examined are characterized by varying depths of credibility assessment. Despite some discrepancies, they collectively highlight an evaluative process that operates on a spectrum: from peripheral assessment, reliant on heuristics and surface characteristics, to a systematic examination that involves a thorough analysis of available cues and content. This emphasises the notion that credibility evaluations are perceived and situational. Thus, understanding the methodologies employed in the evaluation of information is essential. Consequently, the present research prioritizes exploring the assessment process, aiming to explain the paths taken, the evaluation strategies employed, and the criteria applied by WhatsApp users on political information. This objective is summarised in a singular research question:

RQ1. How does the process of credibility assessment of political information occur on WhatsApp?

Motivation and Ability. Motivation and ability are, in broad terms, the most important variables that affect the depth of the credibility assessment process. This section reviews the literature for factors known to affect these two variables. Factors related to the information user, are at the centre of these two constructs, while many emerge in the relation between the user and the information or medium/technology.

Motivation is affected by individual-only factors such as the *need for cognition (NFC)*, defined as “an individual's tendency to engage in and enjoy effortful cognitive endeavors”

(Cacioppo et al., 1984, p. 306). Additionally, temporary factors such as emotional states affect the assessment process, making them less likely to follow a systematic process (Ecker et al., 2022). Personal emotions and feelings towards a source or topic also have an effect; however, results on this topic vary, with some finding a positive relationship between emotions like anger and fear and the perceived credibility of information, while others identify the opposite effect (Ali et al., 2022; Han et al., 2020; Ou & Ho, 2024).

Issue involvement, encompassing the level of engagement, personal significance, and perceived relevance of information, is believed to strongly correlate with systematic information processing (Petty & Cacioppo, 1986). While various studies support this notion (Freeman & Spyridakis, 2009; Jung et al., 2016), some researchers argue that the need for information—linked to issue involvement—does not inherently lead to improved credibility evaluations, making individuals more inclined to view information as credible, regardless of other influencing factors (Tseng & Fogg, 1999).

The multi-motive framework proposes another approach to motivation, in which the intensity of motivation (high or low) affects the depth of the cognitive process, while the type of motivation predicts how it occurs (Chaiken et al., 1996). The framework identifies three types of motivations: accuracy, defence and impression. First, accuracy motivation occurs when individuals want to make sure a piece of information is accurate – or accurate enough for their goals. Second, defence motivation surfaces when information is processed to reinforce one's perceived interests and self-definitional beliefs (e.g., values, social identities, personal attributes) (Chaiken et al., 1996). In this case, information is processed selectively and with bias. Third, when an individual scrutinizes a piece of information with greater depth due to concerns over the

personal consequences of expressing a particular opinion within a given social context, Chaiken et al. (1996) refer to this as impression motivation.

Conversely, ability is most often connected with user knowledge. Knowledge, often referred to as user expertise, is an aspect of ability typically divided into two dimensions: the understanding of the topic/domain/issue and the knowledge of the medium or technology, also known as information skills (Lucassen et al., 2013; Van Der Heide & Lim, 2016). Some researchers argue that *knowledge of the topic* enhances an individual's capacity for a comprehensive evaluation of information (Metzger, 2007; Tseng & Fogg, 1999), while others contend that it shifts the assessment focus toward the information's semantic features and factual accuracy, as opposed to the source or superficial elements (Lucassen et al., 2013). *Information skills*, which encompass the general abilities needed to assess information, along with *familiarity with the medium* (sometimes referred to as digital literacy), are also believed to influence the credibility assessment. Users possessing strong information skills but limited topic knowledge may lean on superficial indicators, such as the arguments' coherence and the writing quality (Lucassen et al., 2013). However, this does not imply that their assessment will be shallow or peripheral. The problem arises primarily for those lacking both topic knowledge and information skills, who are more inclined to depend on conventional and surface-level heuristics, such as the presentation of the message and recognition of the source (Van Der Heide & Lim, 2016).

Additionally, individuals with a greater understanding of the medium or technology tend to be more aware of its conventions (Fogg, 2003). With the rise of the Internet, this was a reason for concern: without prior experience, users might have struggled to identify credible sources and information, ultimately leading to superficial evaluations of the information presented (Flanagin & Metzger, 2000).

2.4.2 Contextualization

The second commonality between the models of credibility assessment is the importance of context for this evaluation. Literature on information behaviours and practices is at the foundation of these approaches. For Agarwal (2022), the importance of considering context comes from the understanding that people do not engage in information behaviours the same way every time. Instead, people's behaviours differ according to their situation, surroundings, and other factors. Savolainen (2008) describes that information practices are done within the context of one's life-world, which includes one's experiences and shared social, cultural and economic factors. He adds that these information practices are affected by situational factors such as the urgency of the project or the time available for it. As summarized by Saracevic (2010), "One cannot not have a context in information interaction" (p. 1).

Several of the models of credibility assessment include context, although its centrality varies. Fogg (2003) considers context one of the variables affecting his model's interpretation phase. He includes the user context (e.g., expectations), the task context (e.g., work versus leisure), and the environment under context. Differently, Metzger (2007) connects "situational factors" to the exposure phase of the Dual Process Model of Credibility Assessment.

Wathen and Burkell's (2002) model includes context as a determinant of the criteria used in each process step.

"It should be kept in mind that this pass/fail "criterion" would likely differ among users, depending on the contextual factors and intervening variables, such as time, expertise, experience with Web sites/computers, existing knowledge, and need for information, previously described." (Wathen & Burkell, 2002, p. 142)

This idea that context defines the level of accuracy goals is also present for Metzger (2007) and Rieh (2014), who says: “Depending on the contexts in which they interact with information, their constructs of credibility, concern about credibility, effort put into credibility assessment, and strategies used for credibility judgments might be characterized distinctively” (p. 8). Similarly, Rieh and Hilligoss (2008) state that context guides the selection of resources or limits the applicability of the credibility judgment. For example, in their study with college students, they find that students will shape their information-seeking activities according to the professor's opinion, such as preferring books to the Web as sources (Rieh & Hilligoss, 2008).

The idea of a contextualized credibility assessment process has significant implications for the conceptualization and approach to credibility. First, as presented before, this solidifies the understanding of credibility as a perceived characteristic, not intrinsic to an information object or source, constructed through the perspective of the individual evaluating it. Second, the context surrounding the credibility assessment affects the process and final judgment. One individual can evaluate the same information differently in different contexts. For example, the study by Metzger et al. (2010) shows how Wikipedia was credible enough to get basic information but not a trusted source for more essential matters. One must uphold the importance of context in credibility assessment. According to Self and Roberts, "The mediated, interactive environments of online media have led to an emphasis upon situated judgments of credibility" (2019, p. 436).

The goal of this research can then be rephrased as understanding the credibility assessment process of political information in the context of WhatsApp. However, a few issues emerge when defining context in relation to social media and mobile communication. Before going into this discussion, it is pertinent to delve more in-depth into the concept of context and how it has been connected to credibility assessment.

Definition of Context. Context has been conceptualized in a variety of ways. In his literature review, Agarwal (2022) defines of context as:

“The context of an actor’s information behavior consists of elements such as environment, task, actor-source relationship, time, etc. that are relevant to the behavior during the course of interaction and vary based on magnitude, dynamism, patterns and combinations, and that appear differently to the actor than to others, who make an in-group/out-group differentiation of these elements depending on their individual and shared identities.” (Agarwal, 2022, p. 128)

This definition understands context as existing in relation to an actor or group of actors engaged in information behaviour. This means that context is viewed from a particular point of view at a particular point in space and time. Agarwal identifies three views of context: the personal view, in which the context is seen from an individual actor engaged in information behaviour; the shared view, in which the context is seen by a group of people with some common identity engaged in a cooperative information behaviour; and stereotyped view, in which the context is seen by an actor who is not part of the information behaviour.

Based on an extensive literature review, Agarwal (2022) also identifies the elements of context, the parts that make the whole (context), and their variables, the attributes that measure each of these parts. These elements “include aspects of the environment, the task or problem situation, the need or information required, the actor and his/her/their identity, the source/system/channel, the actor-source relationship, and time/space” (Agarwal, 2018, p. 126). Table 1 presents the elements and variables identified by Agarwal (2022, p. 105). It is important to notice that Agarwal focuses on information-seeking behaviours in an organizational context, so some of the variables are framed as organizational factors, but they can be expanded for other contexts.

Additionally, for Agarwal (2018), the actor through which context is viewed differentiates these elements into in-group and out-group, where in-group elements are those with which the individual feels a sense of shared identity, while out-group elements are those excluded from it and stereotyped by the actor.

Context in Credibility Assessment on WhatsApp. The issue with defining the context of credibility assessment of political information in the context of WhatsApp is that the app, like many other social media, blurs the lines between different contexts (boyd & Papacharissi, 2010). First, there is an increasing fading of the boundary between the physical and the digital contexts (Agarwal, 2022). Through digital media, an individual can occupy multiple contexts at once or quickly switch between them. For example, one individual can talk to family members while at work. The mobile nature of WhatsApp can make this even worse because the physical environment can also change. So, not only can one talk to their family while at work, but they can also be reached by work colleagues while at home. Swart et al. (2019) argue that the difficulties that emerge from context collapse make users alter their practices. In this way, context collapse can be seen as a variable of the context of social media.

This research then must choose what elements of WhatsApp as context to focus on. Guided by the goal of understanding the credibility assessment process of political information in the context of WhatsApp and understand what makes it unique, the four potential issues for credibility assessment on WhatsApp explored in section 2.3 and the support of existing literature on context, credibility assessment and WhatsApp, this section of this study chooses to focus on three elements - sources, social dynamics and affordances of the application - as paths to accomplishing this goal. The following sections explore each of these elements through existing literature on their role in information credibility assessment.

Table 1*Context Elements and Variables*

Context Elements	Context Variables
Environment	• Type (organization, social network, culture, physical environment) • Organizational structure; diversity, flexibility, goals; organizational decision-making style; resources, support • Influences of stakeholders and work colleagues; collective discourse of community; employees' familiarity with each other; shared context • Information culture; organizational climate; cultural differences in information environments and practices; culture • Embodiment
Task/activity/ problem/situation	• Type, nature, goal, dimension, characteristic • Specificity • Domain or topic • Stage, step, phase • Complexity, difficulty, uncertainty, non-routineness, intellectual demand • Importance, urgency • Interdependency • Engagement
Need	• Trigger (job and task type, everyday life) • Changing nature

Context Elements	Context Variables
Information required	• Judgments of “enough” • Importance and utility • Tacitness • Observability • Systemic nature
Actor	• Demographics (academic background, age, gender) • Coping style; cognitive ability/style; perceptual speed; visualization abilities; personality— “it’s mine!”, extroversion; identity; problem-solving style; metacognitive monitoring; risk aversion; reciprocation wariness • Habits; reading habits; hobbies • Disability • Work domain; work role; tenure in position; tenure in organization; social role • Experience, domain knowledge, knowledge state, impact of previous information seen, understanding; pre-search confidence; information literacy; cognitive state • Search skills; prior experience with system; technical aptitude • Mood; information overload; attitude toward task; affective state • Interest; motivation; curiosity; academic orientation; learning orientation; need for achievement

Context Elements	Context Variables
Source/system/ channel	• Type (interpersonal, impersonal), dimension • Quality; authority; appropriateness; uniqueness; people-skills, job roles; reliability; usefulness; documents—author, style; currency; system—interface, customizability, functionality, features, interactivity, search interaction method, information objects; device—aesthetics; apps—variety • Accessibility, speed, place, format, physical proximity, impersonal—ease of use; cost; communication difficulty; understandability; device—portability, embodiment
Actor-source relationship	• Social risk, embarrassment, loss of face, revelation of incompetence • Degree of comfort, quality • Expectation • Degree of familiarity with source/system
Time/space	• Time of interaction, immediacy, time constraints, time pressure, estimation of time needed, duration, time of day/week/year, before-during-after, actions in relation to time, synchronicism (synchronous, asynchronous) • Place of interaction, spatial location, functional place and space, artefacts • History of past interaction

2.4.3 Sources of Information

The source or sources are extremely important in information credibility assessment, especially when done heuristically (Tandoc, 2019). When sources are available, users quickly evaluate them using their previous experiences and knowledge and apply this assessment to the information. *Source credibility* is an important factor in the information assessment as it can be used as a cue for several heuristics (Flanagin et al., 2020; Pornpitakpan, 2004). However, its dimensions are not agreed upon. Traditionally, source credibility was composed of trustworthiness and expertise (Hovland et al., 1954), but other authors include aspects such as likeability and similarity. *Source likeability*, defined as how much the receiver likes the source based on variables such as friendliness, pleasantness, physical attractiveness, and dynamism (Metzger et al., 2003), is linked to the *liking-agreement heuristic*, or the belief that “people agree with people they like” or “people I like usually have correct opinions on issues” (Chaiken, 1987, p. 4). Another critical factor is *source familiarity*. People are likelier to believe in sources they know and can recognize (Hilligoss & Rieh, 2008; Metzger et al., 2010). Source familiarity is associated with the *reputation* or *recognition heuristic*, in which name recognition is used as a credibility cue (Metzger et al., 2010). Metzger et al. (2010) suggest that people might prefer known sources because they reduce the cognitive effort of the information evaluation compared to less familiar ones.

The complication surrounding source-related factors is that individuals can perceive several elements in the communication chain as sources, including the channel, other receivers, and the individual themselves (Sundar & Nass, 2001). Furthermore, users can perceive more than one source whose own credibility can interact in multiple ways and affect the evaluation of the message (Kang et al., 2011). On WhatsApp, the lack of source cues (Machado et al., 2019;

Pellegrino, 2018) or the inclusion of the sharer of the information as a source (Kanthawala & Maddox, 2022) can make the credibility assessment more complex.

Other source factors affecting the credibility assessment include the source type, which creates expectations towards a source. This can trigger certain heuristics, such as the persuasive-intent heuristic, in which sources perceived to have underlying intents (e.g. selling a product) are evaluated as less credible, and the expectation violation heuristic, in which a source's credibility is reduced when the user's expectations are broken (Metzger et al., 2010; Tseng & Fogg, 1999).

Literature also talks about the number of sources as a heuristic. Traditionally, this refers to the *consistency heuristic* and how the repetition of a piece of information across several sources indicates its credibility (Meola, 2004; Metzger et al., 2010). More recently, however, this factor has been used to discuss the social endorsement of content, possibly through social media features such as likes and shares (Lee & Shin, 2019). People often give credibility to sources or messages because others have done so (Chaiken, 1987; Metzger et al., 2010; Sundar, 2008). More details about these heuristics are discussed in the next section.

Overall, many source-related factors affect the credibility assessment process, especially when it is done heuristically. Further, many of the emerging challenges of credibility assessment in networked media are source-related, including the possibility of information users recognizing several sources simultaneously and source-related cues being missing or altered. Given that WhatsApp's near-sighted environment does not permit users to track the origin of the content they receive and that this levelled source identification was already encountered in the messaging app (Kligler-Vilenchik, 2022) to answer our main research question, this research examines:

RQ2. How do the sources of political information on WhatsApp, as perceived by users, impact the practices and criteria used to assess its credibility?

2.4.4 Social Dynamics

Focusing on the social aspects of credibility assessment is crucial because credibility is inherently social, not evaluated in isolation but through socially constructed processes influenced by interpersonal relationships and group dynamics (Rieh & Hilligoss, 2008). Research suggests that these cues are not only central to the credibility assessment process but that digital media's capacity to connect individuals offers new potential for these social-based strategies (Metzger et al., 2010). On WhatsApp, where communication and political information sharing frequently occur between close-ties of family and friends, or like-minded groups, it is expected that social interactions play a dominant role in shaping the evaluation of the information by providing important cues for credibility assessment and triggering heuristics. By looking at these social factors, this research aims to understand how aspects such as interpersonal bonds, similarity, group identity and social norms shape the credibility assessment process on a platform that uniquely blurs the borders between personal and mass communication.

Credibility research has always included social aspects as critical in the persuasive effects of sources and messages. Hovland et al. (1954) already stated that the persuasiveness of a communicator depends on an individual's personality and adherence to group norms and standards. Literature relates the impact of social cues to social validation, or social proof, a mechanism where people assess their behaviour and opinions based on the actions of similar others (Cialdini & Goldstein, 2004; Cialdini & Trost, 1998). Research by Cialdini and Trost shows that when lacking objective information, individuals seek external answers, turning to others with similar characteristics for guidance. Social validation significantly influences persuasion, selling, and credibility assessment.

Intermediaries, also called trustees (Jessen & Jørgensen, 2012; Mena et al., 2020) and sharers (Samuel-Azran & Hayat, 2019), are second-order sources that did not create or publish the content initially but shared and endorsed it (Shen et al., 2019). The role of intermediaries in the credibility assessment assumes the most basic idea of social proof: "People are inclined to perceive information and sources as credible if others do so also, without much scrutiny of the site content or source itself" (Metzger et al., 2010, p. 427). However, much discussion remains on how these actors influence credibility assessments. Some research shows a positive link between endorsement by a trustworthy source and perceived credibility (Mena et al., 2020), while others found no interaction among source, intermediary, and bandwagon cues (Shen et al., 2019). The discussion also includes the importance of intermediary characteristics, such as bond strength and similarity.

Social validation also appears as collective endorsement, materialized through bandwagon cues or aggregated opinions from others, such as likes, reviews, and ratings (Metzger et al., 2010). Sundar (2008) calls this idea - that individuals assume a piece of information is correct if many others do so - the *bandwagon heuristic*, while Flanagin and Metzger (2008) define it as a form of endorsed credibility, which they call *tabulated credibility*. Both Flanagin and Metzger (2008) and Sundar (2008) discuss the increased importance and potential of tabulated credibility, which is more present in networked media. As with intermediaries, the effect of bandwagon cues on the credibility assessment is still debated (Luo et al., 2022; Mena et al., 2020; Wang et al., 2023).

Beyond individual relationships and collective endorsement, the impact of an individual's networks on the credibility assessment of sources and information is also relevant. In a small-scale study, Briscoe et al. (2013) demonstrated that people use social network structure

properties to estimate the credibility of information and sources in the scenario of no additional context. Consensus, degree centrality, geodesic distance (Briscoe et al., 2013), social diversity (Hayat et al., 2019), and homophily (D. Sohn & Choi, 2019) are network characteristics that impact credibility.

Lastly, people's credibility behaviours can be affected by social norms. Although there are many definitions of social norms, the concept can be broadly described as shared expectations or explicit rules within a group that incentivize and guide behaviour (Legros & Cislighi, 2020). Social norms are related to one's attitudes, factual beliefs and perceptions of the self and the group. According to Legros and Cislighi (2020), "These various constructs contribute to creating a web of meanings that affects how people feel, think, and act." (p. 63)

Thus, social norms may directly or indirectly impact the information assessment. For example, social norms of availability and short response times may be associated with more heuristic processing of information credibility. As far as this research is aware, no studies examine the relationship between social norms and credibility assessment. However, other research has looked at tangent themes. For instance, both Malhotra (2023b) and Chadwich, Vaccari et al. (2023) look at how norms of deference towards elders and conflict avoidance, respectively, hinder social correction within WhatsApp groups. Therefore, in this research, social norms may emerge as factors influencing the credibility assessment of political information.

With networked media becoming more social and connected, the social nature of credibility assessment has been potentialized (Self & Roberts, 2019). Despite that, research is only beginning to explore the credibility assessment concerning an individual's relationships and networks. Moreover, WhatsApp design and user practices amplify the influence of these social

dynamics. Considering this scenario, this research focuses on the social aspects that influence credibility assessment on WhatsApp, asking:

RQ3. How do social interactions among WhatsApp users impact the practices and criteria used to assess the credibility of political information received on the app?

2.4.5 The Credibility Assessment of Political Information

Political information is a special case within credibility assessment because of its charged nature and its deep connection to one's values, identities and social affiliations. In contrast to other less contentious topics, the credibility of political information is often processed by what Lodge and Taber (2013) call *hot cognition*, in which responses are automatically triggered. These responses are immediate emotional reactions, shaped by identity perceptions, group identification, and partisan alignment. As a result, the credibility assessment of political information is more likely to be influenced by motivated reasoning, perceived similarity (or homophily) and the dynamics of group identity.

While all credibility evaluations can be shaped by one's existing beliefs and goals, political information is especially prone to be evaluated in accordance with one's feelings on the subject, a process known as motivated reasoning (Kunda, 1990; Lodge & Taber, 2013). In such cases, credibility evaluations are less motivated by accuracy and more by defence motivations, such as the need to defend existing attitudes and beliefs (Kunda, 1990). As a result, individuals are more likely to accept information that aligns with their worldview and discount or counterargue information that challenges it.

Another factor that makes the credibility assessment of political information different is the role of perceived similarity and homophily. People are more likely to consider information credible when it comes from sources they perceive as similar to themselves (Housholder &

LaMarre, 2014). Housholder and LaMarre (2014) argue that political information differs from other communication domains in that attitudinal similarity carries more weight than typical credibility cues such as expertise.

Lastly, identity and group belonging disproportionally shape the credibility of political information. Research has shown that people automatically categorize themselves and others into social and political groups, and these group identifications can trigger effects, positively towards in-groups and negatively towards out-groups (Lodge & Taber, 2013). As a result, evaluating political information often becomes a less about assessing the message itself and more of affirming one's group membership.

Together, these factors highlight why political information requires special attention in credibility research. Its emotional load, social embeddedness, and identity-reinforcing nature make it especially vulnerable to biased processing. In the context of growing disinformation, especially on private platforms, it is particularly important to look at political content, because when its credibility is not properly judged, misinformation can more easily spread, polarization can increase, distorting the public discourse and undermining the democratic process.

2.4.6 WhatsApp Structure and Affordances

It remains to be understood how WhatsApp's role in the credibility assessment of the information that passes through it. WhatsApp's distinct design- such as end-to-end encryption, private group chats, and sharing functions - creates a communication environment that is different from other open social media. As discussed in section 2.3, these characteristics not only support social practices but also directly influence an individual's attitudes and behaviours towards a piece of information. The question, then, is how these features interact with users' practices and perceptions during the credibility assessment process.

Affordances theory provides a framework for understanding the relationship between WhatsApp's material design and user information behaviour. Bucher and Helmond (2018) define *affordances* as "what material artifacts such as media technologies allow people to do" (p. 3). The concept of affordances originated in ecological psychology, with Gibson (1977) rethinking the relationship between a being and its environment. Affordances are relational they exist in the relationship between the material and the user (Gibson, 1977). Technologies constrain what affordances they might offer and through what means. On the other hand, there are many ways that a user can respond to and interact with these possibilities (Hutchby, 2001).

Affordances are usually defined as potential or possibilities for action that must be activated by an agent (Bucher & Helmond, 2018; Ronzhyn et al., 2023; Treem & Leonardi, 2012). For Evans et al. (2017), whether a technology affords or constrains actions can be understood as a variability or range of each affordance. For example, Facebook affords a larger range of visibility, from completely public to private in one-to-one conversations, from WhatsApp, where visibility is limited to members of a conversation or one's phone contacts through the status feature.

Despite these common understandings, there is disagreement over the role of perception in the existence of an affordance. Gibson (1977) believes affordances exist as potentials in the environment, whether it is perceived or not. Similarly, Gaver (1991) and Hutchby (2001) deem that affordances do not have to be visible or easily perceptible to be interacted with. Instead, they can be learned, explored, and discovered. In opposition, for Norman (1999), affordances must be perceived to exist.

Nagy and Neff (2015) introduce the concept of imagined affordances, highlighting that users' perceptions of technology influence their expectations and interactions, regardless of

whether those perceptions are accurate. They argue that these perceptions are shaped not only by the technology's material characteristics but also by the user's social context and emotions. Similarly, McVeigh-Schultz and Baym (2015) explore affordances through the idea of sense-making, highlighting how users derive meaning from their interactions with technology. They suggest that the relationship between users and technology is dynamic, leading to the emergence of new practices and the discovery of previously hidden affordances. Together, these perspectives underscore the significance of user perception and context in shaping technology interactions.

Sundar (2008) proposes that the affordances of digital technologies affect credibility assessment in two key ways. First, they add cues that trigger heuristics that impact the assessment process. For instance, synchronicity, often understood as sub-affordance of interactivity, can increase message credibility because the absence of time delay implies fewer opportunities for content manipulation (Lee & Shin, 2019). Second, affordances can result from an active effort to assemble cues used in the information evaluation. For example, WhatsApp's "forwarded many times" label can trigger the bandwagon heuristic and make users perceive the information as more credible. These examples also show how the same affordance can trigger positive and negative heuristics. The "forwarded many times" label can also trigger an anti-bandwagon heuristic.

Studying WhatsApp's structure through affordances offers many advantages. Affordances, through their constraints and possibilities, shape the context where the information is shared and evaluated. On WhatsApp, for instance, limited visibility restricts the use of traditional credibility cues while highlighting social factors. In such a context, the strategies used

in the credibility assessment are either shaped by the affordances of the platform or triggered by the affordances themselves.

Furthermore, an affordance-based approach allows for a deeper understanding of the interactions between WhatsApp's materiality with users' behaviours and practices. Affordances provide a framework to analyze not only what features a platform offers but also how users interpret and act on these features (McVeigh-Schultz & Baym, 2015; Nagy & Neff, 2015). Lastly, this framework also concedes that as much as affordances are part of the context of the information behaviour, affordances are also shaped by this context. For example, WhatsApp's availability will vary due to technological aspects, such as bad reception, and social settings, such as a meeting.

By focusing on affordances, this research explores how WhatsApp's structural and design choices influence the practices and criteria used when evaluating the credibility of political information. This approach acknowledges that credibility assessment is shaped by both the content of the information and by the environments in which it is shared. WhatsApp's unique structure ultimately mediates the interactions between the users and the information, playing a critical role in shaping the credibility assessment process. Based on this framework and the goal of exploring the credibility assessment process as it occurs specifically in WhatsApp, this research also aims to answer:

RQ4. How do WhatsApp's affordances impact the practices and criteria used to assess the credibility of political information received on the app?

Some research has discussed WhatsApp regarding the constraints and possibilities of action that the application gives users. The following section explores some of the literature on

WhatsApp's affordances and research on other instant messaging apps and social media applications when applicable.

The Affordances of WhatsApp. WhatsApp is characterized by its immediacy, synchronicity, and "always-on" nature, understood as an outcome of availability or visibility (Mascheroni & Vincent, 2016). In their study with children and teens, Mascheroni and Vincent (2016) find that this constant availability afforded by smartphones and social media applications, particularly WhatsApp, creates proximity, intimacy and belonging. However, these affordances also generate expectations that contribute to anxiety and insecurity.

As a counterpoint, WhatsApp also affords a means of control over one's presence and online activity. By controlling their visibility, users balance connections with contacts, manage digital interactions, and overcome distractions (Mannel, 2019; Mols & Pridmore, 2021). For instance, users can deactivate read receipts or the "last seen" label, to reduce visibility and immediate social consequences.

Users also have control of what they share on WhatsApp, an affordance Kini et al. (2022) calls *filter-ing* (with the hyphen). Through this affordance users have control over the inclusions and exclusions in interactions. One-to-one conversations, group chats, and public status features give users this control over what to share and with whom to share it. However, as Pellegrino (2018) notes, the scalability of WhatsApp can lead to context collapse, where users lose control over who ultimately has access to their shared information.

Persistence and replicability, preserve the original form of a message, retaining the information as it was first sent in the app. This allows users to return to it and potentially verify its credibility. However, these same affordances can lead the information to be consumed in a

different context than its original, often leading to misinterpretation (Pellegrino, 2018).

Information is susceptible to the loss of its contextual integrity (Nissenbaum, 2004).

Masip et al. (2021) suggest that four affordances - privacy, personalization, replicability, and segmentation - influence how people engage with news on WhatsApp. Privacy and personalization are seen as filtering through trusted ties, allowing users to segment their information flows into smaller, more coherent "timelines" inside each conversation and giving users control over whom they will share a piece of information or news. Lastly, segmentation affects the other affordances, allowing the user to have specific rules, habits, and responses for different groups.

Lastly, on civic and political participation, Colom (2022) identifies how affordances such as *group relevance*, *information visibility*, *multimodality*, and *scale* are critical for building connections and creating shared meanings in Kenyan civic groups. However, structural inequalities, such as limited data plans, and social dynamics, such as gender expectations, constrain the availability of some affordances to users. These constraints underscore the importance of considering structural inequalities in shaping users' practices.

These studies highlight how WhatsApp's affordances mediate users' behaviours with information and other users. However, the role of these affordances in the credibility assessment process remains unexplored. Building on this framework, this research seeks to understand how WhatsApp's affordances influence the practices and criteria users employ when assessing the credibility of political information.

2.5 Summary and Research Directions

This chapter describes the state of credibility research and sets a framework for the present research. Credibility is defined as the believability of messages, sources, or media (Tseng

& Fogg, 1999) and characterized as a perceived quality, not intrinsic to the object (source, medium, or information) but an assessment made by the individual evaluating it (perceiver) (Appelman & Sundar, 2016; Choi & Stvilia, 2015; Hovland & Weiss, 1951; Metzger, 2007; Self & Roberts, 2019; Tseng & Fogg, 1999). Defining credibility as a perceived quality, as done by communication studies, distances the concept from truth (Self & Roberts, 2019). This research does not concern itself with truth and falsehood but with the individual's perception of the information.

After the delineation of the history of credibility research in modern times, the present mediatic moment is contextualized through four potential challenges for credibility assessment: the disruption of traditional gatekeeping (Thorson & Wells, 2016), the loss of traditional credibility cues, such as authority, sources becoming more complex and murkier online, and credibility becoming increasingly social.

These four credibility challenges are applied to WhatsApp through existing research on instant messaging applications. WhatsApp and other IMAs are understood as fundamentally different from open social media, particularly in aspects that can have a great influence in the credibility assessment process, such as strength of ties, lack of visibility and available cues.

The theoretical framework of this research returns to the credibility assessment models to explore its two main commonalities: different depths of elaboration and contextualization. First, the credibility assessment process is understood as occurring at different depths or elaboration levels, depending on aspects such as motivation and ability to evaluate. This variation affects which factors are looked at and how they affect the final credibility evaluation.

Second, information studies literature is invoked to discuss the importance of context for the credibility assessment process, among other information behaviours. Based on the definition

by Agarwal (2018), context is understood in relation to an actor or group of actors' point of view at a particular point in space and time.

Identifying the gap in current research on the study of the credibility assessment of political information on WhatsApp, this study aims to understand the credibility assessment process, identifying through what strategies and criteria it is done. Informed by the main challenges of credibility assessment described in Section 2.2.5 and Section 2.3, and by credibility assessment research, this study focuses on three aspects: the perceived source of the information, the social dynamics that occur in the application and how WhatsApp structure, through its affordances, shapes the credibility assessment process.

The goals of this research are summarized in four research questions:

RQ1. How does the process of credibility assessment of political information occur on WhatsApp?

RQ2. How do the sources of political information on WhatsApp, as perceived by users, impact the practices and criteria used to assess its credibility?

RQ3. How do social interactions among WhatsApp users impact the practices and criteria used to assess the credibility of political information received on the app?

RQ4. How do WhatsApp's affordances impact the practices and criteria used to assess the credibility of political information received on the app?

In summary, these research questions aim to answer RQ1, but this study focuses on the most pressing matters of credibility in network media, source, and social aspects. It also provides a framework for addressing this question uniquely for WhatsApp.

The next chapter provides a methodological approach to answer these research questions, dealing with the challenges of researching a perceived and contextual construct, often done

unconsciously (Sundar, 2008). Methods and their specific operationalizations are formulated to capture the perceived sources of political information on WhatsApp, the relationships between individuals and groups, the affordances of the application, and how they shape the credibility assessment process.

Chapter 3 - Methods

In this chapter, the methodological approach is explained and justified, followed by a detailed explanation of the choice of methods. In sections 3.3, 3.4, and 3.5, each phase of the research is dissected, including the sampling methods, operationalization of research tools, and data analysis. Section 3.6 presents how the diary and interview data was combined. Sections 3.7 and 3.8 discuss the limitations of this study and ethical considerations, respectively.

To respond to the research questions, a mixed-methods sequential design is used, composed of a recruitment survey, diary study and in-depth interviews (Creswell & Creswell, 2018). A preliminary survey was used to recruit volunteers for the research and gather information necessary for the diary sampling. Next, in a diary study, participants were asked multiple times to answer a questionnaire on the credibility assessment of the last piece of political information received on WhatsApp. Subsequently, in-depth interviews were conducted with some of the diary participants. Preliminary findings from the diary studies informed the interview script and the diaries of each of the participants were used as prompts for discussion. Both data corpora were analyzed thematically, first separately and later combined to present one set of results.

3.1 An Interpretive Methodological Approach

This thesis is grounded in an interpretive approach. Interpretive methods deviate from positivist approaches by prioritizing theory generation over testing and verifying an assumed objective reality. Unlike positivist approaches, interpretive methods recognize that interactions between researcher and literature do not necessarily reflect subjects' lived experiences. While interpretive methods accord with the formulation of research questions and the engagement with literature, they also have space for unexpected discoveries, surprises, and the emergence of new

questions (Babones, 2016; Schwartz-Shea & Yanow, 2012). As this research focuses on information credibility, instant messaging applications and political information, an intersection that has not been extensively investigated and aims to be explanatory, the interpretive approach is rather fitting.

Additionally, interpretive research "focuses on context-specific meanings, rather than seeking generalized meaning abstracted from particular contexts." (Schwartz-Shea & Yanow, 2012, p. 23). Understanding meaning-making as context-specific rather than generalizable is vital for this research on several levels. First, this study aims to understand the credibility assessment process in the context of WhatsApp and its associated meanings. In WhatsApp, for example, people's perception of privacy and their trust in relationships within it add new layers of meaning to the app and the credibility assessment process that occurs in this context. Second, as seen in the previous chapter, the credibility assessment is highly contextualized. Interpretive methods acknowledge and account for this specificity, allowing depth and detail to be the strength of the research rather than focusing on the lack of generalizability.

Moreover, the research also calls for a methodology that talks about *realities* in the plural. Messaging applications, private by nature and by presentation, impose several technological and ethical limitations to data collection. Although existing research has found ways to circumvent the technical constraints (Caetano et al., 2018; Garimella & Tyson, 2018; Resende et al., 2019), questions can still be raised about the ethical nature of this data. For the present research, it was decided that no data would be gathered directly from the application, understanding that privacy and security are expected from WhatsApp. Therefore, all data is collected via self-reported methods, that is, through the participants themselves. In other words, entry into these private spaces is by way of the participants' perceptions. Although this does not necessarily call for

interpretive methodology, it prevents an objective truth from being reached. The interpretive approach looks for meaning-making by the individual and as a social practice, acknowledging multiple interpretations of acts, events, and experiences (Schwartz-Shea & Yanow, 2012).

While this study relies on some descriptive statistics, the study is primarily qualitative. Many qualitative methods give the researcher access to the thoughts and feelings of the subjects, or as Hyers (2018) puts it, "gives voice to the participants" (p. 7). To answer this thesis' research questions, it is necessary to create space for individuals to express their own experiences and thoughts, as the credibility assessment is subjective and mostly internal, with only part of it being expressed externally through actions (Sundar, 2008). Therefore, these qualitative methods that give voice to the participants are essential for this research.

3.2 Case Selection

In selecting the focus of this study, the platform, the national context and the regional setting were considered. The choice of WhatsApp, Brazil and São Paulo aims to provide enough detail for the exploration of the topic of study while allowing the potential of this study's findings to apply to other contexts.

WhatsApp is the largest instant messaging application in the world, with more than 2 billion users (WhatsApp, 2020b). In addition, WhatsApp has widespread adoption and a significant user base in diverse countries in Asia, Africa, Europe, Latin America and North America (Ahmed, 2023; Kemp, 2024; WhatsApp, 2020b). In comparison, the second most used messaging application, WeChat (1.3 billion users), is highly concentrated in China, with 1.1 billion users from that country (Statista, 2024).

Furthermore, while WeChat deals with the Chinese government's control, which includes the regulation of misinformation, WhatsApp encryption obstructs any form of content

moderation (Butler & Ecker, 2023). This way, research on WhatsApp is more likely to provide findings applicable to other instant messaging applications and other countries.

Lastly, although WhatsApp is the most studied messaging app in media and communication, scholarship (Baulch et al., 2024) and significant research has been done on the spread of misinformation within the app (Baulch et al., 2022; Resende et al., 2019), studies on users' cognitive processes of political information received on the application are few (Malhotra, 2023a; Masip et al., 2021).

Brazil is the 7th largest country in the world by population. Although it is a developing country, internet access and use are significant. Internet penetration in Brazil is of 88% (IBGE - Instituto Brasileiro de Geografia e Estatística, 2024a). Internet use in Brazil is particularly characteristic because it is done mainly through mobile means. 98.8% of internet users access it through mobile phones, while 49.8% do it through their television devices and 34.2% through computers (IBGE - Instituto Brasileiro de Geografia e Estatística, 2024a). Access to cell phones is most often cheaper than through computers. For this reason, 87.6% of Brazilians have a mobile device, and 96.7% of them use it to access the internet (IBGE - Instituto Brasileiro de Geografia e Estatística, 2024a). Research data also shows that internet use is highly connected to messaging, as 91.1% of internet users use it to send and receive messages through applications, excluding email (IBGE - Instituto Brasileiro de Geografia e Estatística, 2024a).

Brazil's relationship with WhatsApp is also strong. Brazil has the second largest number of WhatsApp users in the world (Ahmed, 2023). A 2023 survey found that 99% of smartphone owners in Brazil had WhatsApp installed, and 93% of the application's users used it daily or almost daily (Paiva, 2023). WhatsApp is used for voice calls by 78% of the app's users, and 65%

of them say they make more calls through the app than through their mobile carrier (Paiva, 2023).

Additionally, WhatsApp is used in the context of increasing news avoidance and the switch to personalities/influencers and alternative sources for news (Newman et al., 2024). There has been a great increase in individuals declaring feeling worn out by the news, with numbers jumping from 30% in 2019 to 46% in 2024 (Newman et al., 2024). Although the Reuters Institute Digital News Report 2024 indicates a decrease of 5%, 38% of survey respondents still indicated that they use WhatsApp for news (Newman et al., 2024).

Lastly, Brazil has been stage of many political misinformation and political propaganda scandals on WhatsApp (Belli, 2018; Evangelista & Bruno, 2019; Machado et al., 2019). Despite these stories and the numbers associated with WhatsApp in Brazil, the country has not been the focus of many studies in media and communications (Baulch et al., 2024).

3.3 Recruitment Survey

As a sequential multi-method approach, sampling for each step of this research was informed by the previous one. Volunteers were recruited through a survey with questions about the inclusion criteria. From the sample universe of volunteers, quota sampling was used to select participants invited to join the diary study. For the interview phase, quota sampling was used again, to maintain the same variability as the diary study. Table 2 shows the characterization of the sample over the different steps of the study. Each sampling method, criteria and variable will be better explained in their respective section.

The survey was a preliminary step used to recruit willing volunteers. The recruitment was done in the form of a questionnaire, which collected information necessary for sampling the next

phases of the research, including demographic characteristics, political opinion, and contact information.

Table 2

Sampling Strategy and Description by Each Phase of the Study

Phase	Sampling method	Criteria/variables	Goal	Final number
Recruitment survey	Eligibility criteria and consent	18+ Living in the Metropolitan Region of São Paulo WhatsApp user	No limit for number of volunteers	139 completed surveys 83 responses retained 59 volunteers for diary study
Diary	Quota sampling	Age Gender Political opinion	55 participants	30 participants
Interviews	Quota sampling	Age Gender Political opinion	12-15 participants	14 participants

At this stage, certain eligibility criteria were already narrowed the pool of volunteers. Eligible participants had to be 18 years old or older, residents of São Paulo or its metropolitan area, and frequent users of WhatsApp. Because of the messenger's application ubiquity in Brazil, especially in urban areas, this criterion was not seen as a limitation (Paiva, 2023).

A Qualtrics form was used for recruitment. It started presenting the consent form that encompassed both this questionnaire and the participation in the diary studies phase (Appendix 1). Following, gender, age, education level and city of residence (São Paulo, Greater São Paulo,

and others) were asked. Political opinion was asked using a question adapted from Latinobarometro, in which participants were asked to place themselves on a 0-10 scale, with 0 being left and 10 being right. This question was then followed by an inquiry about the participants' interest in political and social topics, measured on a 7-point scale.

Volunteers were asked about their frequency of use of ten (10) media, including traditional and digital media. Next, the survey interrogated participants about their WhatsApp use, including motivations for using it, group membership, and reception of political information on the app. Finally, respondents completed a matrix on the importance of different credibility constructs in assessing political information on WhatsApp, based on Rieh et al. (2010). The complete questionnaire can be found in Appendix 2.

Recruitment ran from August 15th, 2022, to November 24th, 2022, for 102 days. Recruitment was primarily done through social media. The researcher used her own networks to share the invitation to participate and asked that people share with others who might be interested. The researcher also posted the recruitment image several times on her own social media profiles. Aiming to reach a more diverse public, especially in political opinion and level of education, the researcher carried out the following means of recruitment:

- Posted the invitation to various Facebook and Reddit communities. The researcher sought out groups focused on politics, political candidates, and the city of São Paulo, including neighbourhood groups. Upon gaining access to these communities, she shared the recruitment message.
- Contacted professional associations like the Association of Superintendents and Domestic Workers Syndicate to share the research but received no response.

- Created a sponsored Facebook post targeting eligible users. R\$300.00 were spent to promote it.

All the recruitment was made with the same design and similar text, adapted only for size and target. An example of a recruitment post can be seen in Figure 1.

Figure 1

Example of Recruitment Material



3.3.1 Data Cleaning

The admission survey data was cleaned for statistical analysis. Entries from individuals that were not encompassed in the inclusion criteria were excluded. Any answers with missing information were excluded from the matrix questions about media use, type of political information received on WhatsApp, and credibility constructs.

A total of 139 responses were recorded, but 36 participants were excluded due to ineligibility or unanswered questions. Thus, 83 surveys were included in the analysis. Volunteers

Table 3*Survey Sample and Volunteer Characteristics*

Variable		Survey Respondents		Volunteers	
		Frequency	Percent	Frequency	Percent
Total		83	100%	59	100%
Gender	Female	42	51%	25	42%
	Male	41	49%	34	58%
Age	18 to 34 years old	19	23%	14	24%
	35 to 54 years old	34	41%	21	36%
	55+ years old	30	36%	24	41%
City of residence	São Paulo	66	80%	45	76%
	Metropolitan Area of São Paulo	17	20%	14	24%
Education	Superior education completed	62	75%	48	81%
	Superior education incomplete	4	5%	2	3%
	High school completed	14	17%	8	14%
	High school incomplete	1	1%	1	2%
	Middle School incomplete	2	2%	0	0%
Political opinion	0 or 1	12	16%	12	20%
	2 or 3	24	32%	20	34%
	4 or 5 or 6	13	18%	8	14%
	7 or 8	16	22%	13	22%
	9 or 10	9	12%	6	10%
Political interest	7 - Very interested	40	48%	33	56%
	6	17	20%	10	17%
	5	18	22%	12	20%
	4 or less	8	10%	4	7%

needed to answer questions about age, gender, and political opinion, resulting in 83 eligible respondents. Finally, 59 agreed to participate in the next phase and provided their cellphone numbers for contact.

Table 3 shows the demographic characteristics, political opinions, and political interests of the 83 respondents within the eligibility criteria and of the 59 volunteers.

3.4 Diaries

Diary study is an umbrella term for several data collection methods in which data is gathered multiple times from the same respondent. Solicited diaries are especially used to gather details about daily occurrences, experiences, emotions, and thoughts, offering embedded and contextualized data (Ohly et al., 2010). This method is particularly relevant for this research because of its temporality, contextual embeddedness, and level of data collection.

Diary studies can capture data on various levels, making them well-equipped to gather data on researched constructs that lack stability, either over time or for the same individual (intraindividual) (Ohly et al., 2010). With credibility's nature as an individual perception (Self & Roberts, 2019; Tseng & Fogg, 1999) and highly affected by situational circumstances (Rieh & Hilligoss, 2008), the higher frequency of diaries facilitates capturing these experiences.

Additionally, diary studies can be embedded in daily life, gathering data in natural contexts like home and work (Meth, 2016). They are effective for exploring behaviours influenced by situational factors (Ohly et al., 2010) and facilitate the collection of contextual data, including "details about the immediate social setting, associated feelings, or the ongoing day-to-day storyline surrounding an event." (Hyers, 2018, p. 66). For this research, diary studies are ideal for examining the dynamic nature of credibility assessments and gathering relevant

contextual details, including social backgrounds, information sources, content, and participant perceptions.

Diary studies capture often-overlooked attitudes, thoughts, and behaviours, including the credibility assessment of information that users may not consciously recall (Hyers, 2018; Sundar, 2008). They reduce retrospective bias by encouraging participants to focus on their behaviours and collecting data close to the experience. Additionally, as noted by Hilligoss and Rieh (2008), diaries serve as prompts for discussion in follow-up interviews. This approach enhances memory recall and allows for deeper reflection and questions from the researcher.

Interviews also complement diaries by challenging participants to reflect on their behaviours and give a more nuanced evaluation of their thoughts (Meth, 2016). For this study, the diaries were expected to collect information on the social relationships, sources, heuristics, and interactions that were part of each credibility assessment needed to respond to RQs 1-3. However, they would not necessarily be able to inform RQ4 about the role of WhatsApp's affordances in the assessment process.

Diary studies have already been used in credibility and information behaviour research, most notably Hilligoss and Rieh's (2008) work on information-seeking activities that resulted in their Unifying Model of Credibility Assessment. Also significant are Rieh et al. (2010), Ohme et al. (2016) research on citizens' media exposure in a convergent media environment and Tang and Oh (2019) study on university students' consumption and reactions to political news accessed via mobile phones during the 2016 election campaigns.

In conclusion, diary studies are suitable for studying credibility due to their embeddedness, contextualization, and flexible temporality. Furthermore, this method can be operationalized through several tools, include a diversity of prompts—structured or open-

ended—and be adapted to the research goals and restrictions. For this reason, diary studies were chosen as a central component of this thesis.

3.4.1 Diary Sampling

Thirty (30) volunteers were sampled to participate in the diaries. To ensure a variety of perspectives could surface during the diary study, quota sampling was used to select participants across a predetermined property space. In quota sampling, once the variables are decided, the population is divided into subgroups which have specific combinations of the variables. Then recruitment is made in equal numbers for each subgroup (Moser, 1952). Although not representative of the wider population, quota sampling promotes variation across selected independent variables (Moser, 1952). For this research, gender, age, and political opinion were the variables chosen to compose the property space, as existing literature suggests that these variables are likely to influence the credibility assessment of political information online (Bonafé-Pontes et al., 2021; Johnson & Kaye, 1998; Pont et al., 2019; 2019).

Quota sampling is also suitable for the continuous recruitment of participants. Although the expectation was to collect the diaries before or during the 2022 Brazilian Presidential Elections, due to the low number of volunteers at that time, recruitment continued even after the start of the data collection. Moreover, sampling had to account for the high drop-out rates typical for diary studies (Hyers, 2018). Quota sampling allows each participant's response rate to be supervised, ensuring the quota for each property space cell is met. This way, if one or more participants dropped out of the study, another volunteer could be recruited to fill the incomplete quota.

Selection criteria. The variables used to create the property space that guides participant selection – age, gender, and political opinion – appear relevant in the credibility literature.

Significant effects of gender on information credibility are found by Shen et al. (2019) and Johnson and Kaye (1998). The same studies identified a strong effect of age on credibility evaluation, a finding more recently corroborated on WhatsApp and Facebook by Pont et al. (2019). That said, there remains a lack of consensus on the importance of these variables for credibility assessment (Choi & Stvilia, 2015; Pont-Sorribes et al., 2020). Despite this, the two variables were chosen due to their effects on different information behaviours. For example, Pont-Sorribes et al. (2020) found significant differences in men's and women's behaviours on WhatsApp regarding the topics they discuss. Gender was a dichotomized variable in males and non-males. Age was divided into three groups (18-34 y/o, 35-54 y/o, 55+ y/o) based on the operationalization used by several research institutes in Brazil (IPEC, Opinion Box, Datafolha, Data Senado, Latinobarómetro)¹.

The third variable, political opinion, is frequently labelled as significant in credibility and misinformation research. Johnson and Kaye (2014) found that political ideology and party affiliations were related to the perception of social network sites' credibility. More recent studies in Brazil found that political opinion affected both message (information) perception and trust in the media (Bonafé-Pontes et al., 2021; Rossini & Kalogeropoulos, 2023). This variable was divided into five categories: far-left (0 or 1 in the survey), left (2 or 3), centre (4, 5 or 6), right (7 or 8) and far-right (9 or 10), to sample a variety of political opinions. Table 4 categorizes the 59 volunteers.

Education level is also consistently correlated to credibility assessment behaviours, with individuals with higher education evaluating both digital media and the information published

¹ Research institutes:

Ipec: <https://www.ipec-inteligencia.com.br/>; Opinion Box: <https://www.opinionbox.com/>; Datafolha: <https://datafolha.folha.uol.com.br/>; Data Senado: <https://www12.senado.leg.br/institucional/datasenado>; Latinobarómetro: <https://www.latinobarometro.org/lat.jsp>

through them as less credible than other media (Bonafé-Pontes et al., 2021; Johnson & Kaye, 1998; Pont et al., 2019). However, given the volunteer pool, it was not possible to include education level as a variable for the diary sampling. As will be further discussed this is one main limitation of this research. Nevertheless, considering the importance of this variable, the researcher aimed to diversify the diary sample.

The number of sampled diarists was informed by the goal of collecting 450 diaries by the end of the data collection period. This number was derived from compiling seven communication articles using diary studies (Cisek & Krakowska, 2019; Ekström, 2016; Ohly et al., 2010; Rieh et al., 2010; Roche & Jacobson, 2019; T. Sohn et al., 2008; Tang & Oh, 2019). These references and additional literature on methods shaped the decision for each participant to complete 10 diaries (Hyers, 2018; Janssens et al., 2018; Ohly et al., 2010). It was expected that this number would provide insights into how diarists engage with political information on WhatsApp, capture a range of information and contexts, and keep the burden on participants manageable.

The sampling goal also accounted the expected high drop-out rates typical to diary studies (Meth, 2016; Ohly et al., 2010). Compensation for participation was not authorized by the research ethics board in Brazil. While strategies to increase compliance were used, such as having a communication channel between the participants and the researcher during the collection period and explaining the importance of the research, the lack of financial incentives played a role in participants volunteering and staying engaged with the study.

Ultimately, 46 participants were invited to participate in the diaries, with 30 completing at least one entry. This represents a dropout rate of 35%, which is expected in diary studies (Hyers, 2018).

Table 4*Quota Sampling Grid Completed with 59 Volunteers*

		Gender							
		Male				Non-Male			
		Age				Age			
		Base	18-34	35-54	55+	Base	18-34	35-54	55+
Political Opinion	Base	34	8	15	11	25	6	6	13
	Far Left	3	1	1	1	9	2	-	7
	Left	12	5	4	3	8	2	4	2
	Centre	3	1	-	2	6	1	1	3
	Right	13	1	9	3	1	-	-	1
	Far right	3	-	1	2	2	1	1	-

3.4.2 Diary Study Design

This subsection describes the data collection procedure and explains related decisions.

The main decisions of a diary study design pertain to study duration, measurement frequency, measurement timing (i.e., random or fixed), the option between retrospective and momentary assessment, allowed delay between trigger and response, recruitment and instructions, data collection device, and data collection tool (Hyers, 2018; Janssens et al., 2018; Ohly et al., 2010).

The diary study took place from September 21 to December 19, 2022. Participants were grouped into seven different waves, each lasting four weeks. This timeline coincided with the

2022 Brazilian Presidential Elections, allowing for the collection of a wide range of participant experiences. The study was intended to continue until the expected number of participants and entries were obtained. However, many participants reported declining political discussions within their WhatsApp chats in December, replaced mainly by football-related topics due to the FIFA World Cup.

Each diarist was asked to answer the diary questionnaire 10 times during their period of participation. This frequency was a compromise between achieving the hoped for number of diaries, gathering data from a diverse number of participants, and keeping the participant burden acceptable so as to improve the response rate.

Randomized timings for data collection was the best option for this study. Randomization of data collection can avoid participant reactivity and anticipation effects and increase data representativeness, while reducing participant burden (Janssens et al., 2018). Trigger messages were sent to the participants via WhatsApp. The dates and times of these triggers were randomized using Excel for each 4 week waves, every day, between 8 am and 10 pm (measurement timing).

Participants selected for this phase of the study were contacted via WhatsApp after having provided their cellphone numbers in the recruitment survey. They were informed that their participation required them to answer ten (10) questionnaires at the time, or soon after, they received a trigger message via from the researcher. For each diary entry, participants were asked to focus on the last piece of political information they had received or read before receiving the trigger message or when they could answer the questionnaire. Participants were given two (2) hours to answer the questionnaire after the trigger message. This relatively short delay aims to diminish recall bias and discourage the participants from choosing which message they would

talk about. At the same time, some delay had to be allowed to increase feasibility and participant compliance (Janssens et al., 2018).

After careful consideration and testing of available tools, the best way to trigger the diaries was to schedule messages directly through WhatsApp. The setup involved sending WhatsApp messages which included links to the online survey tool Qualtrics. The messages were scheduled through the plug-in WhatsUp+. WhatsUp+ is a signature-based WhatsApp Web plugin primarily designed for business purposes (*WhatsUp+ Para WhatsApp™*, n.d.). Using the participant's contact information, the researcher scheduled the ten (10) messages for each diarist, using the randomly generated dates and times. This setup achieved three goals: sending messages at random intervals, accommodating various question formats, and keeping the demand on participants to a minimum. Given that participants were all self-identified WhatsApp users, it was expected that the trigger messages would not be missed. At the same time, receiving the trigger message on the app allowed them to quickly review their conversations and find the last piece of political information they had received. This method avoided asking the participant to download a new application just for the research, as other tools required. Using WhatsUp+ allowed the triggers to be scheduled at random times, separate for each participant, avoiding the main issue found during pilot studies, relying on the researcher to send the trigger message at the right time.

Each participant received a unique link to a Qualtrics questionnaire in each trigger message.. This enabled the data to be attributed to the individual without including personally identifying information alongside their diary responses. This format also allowed participants to easily access the diary questionnaire on any device they had WhatsApp.

3.4.3 Data Collection Instrument

The diary questionnaire was composed of both multiple-choice and open-ended questions. The questionnaire had a total of 15 questions, with two of them being open-ended. This followed the advice from Reis et al. (2014) that diaries should not take more than five to seven minutes in total and from Ohly et al. (2010) that scales should be composed of less than five items to reduce participant burden and improve engagement. The complete questionnaire can be found in Appendix 3. Several iterations of the questionnaire were piloted with friends and family until the final version was reached.

The first set of questions within the questionnaire focused on the political information itself, asking the participant to describe it in their own words and provide links, if possible. This was followed by two multiple-choice questions asking about specific characteristics of the information, including format and content.

The second set of seven questions gathered information about the conversation in which the message was received. First, if it was received in a group or individual conversation. For information received in a group setting, participants were asked about the relationship between group members and if the group was open or private. For individual conversations, participants were asked about their relationship with the sender. This was followed by four short-text questions in which the respondents were asked to identify who or what they considered to be the source of the information. A quick explanation was given in the diary's guide (See Appendix 4) to help participants with this question. For each source identified, participants were asked about its perceived credibility through two questions taken from Sterrett et al. (2019).

The following question aimed at capturing the perceived credibility of the information. In the current media environment in which both source and media can be blurry and layered, having an independent message credibility scale allows for better identification of the components that

compose the judgment from the ones that reflect it (Appelman & Sundar, 2016). However, message credibility can be extremely hard to measure independently due to the interference of source and media credibility in the user's perception of the information. To measure message credibility independently, this project used Appelman and Sundar's (2016) measure. Their proposed scale passes all validity and reliability tests, in addition to being user-friendly, with only three (3) items.

Both the source credibility (Sterrett et al., 2019) and the message credibility (Appelman & Sundar, 2016) measures were adapted to Portuguese by the researcher based on the work by de Figueredo and Gómez (2011). Although some credibility-related words cannot be directly translated from English to Portuguese, or can be translated into several words, the two measures can be easily translated, as indicated by de Figueredo and Gómez (2011).

The last two questions asked participants about the process they took to arrive to their credibility evaluation. First, participants were asked, "Explain how you decided that this information is credible or not," and provided space to write their answers in paragraph form. In the instructions sent at the beginning of their participation, they were asked to "answer with a couple of sentences" or more if they wished. The last question of the questionnaire, asked participants whether they used any of the listed measures to check the information, based on a predefined list adapted from Rieh et al. (2010).

3.4.4 Sample Demographics

A total of 134 diary entries were collected from 30 participants each contributing between one to eight entries during their involvement in the study. While one participant asked to withdraw from the study, they did not request the exclusion of their data. Gender representation was balanced among participants; 15 male, 15 non-male. However, there was

imbalance of representation in political opinion, with left-leaning participants constituting 63% (n=19), right-leaning participants at 27% (n=8), and centrists at only 10% (n=3). It is relevant to note that this disparity was previously seen in the volunteer survey, indicating a potential recruitment bias, failing to reach right-leaning individuals. This might also suggest a self-selection phenomenon, where both right-leaning and centrist individuals opted out of the study, albeit the reasons might be diverse. The limited representation of centrists may reflect the polarization observed in Brazilian politics over the past decade or be tied to their level of interest in political matters (Samuels & Zucco, 2018).

Political interest was also highly skewed towards politically interested individuals, with 90% (n=27) of participants scoring at least 5 on a 7-point scale, where 7 signified “very interested.” Finally, the highest level of education is disproportionality high, with 83% (n=25) of diary participants having completed a bachelor's degree and all having at least completed high school. This diverges from the broader population, in which only 54.5% of Brazilians 25 years old or older have completed high school, with that percentage only being slightly higher in the Southeast region at 59.2% (IBGE - Instituto Brasileiro de Geografia e Estatística, 2024b). Table 5 presents the demographic characteristics of the 30 participants, and Table 6 how they fell in the property space.

3.4.5 Data Analysis

The information gathered from the diaries were analyzed in four steps: data cleaning, descriptive statistical analysis, thematic analysis, and interpretation of the combined results from descriptive and thematic analysis. The thematic analysis of the last open-ended question of the diary was combined with the thematic analysis of the interviews.

Data organization and cleaning. A total of 134 diaries were systematically compiled and prepared for analytical purposes. To prepare the data for quantitative analysis, First, missing responses were identified. Nineteen (19) diaries were excluded from the statistical analysis and 23 from the thematic analysis. Exclusions were primarily due to participants completing the diaries without receiving new political information. In three cases, participants used the diary to comment on their credibility assessment experience. While these diaries were excluded from statistical analysis, they contributed to the thematic analysis. Eight (8) diaries were excluded from both analyses, because they provided responses to questions regarding the information but did not address those pertinent to the credibility assessment. Five (5) diaries answered all questions except the final open-ended one about credibility assessment. They were included in descriptive statistics but excluded from thematic analysis. In summary, 111 diaries, including the three commentaries, were included in the thematic analysis, and 115 diaries contributed to the statistical analysis.

Considering only the diaries included in at least one of the analyses, each participant completed between one and eight entries. Table 7 describes each participant's main characteristics and the number of completed entries.

Table 5

Diary Participants Demographic Characteristics

Variable		Diary Participants	
		Frequency	Percent
Total		30	100%
Gender	Female	15	50%
	Male	15	50%

Age	18 to 34 years old	8	27%
	35 to 54 years old	6	20%
	55+ years old	16	53%
City of residence	São Paulo	23	77%
	Metropolitan Area of São Paulo	7	23%
Education	Superior education completed	23	77%
	Superior education incomplete	0	0%
	High school completed	5	23%
	High school incomplete	0	0%
	Middle School incomplete	0	0%
Political opinion	0 or 1	7	23%
	2 or 3	12	40%
	4 or 5 or 6	3	10%
	7 or 8	6	20%
	9 or 10	2	7%
Political interest	7 - Very interested	16	53%
	6	5	17%
	5	5	17%
	4 or less	3	10%

Table 6*Diary Participants Quota Filling*

Gender	
Male	Non-Male

	Age				Age			
	Base	18-34	35-54	55+	Base	18-34	35-54	55+
Base	15	5	3	7	15	3	3	9
Far Left	2	1	-	1	7	3	-	4
Left	6	2	2	2	4	-	2	2
Centre	1	1	-	-	2	-	-	2
Right	5	1	1	3	1	-	-	1
Far right	1	-	-	1	1	-	1	-

The following steps were taken to prepare the data for analysis: the message credibility measure was consolidated into a singular score following the directions of Appelman and Sundar (2016). Source credibility also underwent a validation process, in which the second item, used as a manipulation check in the original text, was compared with the first one for consistency as an attention check (Sterrett et al., 2019). Data with discrepancies (e.g. Trustworthy sources who led to reduce trust in the information) was excluded. A comprehensive list of the identified sources and their corresponding perceived trustworthiness was compiled.

Table 7

Diary Participants Characteristics and Participation

Number	Pseudonym	Gender	Age (years old)	Political Opinion ^a	Diaries Completed
1	Ana Paula	Female	66	2	8
2	Beatriz	Female	58	4	3
3	Alexandre	Male	47	8	6
4	Bruno	Male	41	3	7
5	Carlos	Male	33	3	1
6	Camila	Female	41	3	7
7	Eduardo	Male	65	8	2
8	Fabricio	Male	72	2	3
9	Gustavo	Male	29	7	2
10	Débora	Female	30	1	6
11	Henrique	Male	31	0	1
12	Erica	Female	31	2	6
13	Ivan	Male	35	2	8
14	Julio	Male	57	2	5
15	Lucas	Male	58	7	4
16	Fernanda	Female	67	1	8
17	Gabriela	Female	65	7	1
18	Marcio	Male	34	5	3
19	Heloisa	Female	71	3	2
20	Nelson	Male	21	2	2
21	Isabela	Female	22	2	1
22	Juliana	Female	35	2	1
23	Paulo	Male	57	7	4
24	Rafael	Male	73	9	3
25	Karina	Female	39	10	3
26	Thiago	Male	63	1	5
27	Larissa	Female	63	0	3
28	Marcela	Female	61	0	2
29	Natalia	Female	63	0	5
30	Pamela	Female	55	5	5

^a political opinion was divided as: 0-1, extreme-left; 2-3, left; 4-5-6, centre; 7-8, right; 9-10, extreme-right.

The identified sources were grouped into different categories based on their role in the communication process (creator/publisher, intermediary, sharer) and other classifications as

patterns emerged from the data. Some classifications were about the type of creator, such as national or international media, different political actors, and other content creators. The level of specificity of the source was also noted, as some participants would name a specific media vehicle when others only mentioned the type of media. The same thing happened for the sharer and the communication channel, with some participants mentioning people and social media platforms by name, while others using broader groupings, such as "friends" or "social media."

All diary entries designated for thematic analysis were uploaded to nVivo, each linked to its respective participant. For entries containing hyperlinks to political information, the associated content was downloaded for further examination.

Descriptive statistics. Descriptive statistical analysis was conducted on some items of the recruitment survey and the diaries. This study was non-representative, with a small sample size and no aim to generalize findings for the broader population. However, descriptive statistics can still be helpful for exploratory research, given the recognition of its limitations. For this study, descriptive statistical analysis provides a concise summary of participants WhatsApp uses and information behaviours, that can complement insights from the qualitative data, providing additional context. The data can be used to verify the open-ended responses. For example, in the diaries, the written response on the credibility assessment process was compared with the multiple-choice question about actions taken to verify the information, identifying common.

The analytical procedures were conducted in Excel. For the recruitment survey, the frequency and the percentage of the inclusion and property space variables were calculated for the survey respondents, the volunteers (Table 3), and the final diary sample (Table 5). The data also calculated the frequency and percentage of respondents' reasons for using WhatsApp. The

diary data was used to identify participant's different actions when assessing the credibility of the information (Question 15 in the diary).

Thematic Analysis. Thematic analysis is a flexible research tool that admits applications such as combining the diary and the interview data to create broader themes (Braun & Clarke, 2006). The thematic analysis focused on the second open-ended question of the diary, which asked the participant to describe how they had reached their assessment of the information. Although this research focused on four research questions that could not be forgotten during analysis, as an exploratory study, an inductive approach opened space for important aspects of the credibility assessment on WhatsApp to emerge in the research results.

This study followed Braun and Clarke's (2006) six-step process of 1) familiarizing oneself with the data, 2) generating initial codes, 3) searching for themes, 4) reviewing themes, 5) defining and naming themes, and 6) producing the report. Initially, the diary data was analyzed up to the third step, and then the analysis was paused and restarted with the addition of the interview data. The analysis was conducted in Portuguese, to maintain fidelity to the original meaning intended by the participant, and quotes used to present the results were translated into English by the researcher and other Portuguese and English speakers. Due to budget constraints, only the principal researcher conducted the analysis, although other Portuguese speakers were consulted if/when a second opinion regarding any of the interpretations was needed.

In the first stage of the thematic analysis, to familiarize herself with the data corpus, the researcher read each diary in full, including the multiple-choice questions and took notes of possible common motifs within the whole dataset and individually for every participant. When a trend was identified in the participant's diaries, additional notes were taken to later inform individualized questions for the interviews.

Initially, the thematic analysis focused solely on the last open-ended question, which asked participants about how they had reached their credibility evaluation. However, in reading the diaries, it became apparent that it was crucial to consider the responses of the whole diary. This was because participants often referred to their previous answers when explaining their credibility assessment process or left out important information that was part of other responses. In other words, the first open-ended and multiple-choice questions provided the necessary context for understanding the credibility question. For this reason, the thematically analyzed text was not disassociated from the rest of the entry during the first iterations of coding, before themes started to be grouped.

In the first iteration of coding, codes were created without limitation. The researcher combined the notes taken during the familiarization phase with a more detailed reading of the diaries to identify several additional codes. Although the responses were mostly short, many of the answers were coded multiple times, identifying when the participant gave more than one explanation about their credibility assessment.

In the second coding round, all codes generated in the first iteration were compared with each other and combined into larger, more relevant codes. At this stage, some codes already contained subcodes for further organization. Subsequently, all data was coded a second time in relation to the new codes. Codes were added to the initial list when the existing ones were insufficient to cover all the data, while others were excluded, when codes substantially overlapped. This negotiation between data and codes was carried out until the researcher felt it necessary to move on to the interviews. At this point, the thematic analysis of the diaries was suspended.

At this point, the codes that had already emerged were related to the heuristics participants had used in the credibility assessment of that information. That included the source of the information as well as more specific rationales for the trustworthiness of the sources, such as previous experiences with it, name recognition or type. Other codes included the consistency heuristic, which was divided between existing knowledge of the information and participants' descriptions of active cross-verification, message or content-related factors, such as the appearance of any media, and the role of the sharer of the information.

This way, the themes that emerged from the diaries started to answer RQ1 on the credibility assessment process on WhatsApp, by identifying the frequently used heuristics. Additionally, some participants also address different sources of information, what makes them credible and how source credibility affected information credibility, answering RQ2.

3.5 Interviews

Twenty-four of the diarists were invited via WhatsApp to be interviewed of which 14 accepted. Among those who refused to participate in the interviews, their reasons varied from the wish to avoid talking about distressing topics (n=1), personal concerns (n=1), and the lack of trust in the research (n=1). Recruitment was made in hopes of maintaining the same diversity among participants than the initial diary sampling. Braun and Clarke (2013) suggest that a sample size of 12 participants is necessary to reach data saturation

The 14 interviews were conducted from June 22nd to July 19th, 2023, with each lasting between 28 minutes and 1 hour and 47 minutes in duration, summing up to 13 hours. Table 8 presents the distribution of interview participants in the property space. Younger participants, who were already lower in number at the diary phase, were less likely to participate. Women

were also more likely to refuse to be interviewed, leading to a disproportionate gender distribution, unlike the diary phase, with eight (8) men and six (6) women being interviewed.

All interviews were conducted online via video conference at a mutually agreed date and time. The use of online video conferencing for research has been previously explored as an option for qualitative researchers (Lobe et al., 2020). Interviewees were allowed to choose the video conference platform, although Google Meet, Zoom or Microsoft Teams were suggested for their recording capabilities. Despite its limitations, WhatsApp was also offered as an option, as it was expected that some participants might not have the resources or ability to use one of these video conference applications. In total, six (6) interviews were conducted via Google Meet, five (5) on Zoom, and three (3) on WhatsApp. On Google Meet and Zoom, the interviews were audio and video recorded through the application. For the WhatsApp interviews, audio recordings were made using QuickTime Player, which records the audio collected on the computer's microphone. Although not ideal, this method proved to be efficient. All interviews were simultaneously recorded on the researcher's cellphone as a backup.

Table 8

Interview Participants Quota Filling

	Gender								
	Male					Non-Male			
	Age					Age			
	Base	18-34	35-54	55+		Base	18-34	35-54	55+
Politica	Base	8	2	2	4	6	1	2	3

Far Left	2	1	-	1	1	1	-	-
Left	1	-	1	-	2	-	1	1
Centre	-	-	-	-	2	-	-	2
Right	4	1	1	2	-	-	-	-
Far right	1	-	-	1	1	-	1	-

Participants were asked to have a private space for the interviews and to guarantee they would have access to their cell phones and WhatsApp conversations during the interviews. Before the interviews took place, the participants received a link to the consent form (Appendix 5). At the beginning of the interviews, the interviewer repeated the main points of the consent form to the participant. The interviewees then gave their consent verbally at the beginning of the interview, which was recorded in a separate file.

3.5.1 Interview Schedule

The diaries informed the interview in three ways. First, personalized questions were created for participants based on recurring themes from their diaries to clarify attitudes and behaviours. For instance, Ana Paula, who discussed her feelings across three diaries, was asked how her emotions affected her evaluation of the information. Second, when the participants could not describe a recent political information to be discussed in the fifth block of questions, specific diaries were used. Third, the timing of the diaries during the 2022 presidential elections served as an important reference for participants, who often compared the political information received during that time to the less polarizing period of the interviews. Participants were encouraged to discuss these specific periods rather than general aspects.

The interview schedule was adapted from Masip et al. (2021). This study had similar goals to the present research, aiming to understand how WhatsApp affordances affected news-consumption-related practices, how individual factors and in-group social dynamics interact with social endorsement of news on the app, and how social endorsement of news on WhatsApp causes engagement with messages that are conflicting with one's ideological convictions (Masip et al., 2021). That said, there are four substantial differences between the protocol for this research and that used by Masip et al. (2021). Masip et al. (2021) focused on news, which was not necessarily political, while this current project focuses on political information, without narrowing down to exclusively news. Second, although it included questions specific to the credibility of the information and presented results on this topic, Masip et al. (2021) did not aim to have a detailed exploration of the credibility assessment process. Third, Masip et al. (2021) conducted focus groups with eight (8) participants rather than individual interviews. Focus groups enable dynamic discussions absent in individual interviews and allow more time for inquiries, lasting about two hours each. Fourth, this current research aimed to include personalized questions for each participant based on their diaries.

The final interview schedule (Appendix 6) was divided into six (6) sections. Before the interviews it was first piloted with two individuals. The first block of questions aimed to warm up the interviewee and get a broad picture of their media ecosystem and WhatsApp's role in it. Participants were asked how they get informed about politics, what media they use, and the different and diverse roles each medium plays in keeping them informed.

The second section of the interview discussed the interviewee's attitudes and behaviours toward political information in all media. The questions posed in this block aimed at establishing a baseline that could be compared with behaviours on WhatsApp. Participants were also asked to

defined credible information to determine if their attitudes matched their definition. Finally, they were asked if they had ever encountered "fake news" and how they identified it as such. This allowed them to recount specific experiences, focusing on their actions and thought processes without generalizing their evaluation methods.

The third section approached the participant's WhatsApp use. Interviewees were asked how they used the app, about everyday conversations, and about group memberships. To assess WhatsApp's role in their information environment, interviewees were questioned about its impact on how they stay informed, in particular for political news and events. Follow-up questions examined the types of news they received, including political content, emphasizing that political information is not limited to news. Questions in this section also investigated the groups or conversations of which they were members of where political content was shared, whether they were members of groups dedicated to politics, and the existing rules around sharing political content in the groups in which they participated. Participants were also asked to recall instances of receiving political information on WhatsApp and describe their initial reactions, followed by questions about their attitudes (e.g., annoyance during work) or behaviours (e.g., checking the sender).

The fourth section examined how participants assess the credibility of political information on WhatsApp. The interviewees were asked about the criteria they used for determining credibility on WhatsApp, with follow-up questions exploring their responses. When necessary, specific behaviours were mentioned by the researcher, such as referring to fact-checking websites and the relevance of the information's source. Participants were asked about a specific example of one piece of political information they had initially evaluated as credible but which they later found out it to be untrustworthy. They were asked whether they found political

information on WhatsApp more or less credible than that from other media regarding credibility levels. Finally, interviewees were then asked to share challenges they encountered while evaluating credibility on WhatsApp.

In the fifth block of the interview, participants were asked to check their WhatsApp for recent political information. They provided context about the message, including the conversation it was sent in and who shared it. They then explained their evaluation process, discussing immediate reactions, thoughts, criteria for evaluation, and actions taken to assess it. This walk-through of a recently received piece of political information replaced the originally planned discussion about diary entries due to the long gap of time between the diaries and the interviews, which could affect the participants' recall. A diary entry was used in X instances when a participant had not recently received any political information.

In the sixth and last block of questions, aiming to finish the interview, participants were asked about their opinions on the issue of widespread mis/disinformation on WhatsApp in Brazil. This included being asked to share their views on the reasons behind this issue, particularly on WhatsApp, and any possible solutions. At the end of the interview, the participants were given the opportunity to add any other commentary they might like to add to the discussion.

As the interviews progressed, minor adjustments were made to the semi-structured guides to improve the flow of the conversation and better address the research questions. These changes included reordering some questions to create a more natural flow in the conversation and participants' accounts. Additionally, after noting that some participants did not spontaneously mention aspects important to the credibility assessment, more direct prompts were added.

3.5.2 Data Analysis

Thematic analysis was used to analyze the interview transcripts, first independently and later combined with the diary entries. The interviews were transcribed using the online software Sonix, and all transcripts were reviewed by the researcher with the help of other Portuguese speakers when needed. This revision also served as part of the first stage of thematic analysis as proposed by Braun and Clarke (2006): familiarizing oneself with the data corpus.

Each transcript was read thoroughly, and initial notes were taken on potential themes. Subsequently, a first round of open coding was done independently for each interview. During this phase, codes were created freely and without restrictions. Manual annotation methods were used, including handwritten notes and Post-its. These initial codes were compared within each transcript to identify patterns and similarities and group them into broader, higher-level themes, using mind-maps.

Following this phase, the diaries were incorporated into the process. Diaries of the participants who had also been interviewed were integrated into their respective mind-maps, while the remaining diaries were reviewed separately to identify new codes. Ultimately, while the diaries supported several themes, none of the final themes emerged exclusively from the diary data, mostly emerging primarily from the interviews.

A compiled list of themes and subthemes was created and then was applied across the full dataset using NVivo. During this process, a refinement took place; themes were prioritized based on their relevance to the research questions and their recurrence across multiple participants. Themes that reflected more general or tangential uses of WhatsApp were deprioritized. The final stage involved reviewing, naming, and defining each theme in relation to the research focus.

3.6 Qualitative Research Quality Criteria

This section outlines the quality criteria applied to this study, following the criteria established by Lincoln and Guba (1985) of credibility, transferability, dependability, and confirmability. This section also includes the researcher positionality, and for this reason, I turn to first person.

This research focused on transparency, reflexivity, and methodological rigor to support its credibility. From the beginning, I, the researcher, was aware of my own positionality and the potential that my personal background could have on the research process. As both an insider, part of the nationality and cultural background in which the research was being done, and familiar with Brazil's political situation and WhatsApp use, and an outsider, as a scholar living abroad, with potential imbalances related to class, education, age and political leanings, I was aware of how my both my perception of the participants and their perceptions of me could shape out interactions. To minimize these effects, I worked to maintain a neutral stance during the interviews, avoiding saying anything that would potentially make the participant see me as the other. During the analysis, I employed strategies such as working with the anonymized interviews and allowing additional time to review politically charged responses.

In addition to reflexivity, this study also utilized crystallization. According to Tracy (2010) "Crystallization encourages researchers to gather multiple types of data and employ various methods, multiple researchers, and numerous theoretical frameworks." (p. 844). Unlike triangulation, which focuses on finding a singular truth, crystallization's goal is to "open up a more complex, in-depth, but still thoroughly partial, understanding of the issue." (p. 844)

This study employed two complementary methods of data collection, interviews and diaries, each with different strengths. While the diaries focused on capturing real-time, contextualized data, the interviews explored participants' experiences in more depth. Rather than

focusing on a single truth, these methods complemented each other to provide a more complex understanding of the issue. Finally, the credibility of this study is reinforced by its consistency with prior research and theoretical frameworks.

While the findings of this research are not intended to be generalizable, they offer what Tracy (2010) defines as transferability and naturalistic generalization, in which “Transferability is achieved when readers feel as though the story of the research overlaps with their own situation and they intuitively transfer the research to their own action.” (p. 845) Given the widespread use of WhatsApp in Brazil, it is likely that readers within a similar context to those of the participants will see similarities with their own behaviours and situations and might make choices based on their understandings of the findings. That being said, this study’s limitation on sample size and diversity constraints the generalizability of its results.

An extended description of the data collection and analysis process was provided to support the dependability of this research. This transparency allows others to trace the research steps and understand how findings were reached. Further, this study was guided by methodological literature on the methods utilized and orientation from professors and peers, which ensured that procedures were grounded in established qualitative practices. Pilot studies were conducted for both the diaries and the interviews, helping refine the tools and approaches. Together, these measures demonstrate a consistent research process that supports the study’s dependability over time.

To support the confirmability of this research, I implemented several strategies throughout the research process. I have worked closely with Prof. [REDACTED], sharing my data analysis to authenticate my interpretations, and avoid bias. While a second Portuguese-speaking

coder, who could engage with the untranslated data, could have enhanced this process, this was not possible.

Participant de-briefing was not considered for this project. Considering the topic of this research and the politically contentious context, asking participants to review their answers could lead to discomfort and defensiveness. Furthermore, the study design already required a substantial commitment from the participants. However, some confirmatory strategies were used during the interviews, such as referring to specific diary entries, asking participants to elaborate on their answers and confirming their perspectives.

Combined, these strategies aimed to support the core criteria for qualitative research, credibility, transferability, dependability and confirmability. While this study also has its limitations, these criteria are used to ensure that the results are based on participants' experiences and that this research is meaningful and valuable.

3.7 Limitations

This study faced budget and geographical constraints that limited recruitment and its reach. Without being present in Brazil, recruitment was limited to online strategies. In addition to the researcher's social networks, Facebook ads were used to diversify the sample, which generated good results. However, this initiative was limited by budget constraints. Other proposed strategies, such as contacting professional boards and syndicates, did not produce any responses.

A second challenge was that the Research Ethics Board in Brazil prohibited using incentives for research participation. Incentives are often suggested to increase participation and compliance in diary studies (Hyers, 2018; Janssens et al., 2018; Ohly et al., 2010). Therefore, the lack of incentives may have affected the sample size and the drop-out rate of diary participants,

leaving the study with a lower response rate. Other recommended measures, such as restating the importance of the research, were used to increase compliance.

An additional methodological concern is self-selection bias. Because the participation was voluntary and required a high level of commitment, individuals who had high interest in political topics, positive perceptions of research, and possibly those more inclined to reflect on their WhatsApp use, were more inclined to participate.

These constraints may have contributed to the limitations in terms of the reduced size and lack of diversity in the sample. Throughout all stages, the sample showed uneven distribution, characterized by an overrepresentation of older individuals, those with higher levels of education, and individuals with a higher interest in politics. While this does not invalidate their contributions, it narrows the range of perspectives represented and may exclude those who engage with political information less critically. As a result, the findings may skew toward more reflective or articulated assessments of credibility than what occurs more generally among WhatsApp users.

Social desirability bias is another common issue for both diaries and interviews, particularly with sensitive topics such as personal behaviour and those that have a perceived correct way. In both steps of the study, the participants may have overstated their engagement with the information or how in-depth the credibility assessment process was. Several countermeasures were used to the possibility of social desirability bias: participants were assured several times that there were no right or wrong answers and that sharing their genuine experiences would help the study. In the diaries, one of the questions asked about the steps taken to evaluate the credibility of the information. This was used as a comparison measure for the open-ended answer about the assessment process. To avoid the interview from amplifying this

issue, addressing only the instances in which participants performed some credibility evaluation, participants were asked about cases when they did not engage in-depth with the information. During the analysis, special attention was taken to the instances where participants talked about not performing any credibility evaluation or having challenges to do so.

3.8 Ethics

This research was approved by the University of Ottawa's Research Ethics Board and the Ethics Committee of the Faculty of Philosophy, Languages, and Human Sciences at the University of São Paulo. In Brazil, it followed the protocol established by the Ministry of Health for granting ethical approval to foreign projects.

Participants gave their informed consent at two moments of the research. At the outset of the recruitment survey, they were presented with the approved informed consent text (Appendix 1), indicating that completion and submission of the survey counted as consent. This consent form encompassed both the admission survey and the diary studies. In addition, a summary of the study, what would be required of the participant, and ethical measures were included in a presentation document shared with the recruitment posts. The interviewees received a second informed consent document (Appendix 5) before meeting with the researcher. At the time of the interview, participants were again informed of their rights and provided verbal consent.

Anonymity was not possible in this project, but measures were taken to ensure confidentiality. In the recruitment survey, participants remained anonymous, except for the volunteers, who shared their cell phone numbers. After the diary participants were contacted, the remaining volunteer information was deleted. Diary participants received a number; all data was kept under that identification. Any correlation between the participant's name, cell phone number

and their respective identifying number was kept in a password-protected spreadsheet on the researcher's computer.

Participants were added to the researcher's cell phone contacts using pseudonyms to facilitate the diary prompts. During the diary collection, each participant received a different link to the questionnaire. This served as participant identification in the diary entry, so it would not include any personal information from the participant. WhatsUp+ does not store any information used to schedule the messages; all data is only kept in the computer where the plug-in is installed.

After data collection, each diary was linked to its author. Interviews and transcript files were also organized using the participant number. For the presentation of the results, participants were given pseudonyms and characterized by their gender, age, and political opinion. However, this information alone was not enough to identify the participants.

3.9 Conclusion

This research explores the credibility assessment of political information on WhatsApp by employing an interpretative research methodology. This approach was pivotal in understanding participants' subjective experiences using the application. Data collection was conducted through solicited diaries, which prompted participants to reflect on the most recent piece of political information received through WhatsApp and complemented by in-depth semi-structured interviews. Although the interviews generated a larger range of themes than the diaries, combining these methodologies facilitated a comprehensive exploration of the topic. The diaries provided contextualized and embedded data regarding credibility evaluation, while the interviews explored participants' behaviours and attitudes and the application's impact on them.

Despite limitations that affected the recruitment of participants, the collection and analysis of data, and any limitations intrinsic to the methods chosen, the researcher aimed to reduce these issues at every step of the study. Other recruitment strategies were used to increase diversity, and a novel approach to data collection was used to minimize burden and encourage continued commitment, with WhatsApp as the means of contact with participants. Lastly, the researcher consulted with peers and her advisor throughout the analysis to refine, clarify and confirm her analysis.

The following three chapters present the results of this research, merging the findings from the diaries and the interviews, as well as from the descriptive statistical analysis and the thematic analysis. Chapter 4 focuses on the first research questions and presents an overview of the credibility assessment process on WhatsApp. Chapter 5 looks at sources, sharers and the social interactions between WhatsApp users to answer research questions 2 and 3. Lastly, Chapter 6 explores how the platform's affordances shape participants' credibility assessment experiences on WhatsApp, answering question number 4.

Chapter 4 – The Credibility Assessment Process

With 14 interviews and 134 diaries comprised of open-ended and multiple-choice questions, this research aims to answer the four research questions introduced in Chapter 2 and illustrate how the credibility assessment of political information is done on WhatsApp. The results are presented in this and the two following chapters. This first result chapter focuses on the big picture of the assessment process of WhatsApp, aiming to answer RQ1.

Before, it presents three themes that permeate the results explored in this and in the following chapters. First, it details how participants perceive WhatsApp's credibility and some of the ever-present effects this had on the credibility assessment process. Second, it discusses the role of macro-context, describing how participants indicate significant differences between three moments: the COVID-19 pandemic, the 2022 election period, and the calmer moment in which the interviews were conducted. Lastly, the chapter introduces the role of partisanship and politics in guiding participants' attitudes toward political information and their behaviour on WhatsApp.

The credibility assessment process on WhatsApp is described through participants' accounts as follows: A preliminary phase, called *triage* in this study, precedes the user's engagement with the information. In this phase, individuals decide whether they will read/watch/listen to the information, often using some of the same heuristics invoked in the evaluation process. This phase is discussed in section 4.3.

Once the user decides to engage with the information, the credibility assessment of political information on WhatsApp is most frequently done through heuristic strategies. The following section presents some of the heuristic strategies discussed by participants, while source- and sharer-related heuristics are left in Chapter 5. Section 4.5 discusses message factors such as presentation, integrity, authenticity, and opinion. It shows how users' expectations of

what they will encounter on WhatsApp shape the aspects to which they pay attention. Section 4.6 discusses how consistency across multiple sources is used in credibility evaluation. In this research, consistency emerges in three ways: through an individual's existing knowledge, cross-validation or the active search for additional sources, and the repetition of the message by known others.

Lastly, despite being primarily heuristic, participants also discuss conducting more in-depth assessments of information to various degrees. This chapter closes with section 4.7, describing what strategies are used by participants when further credibility assessment is needed. It also indicates variables and additional goals that prompt users to conduct more comprehensive evaluations of the information.

Results from the diaries and the interviews are presented jointly through chapters 4-6. This integrated approach allows for a more comprehensive understanding of the credibility assessment process on WhatsApp. While the diaries present contextualized interactions with the information and a summarized presentation of the strategies used by participants, the interviews give more insight into the rationales that guide these behaviours and participants' experiences on the platform.

It is crucial to consider the credibility assessment of political information within a specific context, including WhatsApp, the political setting, and macro-context moments or events. Therefore, this research's results are introduced by discussing three themes that encompass overarching assumptions. These themes should be considered when presenting the remaining results, as they thread throughout the credibility assessment process.

4.1 WhatsApp Credibility

Participants tended to assume that WhatsApp is a medium of low credibility and that all information demands skepticism and verification. They describe WhatsApp as a “synonym of fake news” (Henrique). This is true even for those who do not report receiving misinformation themselves. Although their experience is of believable information, their perception of the application for others, in general, is one of misinformation dissemination.

This belief is based on several arguments. First, participants discuss the high volume of messages circulating on the app and the ease of sharing information within it, making them unable to evaluate all of it. Some participants associate this with misinformation passing unseen amidst the numerous messages. Eduardo, a 65 years-old taxi driver, raises this concern:

Interviewer: Do you think the information on WhatsApp is more reliable or less reliable than what you see in other media?

Eduardo: No, it is less reliable.

Interviewer: Why, in general, is it less reliable?

Eduardo: Because it is a resource you can (use to) spread. So, everything that is unreliable also goes together. Now, if you read a UOL, for example, a Terra², that is another thing.

Eduardo’s quote shows concern over how information and misinformation mix on WhatsApp and yet are presented equally. In addition, unlike traditional news media, WhatsApp does not discriminate who shares information, making it very easy for anyone to disseminate content, including misinformation.

² UOL and Terra are well-known news portals in Brazil

The second argument for WhatsApp's low credibility is its low visibility, which constrains users' ability to see information on WhatsApp in the conversations they are part of and the statuses of their mutual contacts and public channels. For participants, this reduces the likelihood that others will verify the information and places more responsibility on them. Additionally, this reduced visibility is linked to decreased accountability, as users may feel less pressured to verify information before sharing it on WhatsApp, where the audience is smaller. Lastly, for participants, WhatsApp's visibility constraints obscure some crucial cues for the credibility assessment process, such as source cues. Henrique, a 31-year-old involved in left-wing political activism, says:

They [information on WhatsApp] do not have such a clear source, even if it has a hyperlink, even when it has something behind it. It is not very clear in the sources. It is not very clear in the hyperlink. It is not very clear who is giving the information, where the information is coming from.

Participants also express a concern that the believability of information shared on WhatsApp relies on the trustworthiness of the person sharing the information (sharer) rather than on the content of the message itself. Eduardo shares his experience:

[...] I have a childhood friend, if he sends me something, right? I say, "My friend, are you sure about this?" "No (grunts)." So, am I believing him? I am believing my friend. But not the news itself. Since he said, "You can trust me, I am sure." "So that is good. Since you have said it, you have said it."

Eduardo indicates how the believability of the information is related to the sharer. Furthermore, he also suggests how his relationship with the sender of the information affects his

evaluation and attitude towards it. Débora, a 30-year-old PR professional, also talks about this topic:

Or sometimes someone else has received it (the information) back then, and they send it, send it, send it. And then the person receives it from someone they trust, you know? But that person received it from someone they trust, and it goes on and on, but back there, it was a person who picked up fake news.

Débora conceives that once misinformation enters WhatsApp, it is disseminated in cycles of trust in the person who shared it and forwarding it to other conversations. Through this cycle, the misinformation reaches and is spread by people who are many steps removed from its origin and have no knowledge that they are sharing unreliable information.

Many participants connect WhatsApp's credibility to a disinformation industry or disinformation campaign conducted by politicians, candidates and even the government. Although this issue is not solely associated with WhatsApp or seen as a new phenomenon, they talk about how it was a more significant issue in the application. Some participants know how mass messaging practices work and how they have been used in political campaigns in Brazil. Others might not have full clarity of this, but as discussed in Section 4.5.1, they have a picture of what misinformation looks like on WhatsApp.

Lastly, participants blame the low credibility of information on WhatsApp on users themselves, who are not able or willing to verify it. Most participants suggest that lack of time and issues with formal and informal education act as barriers to a critical and in-depth assessment of political information. They believe others are more likely to believe in and spread misinformation because they are lazy, politically biased and often lack critical thinking skills. On the other hand, they do not fall for these issues.

As the results will show, these core beliefs about WhatsApp play a significant role in shaping users' attitudes toward political information shared on the app. Under the assumption that WhatsApp is a low-credibility medium, participants talk about not trusting the information “a priori” (Alexandre) and looking “into it right away to see if that is right” (Henrique).

4.2 Macro-Context

As described in Chapter 3, this research was conducted in two distinct phases. The diaries were collected between September and December of 2022, surrounding the Brazilian Presidential Elections. The interviews were conducted during the months of July and August of 2023. During the interviews, participants often found it necessary to distinguish these two moments to describe their experiences with political information on WhatsApp. Additionally, many included the COVID-19 pandemic as a period that set itself apart from others, and a few individuals mentioned the days surrounding the January 8th, 2023, riots in the Brazilian Congress.

These events have a significant impact on people's experiences on WhatsApp and their interactions with political information. Consequently, some of the results reflect specific instances, while others are notably significant or pronounced in certain conditions. Participants highlighted three main differences between these three key periods (the pandemic, the election season, and the months surrounding the interviews): the volume and nature of information they received and the political instability that surrounded their engagement with it.

According to participants, the most significant disparity was in the quantity of political information they received during politically heated periods – the pandemic and the 2022 election season – compared to moments of “emotional stability” (Rafael). For many, the large amount of political information is associated with the inability to adequately engage with and evaluate it, political fatigue, and information avoidance.

Second, participants discuss receiving information of different types, topics, and tones, across various periods. Although this varied among participants, the pandemic's beginning was characterized by inconsistent information and disinformation that they considered absurd and unbelievable. Most agree that during the election season, they received more politically incongruent information and arguments forward and against candidates. They also connect this period with increased misinformation and heated, often aggressive, messages. During periods of political stability, participants describe receiving politically congruent information and politically themed memes.

Finally, participants talk about the political instability, polarization, and extremism they witnessed during the months surrounding the 2022 elections, which reflects on the content disseminated through WhatsApp and their connections with other users. Participants recall the election period as a moment of polarization. Rafael, a 73-year-old architect, says, “But at the time you did the survey, I don't know if you remember, I wasn't able to answer. I answered very few [diaries], because the climate was one of polarization, there was no news, there was only hate.”

This polarizing climate affected many participants' dynamics with other WhatsApp users or group conversations. While some changes were temporary, others were permanent, such as family members leaving group chats. Chapter 5 further discusses this topic.

These contextual differences significantly influenced individuals' responses and engagement with political information. While some participants see the election period as an opportunity to challenge misinformation and engage in political discourse, most describe experiencing political fatigue and stress from this polarization and the centrality of political topics. This sentiment is summarised by Camila, a 41-year-old woman, who says:

Wow, it was exhausting. It was extremely tiring. [...] Comparing the beginning of the pandemic and when the elections started is a lot, that is it. The groups I am used to talking to about politics, that is fine, it is easier. But what was difficult was that even places and people, like, groups that did not talk about it started to dump things.

Although each participant's experience is unique, these three moments—the COVID-19 pandemic, the 2022 Presidential Elections, and the more tranquil period around the interviews—and the distinctions between them appeared frequently in conversations, limiting some of the findings to one or two of these events, rather than being a continuous experience. For example, while Débora complains about the volume of information she received during the campaign period, in the interview, she describes being able to look at everything with attention at that current moment.

4.3 Partisanship and Politics

Political opinion threads through many topics discussed in the following three chapters. Participants judge sources based on their biases, sharers on their ideologies, and categorize groups according to political homogeneity. However, participants differ in how aware they are of the role of political opinion and partisanship in their credibility assessment of political information, especially when narrowing into the context of WhatsApp.

This section explains the general guidelines that participants follow regarding political opinion and partisanship at any stage of the credibility assessment process and concerning any actor. Later sections detail the role of political opinion for specific themes. It is essential to point out that what is being considered is the political opinion of sources and sharers from the point of view of the participant, with a focus on the convergence or divergence between beliefs. So, while for a participant, a source is considered neutral, for others, it might be seen as biased.

Interviewees vary in their acknowledgment of the impact of their political opinions on their assessment of political information received on WhatsApp. Many participants recognize that the contacts and groups they are part of are a “bubble” (Ivan) or “segmented” (Rafael) and that the information that reaches them is homogenized. For example, Ivan, a 35-year-old journalist, says he needs to leave WhatsApp and go to other social media to find opposing interpretations or opinions. While some are critical of this, at least in their discourse, it is a common behaviour to leave conversations that cause conflict and discomfort.

On the other hand, only some participants verbally recognize that their political preferences shape the assessment of what is credible or not. Among these few is Ivan, who answers the following when asked about the most significant challenges to evaluating political information on WhatsApp:

[...] maybe it is, in a way, a biased look, I am not going to say biased look, a pre-formed and pre-cited conscience, which basically makes me take practically everything I see as information contrary to what I believe, preach and defend as false until I am proven otherwise.

Most often, participants' inclinations become clearest through their source preferences, their evaluations of their contacts, and their topics of interest. People use stereotypes of the opposition's sources, intermediaries, and information to judge its credibility quickly. For instance, Débora shared a petition with her father, which he decided not to trust because it was signed with “Beloved homeland, Brazil” as a slogan appropriated by the right.

Some participants talk about seeking sources with multiple viewpoints during cross-validations to reduce their own biases. Others understand that, given that all media vehicles have political inclinations, being aware of those biases and critically engaging with them is sufficient.

Participants, however, are more critical of others than of themselves. They believe others have categorical, inflexible opinions. Most participants talk about others being partial and taking personal opinions as the only criteria for information evaluation. For instance, Gustavo, a 29-year-old marketing professional, says:

Well, I do not think there is much of a challenge. It is like agree or disagree. If the person agrees, they pass it on, if the person disagrees, they think it is absurd. I think that happens and I see it happen. So it ends up that ‘he’s right if he thinks the way I think, he is wrong if he does not think the way I think.’ I think the receiver usually makes that decision.

Interviewees, on the political left and on the political right, are particularly critical of Bolsonaro’s followers and their extremism, polarization, and blind trust in the former president and his family. Participants report that extremist behaviour or content makes them less likely to engage in conversations on WhatsApp, regardless of what side of the political spectrum it comes from. Similarly, although participants recognize that all sources have biases, it is almost a consensus that traditional news media vehicles are credible and share news based on facts. This is further discussed in Chapter 5.

This finding is possibly related to sampling issues. Even though participants in the study declare to be on all sides of the political spectrum, they do not present extremist behaviour on either side. Further, no participant expresses being a follower of either Lula or Bolsonaro.

There is one clear outlier in the study. Alexandre, a 47-year-old municipal employee, has stronger political opinions and sentiments toward people on both sides of the political spectrum and the polarization between Bolsonaro’s and Lula’s followers. Alexandre presents a strong “us versus them” rhetoric throughout his diaries and interviews—in this case, an “us (real conservatives) versus them (Bolsonaro’s followers) versus them (the left).”

It is possible that sampling outside of the “Lula versus Bolsonaro” polarization may have resulted in fewer extremist opinions, making Alexandre an exception rather than the norm. Therefore, although Alexandre’s experiences may be unique, they are described frequently in the findings.

Participants’ political opinions also reflect on their behaviour on WhatsApp. As described in Section 5.4, interviewees explain adapting their sharing behaviour according to a group’s political stance, usually aiming to avoid political confrontation. In another example, participants' interpreted memes in politically congruent groups as “the nonsense or the absurd of the other side” (Ivan), while at incongruent groups they are met with skepticism.

Overall, the results show a varying awareness of the impact of one’s own political beliefs in the credibility assessment of political information received on WhatsApp, sources and sharer. Often, participants downplay the importance of their political opinions or credit their impact to other criteria. Although participants do not present extremist behaviour, it is essential to consider the understated effect of their political opinions and their congruency with the source, sharer, and information. Furthermore, in addition to affecting the credibility of information, political congruency also changes people’s behaviours when engaging with the information in different contexts.

The next section delves into the credibility assessment process through the description of behaviour frequently discussed by participants: the decision of whether to engage with the information received. This phase, called triage in this study, occurs before the credibility assessment process, but with possible implications for the following evaluations.

4.4 Triage

Triage is a set of practices and rationales applied by the interviewees in response to the volume and nature of the information they receive. Participants describe triage as a strategy to manage large amounts of information, avoid unwanted or emotionally taxing content, and prioritizing personalized or relevant information. At this stage, participants make decisions based on a set of strategies that reflect WhatsApp's affordances (discussed in Section 6.2) and predictive judgements about the likely value of the information. This section goes into this stage with more detail.

In the interviews, participants discuss three reasons why they feel the need to triage the information they receive on WhatsApp. First, they aim to manage the high quantities of information they receive especially during significant events like the COVID-19 pandemic and the 2022 Brazilian presidential elections. For instance, Camila explains how feeling overwhelmed made her reflect on where she was going to dedicate attention:

I got tired of some things. That is when I started to define a bit more this filter of: "Well, who am I going to devote more attention to when there are things and at what moments? When am I going to devote more attention to sorting things out?" Because, at first, it was a bit insane. You know that feeling of not being able to cope? That you say, "My God, man. It is sprouting like Gremlins."

Second, triaging information is also used to avoid discomfort caused by conflicts with other users or unwanted content, which often comes from politically incongruent content. Débora talks about ignoring messages from an uncle with diverging political opinions and who sends too many messages, including content that makes her uncomfortable and "invaded." She triages out his political messages: "I do not even open it anymore. So, there is no more invasion. It is just

happening there.” Another example is Ana Paula, who is very emotional around politics, sometimes to the point that she needs to “disconnect from politics” and avoid content on the topic.

Lastly, participants talk about triage as a way of getting personalized content on WhatsApp. Participants understand their choice of group membership and conversation participation as a form of triaging that, once set, will select relevant and credible information for them. According to Ivan:

I think the fact that I have this more limited bubble within WhatsApp - friends, family, you name it - ends up making an initial filter. Precisely because everyone I interact with I know at least a little. [...] You know how possible they are to be a spreader of fake news.

As discussed in Sections 6.2 and 6.3, WhatsApp does not provide many features that allow users to select the information that will reach them. Thus, users rely on the actions they can take at this stage to manage the information that gets their attention. The following sections explain the most relevant criteria and strategies participants use to make and enforce this decision.

4.4.1 Triage Strategies and Practices

Participants discuss using several practices to triage information from not paying attention to specific message formats (e.g., audio and video) to disengaging from WhatsApp and other news sources. In several instances, participants choose not to participate in specific conversations, and often ignore or use features such as muting, archiving and blocking the chat. Other participants also discussed leaving group conversations, especially those with conflict. While ignoring conversations is considered a less permanent way to disconnect, blocking or leaving a group is seen as more permanent and public.

Participants also discuss the rules and agreements made, consciously or tacitly, within their conversations. For instance, earlier in the pandemic, Débora requested her friends to reduce the volume of pandemic-related news. After the group's behaviour changed, Débora is now able and willing to engage with all the information discussed in the conversation. More discussion about rules and agreements in group conversations will be done in Section 5.4.

Ultimately, both preventative strategies, such as decisions on group membership, and reactive behaviours, such as ignoring, muting or blocking a conversation, are practices participants discuss using for triaging information. Next section presents the rationales and criteria used by participants.

4.4.2 Criteria and Rationales

The moment triaging occurs, before the user is exposed to information, limits the available cues used in this decision. The most common criteria are heuristics related to the information sharer (the person sharing it on WhatsApp) and the conversation in which the message is sent.

Most often participants use heuristics constructed through their previous experiences with other users or groups to categorize how much attention a conversation deserves. This aligns with research findings on news consumption on WhatsApp, which show that segmentation and hierarchization of groups modulate “the immediacy in the consultation of shared content” (Masip et al., 2021, p. 1073). Gustavo, for example, differentiates two WhatsApp conversations with political information and how he behaves accordingly:

I have a group of friends who are more “peace and love,” more “natural.” We share some funny things, some everyday things, [...] ... some underground things, some lighter things. Now, there is another group, the group that I am talking about that is more

composed of political content, that they tend to have a more bolsonarist position. They are much more radical overall when sending content. [...] So, in this group, I do not open the content; I do not see anything. In the other group, I open it. I consume more of the content that is sent there. Because I know the members, I know what they are like.

As discussed in the next chapter, knowing what their interlocutors “are like” is critical to evaluating the credibility of political information. A similar heuristic is used here, with participants discussing not opening messages from sharers known to spread misinformation or content they consider irrelevant or harmful, while paying more attention to individuals who know what they would like to read about.

Some participants talk about having rules that apply to a whole type of message sender or chat, such as unknown numbers. For example, experience has shown Eduardo that messages from unknown senders are most likely from political candidates seeking votes, whom he “immediately deletes and immediately blocks.”

While credibility sometimes plays a role in the decisions made during triage, for example, participants’ mentions of ignoring content from individuals they perceive as more likely to spread mis- and dis-information, participants also triage based on non-credibility factors, such as relevance or even their emotional states. Therefore, triage is a distinct yet adjacent process to credibility assessment.

4.5 Message Aspects

As discussed in the literature review, message-related aspects are frequently used to assess the credibility of information. This section explores three message aspects frequently mentioned by participants: message presentation, integrity and authenticity, and opinion.

Message-related aspects are used in quick, heuristic assessments and more comprehensive evaluations. According to the Elaboration-Likelihood Model, message factors are more critical when users perform in-depth assessments of the information (Petty & Cacioppo, 1988). Yet, others acknowledge that surface characteristics of the message are also used in its evaluation (Slater and Rouner, 1996; Lucassen and Schraagen, 2013).

While some participants discuss validating the information's internal logic or paying attention to its arguments, the three aspects discussed here - presentation, integrity and authenticity, and opinion - look at superficial characteristics of the message, including the images and video quality, correctness of the text, tone of the message.

Even though these evaluations are heuristic participants still talk about engaging, in some level with the information. For instance, Bruno writes: “I only read the first two paragraphs... I cannot read everything I receive... Sometimes I just read the title - if it is catchy, I get the gist of the idea...” (Bruno, diary) As this passage illustrates, acting upon the information does not necessarily entail an in-depth content assessment. In other cases, participants might indicate that they paid more attention to one or another aspect, such as checking for editions in audiovisual content. Still, as these following sections present, participants are still looking at the superficial aspects of the information, the stylistic elements rather than its arguments, and applying generic rules of thumb in its evaluation.

4.5.1 Message Presentation

Message presentation looks at its most exterior aspects, such as whether the message is well-written, well-produced, its tone and clarity. Participants look at a few aspects. First, on the most superficial level, a message's grammar and style, sentence structure, and the quality of any attached media are associated with a message's credibility. If the information is perceived as

badly written or poor or amateurish the information is likely to be considered unreliable. Thiago describes the information as not credible “given the type of video, which is very amateurish.” (Thiago, diary).

One participant, Alexandre, expresses disagreement with the association between poor presentation and lack of credibility. He questions whether the information that looks more like traditional media (newspaper) is necessarily more reliable than another that “seems to be sending a conspiracy theory.” (Alexandre, interview) Alexandre’s attitude may represent others who, like him, distrust traditional media. This explanation supports the trust in the less known and possibly less professional press.

Second, participants are considerate of the exaggeration of claims and appeals in the messages. While dealing with argument characteristics, this is still a heuristic approach, focusing on how the information is presented rather than what it says. Information using extreme claims or hyperbolic calls to action makes the participants skeptical and more attentive to its credibility.

In one of the diaries, exaggerations even reduce the credibility of an accurate piece of information. For Alexandre the news that a presidential candidate would make a “bombastic revelation” as are less credible (3 out of 7 points), even though “he [the candidate] was indeed going to make a statement.” (Alexandre, diary)

Exaggerations are also associated with numbers and values to which participants frequently pay close attention. When the values presented do not align with their expectations, they question the information’s credibility. Karina describes receiving a screenshot with the information: “Father of the poor. Lula's trip abroad cost more than 7 million in accommodations” (Figure 2). In this instance, the large number immediately caught her attention and made her question other aspects of the message. She searched the information elsewhere and judged it as

not credible due to “[...] the value. I think that is a lot to spend on accommodation. (Karina, interview).

Figure 2

Image Received by Karina



Note. The picture shows Brazilian President Lula and his wife. The text says: “Father of the poor. Lula’s trip abroad cost more than 7 million in accommodations”

The Look and Tone of Fake News on WhatsApp. Participants describe a “look of fake news” particular to WhatsApp and instant messaging applications. It can be described as a combination of poor presentation and specific appeals. According to participants, WhatsApp misinformation does not try to look credible. It comprises meme-like images, long texts, and, according to Pamela, “[...] a lot of Portuguese mistakes and a lot of poorly constructed things.” She distinguishes it from misinformation shared on Facebook, which “looks credible” (Pamela, interview).

Rafael is more concerned with the common appeals that appear in these messages. He describes the “Fake news creator signature.” In one of his diaries, he comments:

There are regular habits in the posts of those who publish fake news: alarming headlines. "Globo³ has taken it down," "Spread the word as much as possible before YouTube takes it down," and "Share it with your friends so we can get millions of views." Real news travels very fast without this kind of appeal. (Rafael, interview)

These examples are supported by descriptions of typical WhatsApp messages as “powerfully shaped by entertainment imperatives that reduce the complex political issues in favor of melodrama, misrepresentative exaggeration, mockery memes, and conspiracy theories.” (Santini et al., 2021, p. 61). Aware of this type of content, participants are cautious about identifying it.

³ TV Globo is the largest commercial TV network in Brazil. It is a free-to-air television network. Bolsonaro frequently accused Globo of being biased against him, publicly named the network “fake news” and “enemies of the people,” and threatened not to renew its broadcasting license. This discourse affected Bolsonaro’s supporter’s perception of TV Globo.

Evaluative Patterns in Message Presentation. Attention to presentation and exaggeration are used to quickly and superficially assess the information. While other attributes have been included under message presentation, from style and organization of the message (Slater & Rouner, 1996) to length of content, number of references (Lucassen et al., 2013), and number of arguments (Metzger et al., 2003), the main concerns of participants in this study are audiovisual content quality, text correctness, exaggeration of claims and numbers and lack of internal congruity of the message.

Participants frequently claim they stop engaging with the information and do not conduct further assessments after its quality indicates a lack of credibility. For example, Beatriz's account, "There is also a lot of nonsense that goes on in these media that you look at and say "Nonsense" and that I often disbelieve right away. It already does not seem believable" (Beatriz, interview).

On the other hand, well-presented information is not necessarily evaluated as credible without additional evidence or investigation. This behaviour is possibly related to assumptions about WhatsApp's credibility and the concern that even well-presented information may hide disinformation. Henrique explains: "Sometimes fake news has proper Portuguese, right? It shows the information well, but the information there is not exactly the truth." (Henrique, interview).

In addition to message presentation and tone, participants look at superficial aspects of the information to evaluate if it has been shared within its original context. The next section looks at how interviewees discuss the role of integrity and authenticity of the information on its credibility and how they evaluate it.

4.5.2 Integrity and Authenticity

Participants express general concern over the integrity and authenticity of the content received. More precisely, in their views, the information received on WhatsApp is often modified so that it loses its material integrity or is decontextualized, losing its original meaning. In many instances, looking for the original information and checking its actual context is the first step to evaluating its credibility.

Participants recount several instances in which they received manipulated or modified images, videos, and audio. For example, Thiago describes a video received about the presidential election results edited from the broadcast of Brazil's largest TV network:

Then they took [the results] from Paraná and said it was general, that “Rede Globo did not want to show it.” But there is always a little flaw. So, you have to look for that little flaw. You have to have a clinical eye. To go there... To see when 70% appeared, "Look, it is showing 70%, but it is in the state of Paraná. Now, when it shows 40 [percent], it is the whole country. (Thiago, interview)

There is a general awareness that people must be cautious and “have a clinical eye” with these different forms of manipulation. Participants underscore the need to rely on information skills to authenticate messages received on WhatsApp. For instance, Gustavo describes an incident where his father shared a video with several cuts (editions). He attributes his ability to identify the manipulation in this example to his educational background in communication and prior experience in digital marketing.

Participants also express concerns about receiving information that has been decontextualized, changing its meaning and losing its authenticity. They talk about receiving slices or “little pieces” (Thiago) of information that, out of context, could be interpreted differently. Lucas recounts one situation in which he ended up believing in misinformation. “It

was some news that I thought was relevant. ‘Oh dear. Look at that,’. But it was out of context. It was a video that was decontextualized.” (Lucas, interview)

Alexandre brings up another form of meaning change: adding extra content or commentary. Specifically, he describes text added over videos and photos, referring to it as “frames.” He raises concerns over the sensationalist and inflammatory nature of such content. One of the examples shared by Alexandre, in which the text overlaying the video misrepresents the events of the January 8th riots in the Brazilian Congress, can be seen in Figure 3.

Figure 3

Example of Text Addition over Video



Note. The picture shows Brazilian Senator Marcos do Val surrounded by people during a visit to the detainees over the January 8th riots in the Brazilian Congress. The text reads: Brazilians sing when leaving the concentration camp.

Authenticity Focused Assessments. Unlike when participants evaluate information presentation, in which a negative evaluation usually led participants to stop the credibility assessment and judge the information as not credible, in the cases of decontextualization and recontextualization, participants report searching for the original content, either in its original source or where it could be found in its entirety. For example, Thiago goes to YouTube to find complete interviews with Lula and Pope Francis I.

These findings suggest that the authenticity of the information representation (its materiality) directly influences its credibility. Lack of integrity and decontextualization are problems for evaluating credibility because the context can indicate how complete that information is and affect how willing to rely on it. For instance, Ana Paula describes one case where she checked if the content “was real, that it was not edited” (Ana Paula, interview), before evaluating the video. In this instance, although participants are often looking at the same message elements as in the evaluation of message presentation, such as image resolution, they are less concerned with the superficial characteristics and arguments of the message and focus on how well the message received on WhatsApp represents the existence of this information with its original meanings.

Beyond structural elements of the information, participants also deal with issues related to opinion and interpretation in evaluating political information on WhatsApp.

4.5.4 Messages Aspects as Heuristic Evaluations of Information

Message presentation, integrity and authenticity are main heuristics used in assessing the information's credibility on WhatsApp. These message factors are used frequently because they rely only on information available to the user on WhatsApp. Through these message-related strategies, users do not have to leave the application to assess the information, although they might do so if more evaluation is needed. This way, they focus on superficial aspects and rough judgements of the message, using information skills rather than topic knowledge.

Results indicate that users have preconceived ideas of what WhatsApp's political (mis)information looks like. Political information on WhatsApp is expected to have grammatical errors, exaggerated claims, and alarming calls to action. It is frequently manipulated or taken out of context. While attentiveness to information is positive, it can also lead users to believe

information that looks reliable but is not. Participants are aware of this risk and mention looking at other factors.

Each of these message factors influences the credibility assessment process differently. For example, when a message's presentation is evaluated as bad, users will likely judge it as not credible and stop engaging immediately. On the other hand, if the presentation is good, they remain concerned over its believability and may continue the assessment process. In cases of manipulation and decontextualization, participants reflect being more likely to search for the original content or the information elsewhere.

However, several participants indicate that information evaluation can be challenging on WhatsApp because messages include both facts and opinions. They explain that it is common for users to share information associated with their views, manipulate facts to support their chosen arguments or present only one perspective. They often must first identify the facts and opinions on the message before assessing them. This assessment can be challenging and discourage a more comprehensive evaluation. When the information is considered an opinion, participants often indicate that its credibility does not need to be judged.

These message-related heuristics are joined by other rules of thumb or superficial assessment strategies. The following section discusses how consistency, or the idea that something seen in several sources is more likely to be credible, is used in the credibility assessment process of political information on WhatsApp.

4.6 Consistency

The consistency heuristic is defined by Metzger et al. as the rationale that “If others agree it’s correct, then it’s probably credible” (2010, p. 429). It can be seen as a variant of the bandwagon heuristic (Rieh & Hilligoss, 2008) or consensus heuristic (Chaiken, 1987). The consistency heuristic is also used when individuals believe a piece of information is credible because it is coherent across different sources (Metzger et al., 2010).

The consistency heuristic was frequently used by participants in their evaluation of the information received on WhatsApp. First, it was triggered when they received information they had already seen elsewhere. Second, it was used for cross-validation, a credibility assessment strategy in which individuals search for the information in other sources to ensure it is similar across them. This section discusses these two assessment strategies and the role of the consistency heuristic.

This section discusses these two assessment strategies and the role of the consistency heuristic.

4.6.1 Existing Knowledge of Information

Participants often reflect on seeing or knowing about the information before it was shared on WhatsApp. This existing knowledge is related to traditional news sources and people’s news-following behaviours. The two following diaries exemplify participants’ rationales:

“I had already read about the information from other sources.” Camila

“Despite being a letter of warning and complaint, we have been following numerous similar reports and news in the press.” Beatriz

As Camila expresses herself, this strategy is about evaluating a piece of information as credible because it was previously seen in other sources. In some instances, the sources in which the information is first seen are essential for the participant to consider it a good baseline to

assess consistency. However, most of the time, the source of the information was not a concern, and often, individuals do not remember where they saw it. This evaluation process is a superficial and quick approach, with participants only focusing on seeing the information rather than assessing and comparing the messages' arguments.

Thiago discusses issues he experienced using this superficial evaluation strategy. Recalling a situation where he received political information on a topic he had already seen on news media, he says, "Since you have been following it, you do not check it out. Later, you realize it was nonsense."

This strategy is possibly one of the most superficial, counting on only the user's existing knowledge and experiences without additional input. As Thiago expressed, it can lead information users to make quick, incorrect evaluations because they do not find it necessary to conduct further assessments. It can also reinforce existing misinformation beliefs, primarily when an individual follows partisan media or only gets news from social media.

4.6.2 Cross-Validation

Following the same rationale that "if a piece of news is real, it will be published in several newspapers, on several different websites" (Débora), participants describe searching for the information in other sources after receiving it on WhatsApp. Digital media and search engines have made cross-validation much easier. It is as simple as "Googling" the information. Unsurprisingly, it is the second most frequent action participants performed to verify the information (27% of diaries) in the diaries. The interviews and open-ended answers also reflect the importance of this heuristic for the credibility assessment process. See the following examples:

- I searched for this information on Google, to find out if other newspapers had reported more on the same subject. (Isadora, diary)
- As well as reading the article, I looked up the subject on other social networks. (Camila, diary)
- I checked other news sites. (Pamela, diary)
- I looked for the information on other reliable channels. (Thiago, diary)
- I checked the news in the main media outlets. (Fernanda, diary)

As shown in these quotes, participants go after diverse sources. For many, Google is the first and the last stop on their assessment process. The search engine allows individuals to look at the headlines from several news sources simultaneously and, from them, infer if the information they receive on WhatsApp is, at least broadly, credible. For example, Alexandre explains that he “(goes) and I Google and I go to the news tab on Google (...)Then I look for the date and find the news by the title” and how the title and the tagline that follows it are “what catches (his) eye.”

Other participants talk about preferring to go directly to the news portals of their trust. This was the case for both Eduardo and Pamela. A smaller group of participants speak about searching for information on social media platforms, which can connect them to traditional news sources and allow them to grasp the integrity of the information through its repercussions.

The number of sources examined depends on the individual’s availability and interest. Saturation plays a part. Beatriz, for example, stops her research when the information becomes repetitive. She says: “[...] Some information becomes: Well, that is all I have. Either I believe it, or I do not, and often when I believe it, I am not sure.” According to participants, options such as search engines allow them to see several sources simultaneously. If the information is not found elsewhere, “it is probably not true” (Henrique).

4.6.3 Repetition

Lastly, participants discuss the impact of repetition of the information in their assessment process. Seeing the information multiple times catches more participants' attention and often prompts a more in-depth evaluation of the message.

Furthermore, seeing the information multiple times, whether before receiving it on WhatsApp or during cross-validation, also positively affects its perceived credibility. Ivan discusses this idea:

“If I receive information only once and never find it again, I am much more likely to think that this information is false than if I receive the same information multiple times, even if I receive it from several unreliable information channels.”

This way, repetition reinforces consistency. Furthermore, this can be associated with the sleeper effect (Hovland & Weiss, 1951), which describes how interferences such as untrustworthy sources are forgotten while the information is still remembered. This would increase when they encountered information from multiple sources that can be confused among themselves.

4.6.4 Cross-Validation and the Contextual Approach

Using their previous encounters with the information to judge its credibility is a superficial strategy for its evaluation, based on the consistency heuristic. Similarly, cross-validation is done by looking at one or a few sources, often only reading the title, enough to apply the heuristic that if a piece of information is seen elsewhere, then it must be true. Several participants discuss it as one of the strategies they teach others to perform when faced with political information. When Débora's mother shares misinformation, she critiques her: “Mom,

you just have to look elsewhere.” This way, even though participants talk about looking for the information elsewhere, the assessment is still superficial.

Cross-validation fits into what Meola (2004) calls a “contextual approach” in that they rely information external to the message to evaluate it. However, it does not answer the question of what makes participants use more in-depth assessments of information rather than more superficial ones.

The following section reviews the credibility assessment process as it has been described so far. Further, it explores participants’ descriptions of situations in which they conducted a more in-depth assessment of the information. The main variables affecting the depth of the assessment process are shown and motivations are detailed.

4.7 The Credibility Assessment Process

This research explores the credibility assessment process of political information on WhatsApp. Supported by existing models of credibility assessment (Fogg, 2003; Hilligoss & Rieh, 2008; Lucassen et al., 2013; Metzger, 2007; Sundar, 2008; Wathen & Burkell, 2002), it aims to understand the depth of the elaboration of this process and the heuristics and strategies used by the research participants to make this evaluation.

So far, the credibility assessment of political information on WhatsApp has been described as follows:

After receiving the information on WhatsApp, before engaging with it (reading, watching), users decide whether to engage with the information. This preliminary phase, called triage in this research, is particularly important during major political events when the quantity of information received increases and individuals feel overwhelmed. During this phase, interviewee’s recall employing some of the same heuristics used to evaluate the information’s

credibility, including sharer and group credibility. This way, these rules of thumb are easily accessible and more likely to be used in the following process.

Once a user decides to engage with the information, its credibility evaluation will most likely be done through a heuristic process. The main heuristics used in the credibility assessment process of political information on WhatsApp that emerged in this research are message-related factors, consistency (discussed in this chapter), and source credibility (Discussed in Chapter 5). The cues to perform these evaluations are often readily available, internalized by the user, or easily accessible. Therefore, these heuristics minimize the effort of credibility assessment.

4.7.1 Goals and Motivations for In-Depth Evaluation

In rarer cases, participants appeal to a more in-depth credibility evaluation. In-depth strategies for understanding the information include detailed investigation, referring to several sources, seeking help from known others considered experts on the subject, or raising a discussion on the topic on WhatsApp group chats. In a few examples, participants talk about engaging with the information calmly and with focused attention, critically evaluating its arguments, and raising possible concerns that may affect its credibility. In this research, participants do not recount many examples of in-depth evaluation of information credibility.

The interviews indicate that a more comprehensive approach to credibility assessment of the information is frequently associated with three goals. These goals trigger additional interactions with the information, which include evaluating its credibility. Participants discuss three goals: understanding political information, correcting others, and self-presentation.

First, participants discuss doing additional research when they are interested in a specific topic or feel they lack knowledge on a relevant subject. Débora, for example, states that she engages more with information when she has some knowledge of the subject, but not enough to

draw conclusions. Ana Paula says that she is “a little bit slow” in understanding politics, so she always seeks to understand the issues better with more research. For Camila, the need to evaluate the different interpretations given to a piece of news is what calls for additional investigation.

Interest can be understood or related to several other variables, including personal interest, personal relevance, newness, and perceived relevance. The term impact is frequently used to describe the information that interests participants, but with different meanings. For Rafael, more detailed research is associated with the potential impact of the informed situation on him. Thiago, in contrast, focuses on the perceived collective impact, looking for information that mentions critical political actors, is present in several large news media, or is scandalous.

Perceived newness of the information is also related to interest. Several participants declare they are less likely to engage with known or old information. However, repetition can also give the information a sense of importance. For instance, Alexandre remembers researching a piece of information because many people were asserting it, even though he initially had no interest in the topic.

Second, the participants talk about often doing additional research to base their arguments or find evidence to sustain corrections when they find a piece of information unbelievable. This is one of the main motivations for Pamela to verify and engage with the political information she receives online. She says: “So, to counter these arguments and calm these people down, I need to read, I need to understand, I need to know.” She habitually researches information she does not know well to “counter this nonsense.” Similarly, Alexandre conducts additional research in advance on the information he will share to prepare for potential counterarguments and disprove any corrections of his message.

A more in-depth evaluation is also associated with the fear of possible repercussions from sharing misinformation or correcting information that is found to be true. Several examples show participants conducting more in-depth evaluations when the social consequences are perceived to be more significant. For Ana Paula, this is an intrinsic social fear. While discussing a video where a pastor explains political concepts, she nervously laughs, “Because I am terrified of spreading fake news.” In this case, sharing the information without proper assessment could harm Ana Paula’s image if the pastor was a Bolsonaro follower and had diverging opinions on other topics.

In another example, Débora's mother shared a petition about a small town where they have a country house. Débora skimmed, signed and shared it with her father. When reflecting on this situation, she says,

I thought, “Ah, no harm done.” This kind of thing that I think will not cause any harm, because I did not share it with many people. I only shared it with my father. I think that if I shared it publicly on my networks with everyone, maybe I would be more like that... at least I would read it more calmly, so to speak. But as it was just something for my father, which my mother sent me, I said “Oh, ok, he will sign it, if he wants, I will send it to him so he knows it is going to happen.”

A few things can be highlighted from Débora’s reflection. First, she talks about the possible harm that the information could cause. In this case, harm can be related to one’s reputation or the consequences of someone believing misinformation, and it is reduced because she shared the petition with only one person. As discussed above, the size of the audience directly impacts the possible repercussions of sharing a message.

In addition to these three motivations, participants discuss some variables that reduce their evaluation efforts. First, they recall time and space barriers, such as being unable to stop work to check on the information. These constraints are related to one's immediate context and WhatsApp practices. For example, while almost all interviewees say they have a harder time engaging with information during work hours, Beatriz is more likely to read longer texts at her office than at home.

Some participants are less likely to engage in-depth with political information on WhatsApp because they feel exhausted by political content in general. While for some, this is related to a specific moment, such as the election period, for others who are less interested in politics, this is a constant behaviour. Eduardo, for example, has minimal interest in politics and avoids any topic related to the political party he opposes.

In conclusion, the interviews indicate that the participants are motivated by goals of knowledge or interest in the information, correction of others, and self-presentation. These motivations are needed for WhatsApp users to engage in-depth with the information, which may include credibility evaluation. Interest, social pressures and fears trigger users to seek more information. The size of one's audience also plays an important role, with participants expressing being more attentive when communicating with more people. Lastly, contextual and emotional variables are the main constraints to more comprehensive credibility evaluations.

4.8 Key Insights from RQ1

This chapter introduced the credibility assessment process of political information received on WhatsApp, trying to answer RQ1.

RQ1. How does the process of credibility assessment of political information occur on WhatsApp?

It aimed to present a bigger picture of how this research's participants relate to political information on WhatsApp and their main strategies for assessing its credibility, including what paths are preferred and why.

The participants express how they deal with large quantities of messages on WhatsApp and receive unwanted content. To deal with that, they triage what information they will engage with using some of the same heuristics they employ in the credibility assessment of the information. The use of these heuristics may make them more accessible and, therefore, more likely to be used in the credibility evaluation.

Based on the participants' accounts, the credibility assessment of political information is done mainly through heuristic approaches, which reduce the effort and time spent in this process. While the credibility assessment process can fall on a spectrum from heuristic and peripheral to in-depth and systematic, the participants mostly talk about using superficial strategies to judge it.

The main heuristics used in the credibility assessment process are related to message presentation, source credibility and consistency. Except for cross-validation, these evaluation tactics employ cues readily available in the message or the individual's pre-existing knowledge. Notably, participants express an expectation that information on WhatsApp has a particular "look" and tone, which includes alarming appeals, and that it is often manipulated or removed from its original context, changing its meaning.

However, while these strategies are explained separately, they are not done in isolation. Instead, they are combined, often simultaneously, to construct one credibility assessment. In the example about the cost of Lula's travels, the large number first caught Karina's. She then considered the sharer of the information, a friend who opposes Lula's party, making her more aware of the need to verify it. However, the message format, a screenshot, and the lack of

source-related cues constrained Karina's evaluation. Ultimately, she evaluated the information's credibility with the available cues, primarily the large amount declared in the message.

Under certain circumstances and affected by several variables, participants discuss evaluating the credibility of political information more comprehensively. Among these variables, they talk about interest, personal relevance, newness, perceived relevance and salience of the information, contextual restrictions such as time, immediate surroundings, and political fatigue. Participants' testimonies also highlighted that in-depth engagement with the information was often triggered by the goals of understanding the information better, correcting others, and image preservation.

Medium-depth and in-depth assessments of information credibility were conducted through strategies such as more comprehensive cross-validation of the information, fact-checking websites, extensive research around the topic and asking for the help of other individuals or groups considered experts.

In a quick summary, participants' accounts indicate a credibility assessment process of political information on WhatsApp most often conducted heuristically (superficially), with them using message, source, sharer and consistency rules of thumb to make this evaluation. In-depth evaluations are often related to the goals of knowledge or interest, correction of others, and self-presentation. Contextual barriers also affect the depth of the credibility assessment process. When participants feel the need for a more comprehensive evaluation of political information, they will most often reach for other sources (including other people) that will give them more details, a different perspective, or an expert opinion on the topic.

Based on this first description of the credibility assessment process of political information on WhatsApp, the following chapters try to answer the remaining research questions

detailing two additional heuristics, the perceived sources of the information, three types of social interactions described by the participants, and finally, how WhatsApp's affordances outline the background in which this evaluation is made.

Chapter 5 – Source and Social Aspects

WhatsApp presents many characteristics that affect the credibility assessment of political information. Among those, Chapter 2 highlighted how users identify several levels of sources when receiving news in group conversations (Kligler-Vilenchik, 2022) while often receiving less-than-optimal cues about the source of that information (Evangelista & Bruno, 2019; Pellegrino, 2018). On WhatsApp, both strong-tie relationships and homophilic groups thrive (Gil de Zúñiga et al., 2019; Masip et al., 2021). Considering the importance of these aspects for the credibility assessment of political information, two research questions were asked:

RQ2. How do the sources of political information on WhatsApp, as perceived by users, impact the practices and criteria used to assess its credibility?

RQ3. How do social interactions among WhatsApp users impact the practices and criteria used to assess the credibility of political information received on the app?

This chapter aims to answer these questions. Section 5.1 reviews the different levels of sources that participants identified in the diaries and interviews. These sources are categorized in creators, the producers of the information, sharers, WhatsApp users who send the information to the receiver, and intermediaries, any sources in between. 5.2 reviews the results for RQ2, exploring how participants describe credible sources and their effects on information credibility. Results generally line with existing literature, showing that the research participants use heuristics of reputation, familiarity, and political congruency in evaluating the content creator's credibility. It also highlights a less explored aspect of credibility assessment and identifies how participants deal with the lack of source-related cues when receiving political information on the platform.

Section 5.3 discusses how the participants perceive the credibility of the person that send them information on WhatsApp and how these are used as heuristics to reduce the effort put into information evaluation. Participants talk about judging the sharer by their likelihood of believing in misinformation and by the probability that they would share politically incongruent and unreliable content, which they assess based on their previous experiences, personal bounds and similarity with them.

Section 5.4 reflects on social interactions on WhatsApp and their possible effects on credibility evaluation and verification. These behaviours include positive discussions and corrections around political information, misinformation, and negative experiences of correction and conflict. These interactions provide insights into how the social relationships and the norms that shape the credibility assessment of information on the messaging app.

Finally, this chapter concludes with a summary of the findings and how they answer research questions 2 and 3, discussing the differences in the assessment of creators and sharers' credibility and their role in the evaluation of the information, as well as the impact of the social norms and behaviours in this process.

5.1 Source Levels

The source of a piece of information has a crucial impact on its credibility (Pornpitakpan, 2004; Tandoc, 2019). For a source to impact the credibility of information, it must first be identified as one by the receiver of the information, who will evaluate its credibility. However, as discussed in Section 2.2.4, the identification of the source or sources in networked media is more convoluted. Multiple actors in the path between the creation of the information and its receiver can be identified as its source, often simultaneously (Kang et al., 2011; Tandoc, 2019). Additionally, the receiver of the information might not perceive specific sources at all.

In the diaries, when asked to identify who or what they consider sources of the information, participants mention different types of actors, at various steps of the path of the information to the receiver. Among others, the diaries cite journalists, columnists, and specific media vehicles (e.g., Folha de São Paulo) as sources, but also generic media types (e.g., ‘newspapers,’ ‘news sites’). Social media is mentioned as specific profiles – although most participants do not remember their names – one particular social media platform (e.g., Facebook, Instagram) or even ‘social media’ broadly. Other sources mentioned are the central characters of the information, such as political figures, social movements and supporters of different political parties. This list is not exhaustive. Sometimes, several actors from one or many of these groups above are simultaneously considered sources.

Based on participants’ narratives and approaches, it is possible to separate these sources into three groups. The first group, from here on, called “creators,” are the actors who produced the content. This group includes journalists and the newspapers where they publish, politicians, governments, and their official media, as well as alternative media, social media profiles, and unknown individuals or groups who the receiver perceives to be the ones who made the content initially.

On the other end of the information path are the “sharers,” individuals from whom the user receives the evaluated content. In other words, these are other WhatsApp users who send messages to the receiver in one-to-one or group conversations. They are the last actor in the path of the information before it reaches its user. The lines and divisions between these two groups are not solid. A source can be both a creator and a sharer, as happens when individuals communicate their opinions or the content they create themselves.

Between them, information users often recognize several actors that are part of the path of information. This third group, called “intermediaries,” can be individuals, social media profiles or platforms, or other WhatsApp users or groups. These actors have not produced the information like the creators, nor will they send it to the user, but still are part of the path that the information took to reach them.

Throughout the diary studies and interviews, intermediaries were the actors that were talked about the least. This could be because they are frequently not visible to the information user. This means they might not be perceived and, therefore, not be a factor in the credibility assessment process of the information. However, hidden intermediaries may sometimes be inferred. During the interview, for example, Beatriz discusses how the domestic worker who works at her home receives messages from relatives, which she then forwards to Beatriz.

When the intermediary is clearly present and is perceived, the information receiver may still not consider it to evaluate the information’s credibility. In one of his diaries, Ivan received a post from an unverified Instagram profile featuring a news headline and a reputable newspaper's logo. While Ivan considered both the Instagram account and the newspaper sources, he ultimately relied on the periodical, which he refers to as the “foundation of the post,” to assess the information’s credibility.

This chapter explores how participants describe creators and sharers and their impact on the credibility assessment of political information. While creators’ credibility was evaluated based on collective perceptions of that source, with aspects such as name recognition and reputation, sharers’ credibility is supported by personal judgements of the receiver based on previous experiences, personal bonds and similarity.

5.2 Creator Credibility and the Credibility Assessment Process

The creator of the information, or at least who it is perceived to be, plays an essential part in its credibility assessment process, something also observed in the existing literature (Pornpitakpan, 2004). Participants talk about using a creator's credibility to evaluate the content and discuss how they determine if a creator is believable or not. Sources are used in heuristic evaluations, such as being references for cross-validation or dismissing information from unreliable origins. Additionally, sources play an essential role in the in-depth assessment of the information when individuals might look for credible references to compare statements or read different opinions. Therefore, describing what characterizes credible sources for the participants is pertinent.

5.2.1 Determining Creator Credibility

Creator credibility is evaluated based on two heuristics: reputation and familiarity. For this reason, traditional news media and official organizations are mostly considered credible. The challenge to evaluating the creator's credibility appears when it is not identifiable in the message or the receiver has no familiarity with it. This section delves more into the rationale behind the evaluation of the creator's credibility.

To simplify their evaluation of the creator's credibility, participants talk about using two heuristics: reputation and familiarity. Reputation is related to how a group collectively judges the source. In two of his diaries, Ivan justifies the information's credibility on the sources' "established history" and "recognized credibility." Reputation is associated with high journalist standards and the editorial process that makes traditional news media reliable. The focus on the reputation of the source is also found in Feng et al. (2022).

Conversely, familiarity, although often necessary for the use of the reputation heuristic, uses name recognition of the creator as an indicator of its credibility. Knowing the creator, even

if only by name, is a shortcut to judge how believable it is. Camila talks about how knowing the creator of the information is essential for her:

One of the things I see is when it's in a media outlet that I know, that I trust, that I know. I have nothing against independent media, I like them too, but I need to know them. I need to have read things about them, I need to have evaluated something. So, it does not necessarily have to be a big newspaper owned by a big group, but I need to know it.

Based on these heuristics, most participants describe traditional news media as credible. It is commonly understood that most traditional news media base their reporting on “factual truths, despite having their own biases” (Ivan). Ivan further explains his statement:

I assume that these media outlets, because of their credibility, because I know how they work... They may have and certainly do have a biased view, but I assume that this information has been checked and that it has a foundation. Of course, when we are talking about, for example, an analysis or an article, I can say that this information may be false, but I assume that the backbone there is made up of true facts [...] I know that other media outlets are not going to make up news. They may “invent,” in quotation marks, editorials, analyses or columns, but I assume that the news that is there has a minimum of true information behind it.

Participants mention the editorial process of traditional news media as what makes these creators reliable. Gustavo compares the editorial process of news media, which goes “through many people,” to videos on YouTube, which do not go through any filtering process. These results reflect what is seen in Aharoni et al. (2022).

Reputation and familiarity are also used to evaluate an individual's credibility. Journalists were considered credible depending on the participant's familiarity with their name and

experience with their work. Similarly, Rafael talks about knowing a creator based on their public work. This illustrates that familiarity with the source is an effective heuristic, even when it stems from experiences unrelated to information reporting.

Official creators, including political candidates, politicians, and parties, and the associated channels are also considered credible, with the caveat of political discrepancies. Camila, for example, writes that a candidate's manifest was credible because it came from her website. Similarly, Julio says the information he received on a WhatsApp group with colleagues is “not fake news” because it “is the party's electoral propaganda.” Government agencies and research institutes are also considered official.

The term “official” is also used to describe verified creators on social media, granting them credibility. For Henrique and Pamela, verification seals are used as heuristics in the credibility assessment with positive results. It is relevant to point out that when participants talk about using these cues for the credibility assessment, they have already left WhatsApp, as the application does not have verification seals. They often talk about accessing the profiles of traditional news media or journalists on Facebook, X or Instagram.

Political Stance. As briefly discussed in Chapter 4, the political stance of the source impacts how its credibility is evaluated. As stated above, most participants regard traditional news outlets as credible, even when acknowledging their biases, which may reflect differing political views. Nevertheless, the creator’s political stance has a negative influence on its perceived credibility when it is in direct opposition to the receiver’s. Mainly, creators identified as favouring the extremes of the political spectrum or aligned with either Lula or Bolsonaro are considered unbelievable by the participants in the opposition. For example, Débora evaluates a news portal she knows is favourable to Bolsonaro as not credible.

In this case, the outlier is Alexandre, whose strong opinion on the political left leads him to equate the traditional left-leaning news magazine Carta Capital with an imagined partisan website he calls Red.org.

When the participant is unfamiliar with the information creator, or it is not identified, they use the information available to them in the message to make inferences about its credibility. They employ elements associated with political parties or positions (e.g. colours, taglines) to infer the creator's political stance and then use it as a central factor of its credibility assessment. This way, when the creator is unknown or unclear, its perceived political stance has a more significant impact on its credibility evaluation, and therefore the credibility of the information, than when the creator is familiar, and its reputation plays a bigger part. This may pose an issue in the credibility evaluation on WhatsApp, as information frequently comes without clear source cues (Pellegrino, 2018).

Overall, participants' evaluations of creator credibility drastically vary by familiarity. Traditional news media and official creators are seen as credible sources for political information, despite often having some political bias. The credibility of these creators is based on collectively judged characteristics such as reputations and familiarity. In other words, it is less related to individuals' personal experiences with these creators and more to perceived societal evaluations of them. The exceptions to this case are creators understood to be too extreme to either side of the political spectrum or seen as aligned with Lula or Bolsonaro.

5.2.2 Creator Impact on Information Credibility

When the creator of a piece of information is included and easily identifiable within the message, its credibility is one of the main heuristics used in evaluating a piece of information. In those cases, participants talk about how they can quickly differentiate between credible and non-

credible creators. Familiar creators or reputed media categories (e.g., printed newspapers, traditional media) are connected to credible information. In other words, credible creators make credible information.

Conversely, when the creator is unfamiliar or unclear, participants doubt the information's believability. Sometimes, they put additional effort into the information evaluation, taking a more attentive look at the message in search of source cues (e.g. graphical aspects) or occasionally searching for more information. In other cases, participants simply evaluate the information as not credible. Pamela's diary is an example of this behaviour, discrediting a piece of information because it had "no reliable sources [creators]." Similarly, when Juliana received information on the voting results in some towns, she evaluated it as not credible because "It was not a government website or a famous research institute."

Juliana's answer also indicates an expectation that certain types of information (voting results) should come from specific creators (government websites, research institutes). In this case, when judging a piece of information for the lack of appropriate creators, participants are triggering the expectancy violation heuristic (Metzger et al., 2010), which also appears when the political information does not fit their expectations of a known creator. Ivan remembers a message from the news portal Terra that linked the Brumadinho dam disaster to the Venezuelan government. This narrative conflicted with his expectations of the portal, causing him to doubt the credibility of the information. Eventually, it became clear that the source was not Terra but a lesser-known site called Terra da Direita (Earth of the Right).

More narrowly, participants provided their opinions on journalists and how they relate to political information credibility. Some participants highlight a connection between the journalist's reputation and their knowledge of the writer's work (familiarity) to the information

credibility, like what occurs with mainstream media. Eduardo adds a different perspective. When explaining why he finds political information from news portals more credible than from WhatsApp, he argues: “These are serious things. You know where it comes from. You have the journalist's name.” Later in the interview, he reiterates this point:

Interviewer: What do you think are credible sources in general?

Eduardo: The signature, in quotation marks. It is the journalist who passed it on... the newspaper... [unintelligible] you can see the journalist's name, the newspaper he works for. That is a reliable source. If he is lying, that is his problem.

This quote shows how, for Eduardo, the presence of the signature is seen as the journalist taking responsibility for what is published under their name. Through Eduardo's rationale, the journalist's name participates in the credibility assessment process even if the information user has no previous experience or familiarity with them. While this may give users more cues to be used in the credibility evaluation, it also means that these cues can be easily falsified.

Seeing With Other Eyes. As seen in the previous section, a creator's political stance affects its perceived credibility and, in turn, the information's credibility. The last section also discussed how, for mainstream news media, its political bias has a lesser effect on its credibility, while for less familiar creators, this aspect is more relevant. Despite that, participants talk about how knowing the creator's ideology affects their attitude when facing the information and how they adapt their interpretations if necessary. This diary entry by Bruno is an example of this rationale:

As a guy who likes Marx & Keynes a bit too much, I'll always find The Economist's vision to be the updated version of what Friedman would say on any topic... always a

more liberal, monetarist and pro-business vision of the situation... Aware of this bias, I enjoy the content of this magazine with a certain pleasure.

This example indicates how Bruno takes The Economist's liberal position, conflicting with his own, into account when examining the information. Knowing this allows Bruno to see the information shared in the magazine through a particular lens, and therefore, he can still value it and take it as credible. For participants, knowing the creator's stance, particular in the cases of moderate media, is crucial because it allows them to better distinguish interpretations and facts of a piece of information. Furthermore, with this knowledge, they can search for sources with different opinions when cross-validating the information. This way, a creator's ideological position affects not only its credibility but also an individual's approach to the information.

Ultimately, in response to RQ2, participants' accounts of the creators of political information received on WhatsApp and their impact on credibility reinforce findings from existing studies conducted in other settings. Creator familiarity and reputation are known heuristics for evaluating its credibility (Hilligoss & Rieh, 2008; Metzger et al., 2010). Creator credibility is used as a heuristic for the credibility assessment of the information. Credible creators produce credible information. When the participant cannot identify the creator clearly or is unfamiliar with it, they often use message aspects to infer its identity or credibility. In other cases, they directly evaluate the information as not credible.

Participants talk about how a perceived discrepancy between the creator and the piece of information triggers the expectancy violation heuristic (Metzger et al., 2010). This appears when certain types of information are expected to come from specific creators and when the content diverges from the receiver's image of the creator. Lastly, one interesting case is of a participant who understands the signature of a journalist as a credibility cue, even if he is unfamiliar with

this creator. This can be compared to the presence of pseudo-evidence in the credibility of information when the evaluation is superficial (Lee & Shin, 2019).

Finally, particularly interesting, the creator's political stance, in addition to affecting its credibility, influences the assessment process (rather than the final assessment), modifying how users approach and interpret the information, allowing participants to separate fact from opinion, identify arguments and positions, and seek references with different points of view.

5.3 Sharer and Groups

The diaries and interviews show that the sharer of the information also has an essential role in assessing the credibility of political information on WhatsApp. Sharer credibility is a heuristic that directly affects the information's credibility and how much additional verification users believe must be done. Sharer credibility is based on relational aspects between them and the receiver, such as similarity and political congruency, acquired through previous experiences and familiarity. In this way, it is much more personal than evaluating the creator's credibility.

The group to which the information is sent is also a factor in the credibility assessment. Participants simplify their evaluation by using the group instead of the individual sharer as a heuristic based on the content it usually contains or previous experiences with its members. Additionally, it often results from preconceived ideas about the type of group or what its members are like, even if the the participant does not have previous experiences with all its members. Thiago, for example, is part of a political news chat and a group with the members of his church. He describes these two groups quite differently:

For example, the news group, they are focused on sending you articles. They are not focused on what happened, they are focused on keeping you up to date with the facts.

Then you go to the church group. They are trying to convince you of an ideology that some people have.

In the next two sections, the information sharer effect the credibility assessment process is described using both individual sharers and group examples.

5.3.1 Sharer Characteristics

Participants characterize the information sharer according to several aspects. Some are commonly related in literature as source factors, such as familiarity, similarity, and expertise (Cialdini & Goldstein, 2004; Metzger et al., 2010). To better explain these factors here they are divided into two main categories: the sharer's capability to verify information, and their political opinion.

Participants are concerned with the sharer's capacity to verify information. They considering the sharer's education, knowledge, and critical thinking skills important for this. Débora, for example, describes trustworthy individuals as “cultured” and uses words such as “naive” and “uninformed” to talk about people she does not believe blindly. Another example can be seen in this section from Lucas' interview:

Interviewer: When you receive some political information on WhatsApp, how do you decide if the information is reliable or not?

Lucas: It's mainly the source [creator]. That's one. Where it was published, that's the first thing. Secondly, who forwarded it, right? [...] If I understand that they don't have the cognitive discernment that... satisfies me, I don't give them the same credibility.

In this quote, Lucas indicates that he establishes a baseline for what he considers a minimal level of “cognitive discernment” for him to attribute credibility to the sharer. Other participants suggest having their own baselines for aspects they find important. Beatriz and

Débora, for example, talk about how much research the sharer does before sending the information.

The concern over the sharer's credibility evaluation process and their criteria and standards complements education and skill in evaluating the sharer. Take the following example from Beatriz:

Interviewer: Are there people you trust more, people you trust less?

Beatriz: Obviously. People I already know and who I know also do a search before passing something on, so they already research, they already look. These people, when they send me something that I find interesting, I also check it out and read it more carefully.

Furthermore, returning to some of the traditional aspects of source credibility, some participants mention the sharer's expertise on the topic of the information. Beatriz trusts the newsgroup she is part of because a journalist coordinates it. Rafael focuses on the expertise of his interlocutor when recounting a situation in which he was corrected for sharing misinformation.

[...] I found the article interesting and sent it to two or three people. Soon one [person] came. He used to be a senior official at Volkswagen. To give you an idea, he speaks four languages, he used to go to Germany all the time. He is extremely well-informed about the situation of the automobile industry. Even though he is retired, he scolded me and said: "Man! This is all wrong." [...]

In addition to expertise, participants also talk about the sharer's proximity to the topic as a credibility cue. For instance, Débora was more likely to believe the information about the town where she has a country home because her mother has friends there, so the information would

have come from someone “internal.” Similarly, some participants mention their friends and family members highly interested in politics as qualified and trustworthy. Adjectives like “engaged” and “updated” indicate this qualification. These results can be seen as what Metzger et al. (2010) call enthusiasts or ‘presumed but noncredentialed experts.’

Second, ideological congruency is critical to the sharer’s credibility. This corresponds with existing literature that finds that “If information found during a search matched the existing beliefs of the participant or originated from a source substantially similar to him or her, then these sources or pieces of information were likely to be considered credible.” (Metzger et al., 2010, p. 423) When asked what makes a sharer credible, Rafael says, “From Novo⁴, I know many people. And I know that they are people... It's not that I know that, historically, these people have behaved in a similar way to me.” In other words, politically congruent sharers were more likely to be credible.

Together, these two evaluations form the sharer's credibility. A credible sharer is one the information user finds skilled enough not to fall for misinformation and similar enough to share politically congruent information. On the other hand, a sharer who is educated but has diverging opinions and a sharer who has similar political opinions but is considered “naïve” will not be regarded as credible.

People evaluate all the above characteristics: the sharer’s education, skills, research behaviour, and ideological congruency based on their personal experience, emotional bonds and similarities with the sharer. Here the term “emotional bonds” is taken from Chadwick, Vaccari et al. (2023) to differentiate this factor from familiarity used to describe source credibility. This is supported by Feng et al., (2022) and Chadwick, Vaccari et al. (2023). These last authors,

⁴ Rafael is a member of the political party Novo

characterize messaging applications as hybrid public-interpersonal communication and explain that “In these contexts, people rely on personal experiences and the emotional bonds of kinship and friendship as bases for what they think about others’ sharing habits, and what they feel able to say in response” (Chadwick et al., 2023, p. 3).

Previous experience shows participants what type of information the other users are likely to share. That includes information they deem irrelevant or polarizing and information judged as misinformation, both based on wrong facts and wrong interpretation. Lucas, for example, says:

This guy, it is not the first or second time. Usually, this one just sends nonsense. So, you do not even look at it anymore. This guy here? Disregard him. Others also have a very politicized bias, some things that do not hold up.

Conversely, emotional bounds are related to personal relationships and similarities between the participant and the sharer. Bounds increase trust between individuals and reinforce similarities. Although not taken blindly, these ties play an essential part in the trust between two people, supporting existing research (Samuel-Azran & Hayat, 2019).

Participants allude to similarity in political opinion, behaviour (how much research one does) and demographic characteristics (age) (see last quote from Rafael, “From Novo [...]). It produces feelings of group belonging and its opposition, the exclusion of others. In this case, the other or out-group is stereotyped, and group belonging alone often defines their credibility (Agarwal, 2022). For example, Alexandre sees all individuals on the political left negatively. He says: “But it's just that the left, for me, is always, always, always lying, in almost everything or in everything. And the right only when the guy is extreme.”

The exception is younger participants' perception of their family groups as environments where political divergencies cause conflict and information must be evaluated with additional care. This connection between WhatsApp family groups and misinformation and lack of credibility is found in other contexts, such as the United States (Feng et al., 2022) and India (Malhotra, 2023b). This opinion stems from observing family members' lack of information skills and perceiving political divergencies between relatives. More about the dynamics of family groups are discussed in Section 5.4.1.

Overall, these results show that sharer credibility is constructed by the receiver's perception of their information skills, knowledge, education, expertise and research process, on the one hand, and by their political opinions and other similarities on the other. Participants base their perceptions of the sharer on their previous experiences and personal bonds with them.

Additionally, these results indicate an aspect reflected throughout the rest of this chapter: how family groups diverge from the expected norm that bond strength is positively related to perceived credibility.

5.3.2 Sharer Impact on Information Credibility

The credibility of both the sharer and the group serves as a heuristic to help participants assess the believability of information with less cognitive effort. Participants express believing in information from credible sharers, while they question the validity of information from those deemed not credible, especially those with conflicting political views. They also feel the need to further evaluate information from sharers who do not meet their credibility assessment standards.

Participants talk about assuming that a piece of information is credible because credible others shared it. For some, groups and sharers are not seen only as filters for the relevance of the information, as discussed in Chapter 4, but are also filters of credibility. Ana Paula is one of the

participants who uses this rationale when engaging with political information. In the interview, she reflects on that:

I read it and try to find out what it's about. To find out if it's true or if it's a lie. Normally, when [information] arrives in a WhatsApp group, if... Most groups usually have the same opinion as mine. In most groups. So, I read it as a source of information. But I try to find out if it's true or not.

Ana Paula's perception of her contacts as filters that will only share credible information allows her to, as said in the second quote, "read it as a source of information." Ideological congruency is central to Ana Paula's belief in her groups and the information shared within them. In fact, Ana Paula's experience represents a feedback loop that characterizes social media, with individuals belonging to homogeneous groups that are more likely to share information that will be evaluated as credible, reinforcing existing beliefs (Johnson & Kaye, 2014).

For most participants, the sharer and group credibility indicate how much additional effort is needed to evaluate the information. Information shared by those perceived as credible requires less verification. Messages from sharers known to share misinformation or politically incongruent information are often ignored or immediately considered less credible. Messages from sharers perceived to have less information skills or verification standards are more likely to prompt the receiver to do additional evaluations. Débora, for instance, talks about having two groups of friends, one that she considers more cultured and one with more "innocent" members. While in the first case, she assumes the information is believable and verifying it is less vital, in the second case, she searches for the information more times. Similarly, Camila separates her friend groups, credible, from her family group, not credible:

If it [information] is from these two groups that I trust more and that we have more frequent discussions about it, I tend to find it more reliable. If it is some groups, the family group, some things, then I will probably check everything that comes up. Because then I trust it a lot less.

The findings of this research also point to the influence of aspects such as the topic of the information, available information cues, and the meso-context and macro-context in the weight of the sharer in the credibility assessment. For example, in situations where traditional sources are less expected to bring credible information, participants relied more on the sharer. For instance, Gustavo, who comes from a small town in the State of São Paulo, reflects on how much he relies on others to evaluate local political information. At the same time, at the state, national or international level, he can count on news sites. He says that in small towns, he often gets first-hand reports from people involved or who have witnessed the happening. A similar example happened to Débora; when she received information about the small town she frequently visits, she assumed that because it is a small town, she would not find the news anywhere else and used other cues, such as that it was shared by her mother, to evaluate it.

In conclusion, participants rely on sharer credibility to quickly evaluate the information. Credible sharers are associated with credible information, including being seen as a source of credible news for one participant. Messages from sharers who have less, or no credibility are seen as unbelievable or as requiring additional research. Sharers not credible for their political incongruency are believed to send information that can be easily dismissed as not credible, while those considered naïve or unskilled might still share believable information, but it must be further verified.

So far, results have shown the importance of the personal bonds and relationships between information users and sharers in the evaluation of information credibility. Additionally, they indicate that the similarity between these actors is a critical factor in this assessment. This addresses RQ3 concerning the connection of the social dynamics among WhatsApp users with the credibility evaluation process.

Moreover, the interviews review three additional themes that complement this discussion by exploring how credibility assessment works as a social process. It emphasizes that not only the receiver's perceptions of the sharer matter but also the norms and social structures. The following section explains these three themes.

5.4 Social Interactions

As explained in Chapter 2, information credibility assessment is an inherently social process, influenced by one's relationship with the sharer, network characteristics and people's standards or the collective evaluation of creators (Rieh & Hilligoss, 2008).

Additionally, sociality is an intrinsic aspect of WhatsApp. In closed social media groups, individuals foster connections by sharing opinions, discussing events, and exchanging information (Swart et al., 2019). Similarly, on WhatsApp, different interactions around political information strengthen relationships, differentiate between groups, and reinforce group norms. As these interactions occur, they also affect the credibility of political information on WhatsApp.

Participants explored three main interactions in the interviews: misinformation corrections, conflict, and social support to credibility assessment. These interactions affect the credibility assessment of political information in different ways, from making an individual verify a piece of information they consider credible to establishing the perception of consensus. This section explores these interactions and their potential effects on credibility assessment.

First, it explores how participants decide when and how they correct others. Then, it discusses how groups and individuals avoid conflict by creating rules or changes in behaviour. Lastly, it talks about participants' positive experiences of others helping in their credibility evaluation.

5.4.1 Negotiations of Correction

Participants frequently mention the theme of correction of misinformation. They talk about either witnessing correction being done, being corrected themselves, or correcting others. According to participants, information correction often leads to information verifications and can change their credibility evaluations. Thus, correction is integral to the credibility assessment of political information on WhatsApp.

The interviews reveal that WhatsApp misinformation correction is surrounded by strategic decisions that guide users' choices on whether they will correct someone, where and how. The main aspects that guide the negotiation of correcting misinformation are the strength and nature of the relationship between the misinformation sharer and the corrector, the risk of conflict, the possible harm caused by the misinformation, the responsibility the user feels towards stopping its spread, and personal aspects such as time and energy. These factors are similarly encountered in Tandoc et al. (2019) when studying misinformation responses in social media. Additionally, they include the perceived efficacy of the correction, which emerged in this research but was related to conflict avoidance.

This section explores how misinformation correction is negotiated in different scenarios and any situations that may trigger a different behaviour. It also discusses what participants consider when deciding where to correct misinformation, as public and private corrections imply various things. Finally, the primary strategy for information correction, the use of proof, is explained, with its connection to the credibility assessment.

Correction in Politically Congruent Groups. According to participants accounts, in politically congruent groups, both those with strong ties, such as friend groups and those with weak ties, like political-themed groups, individuals are more likely to correct misinformation. In these groups, participants feel more comfortable expressing their disagreement, believing that the risk of conflict is small because, as Rossini et al. (2020) suggest, they may know how others will react to the correction. Ana Paula's example of the responses she gets to misinformation correction illustrates this perception:

[...] and they said, "That is right. I have looked into it too. And you are right." Or the person does not agree, but hardly ever. Because we talk to people who think the same, right? I particularly avoid fighting about politics. It does not lead to anything.

Participants' accounts also indicate that in politically congruent groups, members are more likely to accept correction from others. Previous studies report that people are more likely to re-share corrections from like-minded individuals (Pasquetto et al., 2022), supporting these results.

This study further suggests that expectations have been created around information verification in some of the participants' groups. In Beatriz's group with former colleagues, whoever is online when the information is shared will check it, and "Someone will always check it out." While the verification may not occur every time, this expectation makes group members more accountable when sharing information.

Correction in Political Incongruent Groups. In politically incongruent groups, people are less likely to correct misinformation due to the risk of conflict and the belief that others will not change their opinions. However, when the bonds between group members are weaker or nonexistent, individuals are willing to risk discussions and, more often, will correct incongruous

misinformation. Some examples of this are work-related groups, in which the corrector is usually supported by implicit rules banning political content from the conversation.

The political moment also affects correction in these groups. Thiago, for example, says that during the election period, it was important to “be participatory and clarify the fake news and fight it head-on” because he had a role of clarifying not only for the misinformation sharer but the whole group. Outside this period, he is more concerned with creating conflicts and will avoid corrections and discussions, even reducing his social media use.

Correction in Family Groups. Family groups are contradictory because they are composed of strong and medium-strength permanent ties that are not chosen and incongruent political opinions. Correcting misinformation risks creating conflict and damaging relationships between family members. Therefore, it is common for these groups to have rules against sharing political content and implicit social norms of conflict avoidance. Studies conducted in India (Malhotra, 2023b) and the UK (Chadwick, Vaccari, et al., 2023) indicate that social norms, such as conflict avoidance and deference towards elders, influence how misinformation is corrected in conversations.

While misinformation correction is often avoided, several younger, left-leaning interviewees describe engaging in correction and discussion in their family groups. Both Henrique and Camila have become the fact-checkers of their family conversations. They aim to teach their family members to evaluate information and cross-validate it with other sources critically. However, while Camila guides her relatives through every step of the verification process, Henrique is more aggressive in the group, stimulating discussions.

The interviews also suggest a difference between family members participants feel comfortable correcting, usually those with stronger ties, and more distant relatives that they often

avoid correcting. Correcting close others is associated with preventing them from believing in misinformation or teaching them information skills, as Camila does. This sense of responsibility also appears in Malhotra (2023b), who adds that correcting close family members is seen as an act of care.

Correcting distant relatives is considered unnecessary and a more significant risk of conflict. However, the potential harm of the misinformation might lead the participants to correct extended family members. Camila is more likely to correct distant family members “if it [the information] is something very complicated, if it is something very serious.” She also distinguishes between opinion and misinformation when deciding on the correction. Concerning vaccine-related misinformation, she says: “If you decide not to get vaccinated, for God knows what reason, I disagree with that, but okay. Now do not go spreading something that does not make sense because that is where I tried to get [as in correct] on these things.”

Unlike Malhotra (2023b), this study younger participants are more likely to correct family members, despite both studies finding that the same factors affect correction negotiations. These differences can be tied to the different cultural norms and WhatsApp uses that guide these interactions in India and Brazil.

Publicness of the Correction. Between the responsibility of correcting misinformation, the risk of conflict and relationship damage, and personal factors, participants must decide where the correction will be done. WhatsApp is a closed and private environment; however, its different conversation types and other features allow the correction to be semi-public (in groups and statuses⁵) or private (in individual conversations).

⁵ WhatsApp statuses are temporary updates that users can share with their contacts in the form of text, photos, videos, or GIFs visible for 24 hours before disappearing.

Most participants take an “in-situ” approach, in which the correction is made in the same conversation in which the misinformation was shared. This approach is guided by the understanding that the correction should be seen by everyone who might have encountered the initial message. For Henrique, other group members witnessing the correction may be as crucial as the sharer, who might not change their opinions. He explains:

[...] there is never just one person who is going to read it, there is always going to be a lot of people who end up getting to that content at some point or another. [...] Even though I will not often be able to change a person's mind, there will be other people who are much more inclined to discuss, debate, read, who will read that discussion, who will perhaps learn something from what I am debating.

Hence, for Henrique, misinformation correction is not only a rectification of the content shared but also an opportunity to create positive discussions and debates in the group, stimulating others to learn from it. However, the in-situ approach is complemented with other conversation types. Camila, for instance, clarifies that if the group discussion goes “down a path” she dislikes, she will call the individual to a private conversation. On the other hand, Henrique believes that the individual being corrected is more likely to become defensive and attached to their existing opinions when confronted individually and will avoid it as much as possible.

Thiago is concerned with discussing politics and correcting misinformation without creating conflict with the group’s leadership, like his church’s pastor. In contrast to Camila and Henrique, he communicates with the group using humour and jokes to express his disapproval of the message. He expects other members to contact him privately, allowing him to elaborate further on his correction. For Thiago, this strategy has the benefits of avoiding conflict with the group’s leadership and avoiding publicly announcing political allegiances, which later might end

up damaging his reputation. It is also possible to argue that Thiago can present his arguments without allowing the corrected individual to respond.

In different circumstances, Camila explains that to manage the overwhelming volume of misinformation during the election period, she adopted a semi-public approach to correction, using WhatsApp statuses, which she had identified as a tool used by her family for political information. Through this feature, she could reach this audience without engaging in individual conversations. Although she does not usually publish political content publicly, Camila strategically decided to give up personalization and depth of correction for a more extensive reach and boundaries protecting her limits. In the interview, Camila clarifies that using WhatsApp statuses was temporary, and she stopped after the last election period.

Correction Format. Most participants correct misinformation by including evidence in the form of links or screenshots. McCroskey defines evidence as “factual statements originating from a source other than the speaker, objects not created by the speaker, and opinions of persons other than the speaker that are offered in support of the speaker's claims.” (1969, p. 170). Evidence supports the correction, giving it additional credibility.

Participants discuss looking for references from “serious, credible sources” (Ivan) and using them to support their correction. The strength of the evidence should influence the correction result. Still, it is possible to presume that its mere presence also plays an effect, such as what has already been observed when pseudo-evidence increases the credibility of the information in superficial evaluations (Lee & Shin, 2019).

Similarly, some participants understand the evidence as supporting the correction when they are not perceived as credible shares. For instance, Beatriz frequently corrects her housekeeper with references. She justifies: “Because just saying ‘that is a lie,’ she might not

believe it.” According to Beatriz, support in the form of references works to compensate for what she might not have: the housemaid’s trust. “I don’t know. Her aunt might be more credible to her than I am.” Although it is not possible to know the housekeeper’s perception of Beatriz, research shows that evidence can increase source credibility and attitude change when an initially moderate-to-low credibility source shares it (McCroskey, 1969). Despite it all, the evidence does not guarantee the correction will work. In fact, the findings of Batista Pereira et al. (2022) indicate that correction is ineffective in Brazil.

These examples reflect the complex negotiations behind misinformation correction. These decisions are strategic, balancing individuals’ concerns – relationship harm and image protection – goals – sense of responsibility – and personal capacity. These decisions include whether to correct someone, whether it will be a private or semi-private correction, and how best to support their argument. Henrique, for example, is mainly concerned with addressing misinformation and establishing himself as an expert source. Thiago, on the other hand, prefers correction in private conversations, prioritizing image maintenance. Lastly, Camila balances the sense of responsibility with her capacity to correct misinformation.

Credibility is essential for correcting misinformation, which, in turn, is crucial for evaluating credibility. The credibility of the corrector, for example, affects its effectiveness (Ecker et al., 2022). Credible evidence is used to support the correction. On the other hand, individuals are less likely to perform corrections if they perceive that their credibility may be at risk, as seen in Thiago’s example. Furthermore, in groups where social norms support misinformation correction, individuals are motivated to evaluate the information in more depth before sharing it to avoid damaging their images (Kligler-Vilenchik, 2022). Lastly, misinformation correction is often a trigger for the verification of information.

However, as seen at the beginning of this section, not all conversations support misinformation correction. Participants frequently talk about groups where political information is forbidden to avoid conflict and the different behaviours they engage in to prevent discussions. This next section discusses the reasons and strategies for conflict avoidance according to participants.

5.4.2 Conflict Avoidance

Conflict often arises in conversations about politics. Some participants experienced this in their groups, such as Beatriz's group of classmates or Rafael's group with his former army colleagues. Family groups are also a frequent source of political content, with many becoming so contentious that rules are established to ban the topic. While most conflict happens in politically incongruent groups, politically homogeneous conversations are not immune to it.

However, most people wish to avoid conflict. On the one hand, participants believe that conflict will not change other people's opinions, so it is a useless endeavour that wastes their time and energy. On the other hand, participants see conflict as a risk to their relationships.

Several participants agree that other people are unwilling to change their opinions. Therefore, discussions "won't lead to anything" (Ana Paula). A similar sentiment is found in research on misinformation correction in social media (Tandoc et al., 2019) and WhatsApp family groups (Malhotra, 2023b). For Beatriz, this issue stems from the polarization that currently characterizes Brazilian politics. "Everyone is defending their own [side]," she says.

Participants also suggest that conflict is a waste of their time and energy. This is the opinion of Lucas and Alexandre. Lucas believes that any "polemic of the day" is debated on the WhatsApp conversations he participates in. For this reason, they often tend to be quick. He does

not waste his time with these discussions and prefers to wait for the more significant issues to reach Facebook, where he will engage with them.

Additionally, participants are concerned with the issues that conflict can create in their relationships with others. Interviewees' testimonies indicate that different relationships withstand different levels of conflict, and that people are willing to risk some relationships more than others. As discussed in the previous section, people are more cautious with familial relationships and close others. On the other hand, people are less worried about weaker ties, such as co-workers and former colleagues. Lucas, for example, says that in some work groups he is obligated to be part of, he is quick to confront when someone shares nonsense.

Strategies for Conflict Avoidance. Through participants' accounts, several methods for conflict avoidance emerge. In essence, they compose three categories: social control over information sharing, which involves using rules, explicit or implicit, to regulate what can be shared in groups; individual control over information reception, in which individuals employ triaging strategies to avoid content or people that can cause conflict; and individual control over information sharing, including selecting congruent audiences to receive their messages.

The topic of group rules appears in several interviews, particularly in the context of family conversations. However, unlike findings in Chadwick, Hall et al. (2023), where group rules are created to prevent the spread of misinformation within conversations, this study's results indicate that group rules primarily aim at avoiding conflict around political topics. Participants explain that these rules were created either after a dispute between family members or to prevent such conflicts, often banning political content within the group. These group rules are usually enforced through warnings, behavioural corrections and, if needed, temporary expulsion of group members from the chat.

In other cases, the rules created are implicit. During the 2018 Presidential Elections, Débora's family fought a lot, with several family members leaving the group. After the election period, when the members returned to the group, the conversation naturally changed without the need for explicit discussion. She explains: "Now it has kind of turned... The group hardly works. But sometimes it's like, 'let's have dinner with grandma,' you know? Or 'send a photo.' It's nothing, nothing political."

Other conversations guided by tacit rules are work-related and groups with weaker ties where the common understanding is that political content does not belong in these spaces. In this context, the risk of conflict from addressing political content is seen as less than the risk of allowing such content in the group.

A second strategy to avoid conflict involves triaging out incongruent political content or controversial conversation members. Participants admit that engaging with these messages and individuals "would lead to a fight" (Débora) and prefer to avoid them. WhatsApp affords several ways to evade unwanted information and individuals, from ignoring a message to silencing an individual or group. In more extreme cases, participants talk about leaving a group conversation, either because of continuous conflict or due to one situation that crosses their boundaries. Ivan, for example, received "unfortunate comparisons" from distant relatives even after correcting misinformation. He decided that leaving the group was the only option. Similar experiences are described in Chadwick, Vaccari et al. (2023). Section 6.2 explores how WhatsApp affords triaging and information avoidance.

Lastly, interviewees discuss avoiding conflict by controlling their audience and only sharing political information in politically congruent groups while avoiding politically incongruent conversations. Alexandre, for instance, explains that he often posts in liberal groups,

knowing that “they agree and end up commenting positively on what I've posted.” While there may be some divergencies between members, sharing political information in these groups is less likely to generate conflict. In this case, political information sharing performs different social functions (Swart et al., 2019), but individuals feel secure that their image and relationships will not be damaged.

In conclusion, users frequently wish to avoid conflict, especially when the perceived efficiency of misinformation correction or discussion is low, and the risk of damaging relationships is high. Participants talk about three main strategies for preventing or getting out of discussions. First, politically incongruent groups often have rules, implicit or explicit, banning any political topics to be shared within the conversations. Second, individuals triage out political information or other users that may incite conflict through the strategies discussed in Section 4.4.2 and the affordances of Section 6.2. Lastly, participants also talk about avoiding sharing political information in politically incongruent chats, often only discussing politics in groups that agree with them.

The next section discusses a third side of users’ collective behaviour on WhatsApp. When people help each other in the credibility assessment of the information.

5.4.3 Social Support of Credibility Assessment

Although the interviewees highlight many interactions on WhatsApp as negative experiences, positive experiences are also part of their reports. In these moments, other users, individually or collectively, support the credibility assessment of the information by aggregating more relevant information, answering questions, participating in positive debates, and correcting misinformation. These experiences show how WhatsApp is an environment where individuals feel comfortable asking for help, discussing political topics and providing additional information.

The first way participants talk about WhatsApp aiding credibility assessment is by answering questions. The app's ubiquitous and synchronous nature means that a person can ask for help anytime, even if the response is not immediate. Often, groups and conversations can be created for political discussion. Henrique is part of a study group focused on “mobilization, social action, and studying current facts,” where bringing up questions is incentivized and often leads to the discussions that shape the group. Participants also talk about relying on other users they trust. For example, Ana Paula reaches out to several individuals when she has questions, depending on the topic of the information. Most important are her sisters, who she describes as highly trustworthy and who “put a lot of thought into everything she [they] receives.”

Participants also comment on discussions around political content or news supporting information credibility assessment. Some see positive discussions and debates as one of WhatsApp's main aspects. Camila, for example, sees WhatsApp as an environment that allows for discussion and debates, where she can understand other points of view or get help understanding something she has seen. Ivan also uses WhatsApp for discussion but adds that it brings a “false plurality” because most of his contacts have similar opinions. Conversely, some interviewees have the opposite opinion, saying that WhatsApp is not the right place to have these discussions.

A unique example of members supporting each other happens in one of Rafael's groups. Recognizing that not everyone has access to news sources behind paywalls, the group has established a habit: those with access to the full article share it with everyone. This collective behaviour ensures all members have access to complete articles within the app, making it easier for everyone to stay informed.

Together, these experiences show how WhatsApp affords trust environments where research participants and their colleagues feel comfortable asking questions, discussing political topics, and correcting others. However, these conversations are characterized mainly by political homophily, meaning that even debates will not present diverse ideas. This could give members the illusion of consensus, reinforcing their beliefs.

5.4.4 Navigating Politics in Groups

These experiences are different sides of the same coin: guided by the social norms that rule one group or another. In some groups, misinformation correction and debates are accepted and even encouraged. Other groups are characterized by norms of conflict avoidance and rules against sharing political information.

Participants talk about groups varying in political congruency and strength of ties, which combined form four profiles. When the strength of the relationships is strong, but congruency is not, such as in family groups, conflict avoidance is the norm, with individuals not wanting to risk their relationships. Frequently, participants expressed that their family groups had explicit rules forbidding political information and discussions. The only exception to this behaviour was in participants' relationships with their immediate family, with whom they usually took much more liberties but were also more politically similar.

When both the strength of relationships and political congruency are high, such as in groups of friends, participants recall having more political discussions and being more comfortable correcting others. On the other hand, credibility is more assumed in these groups, so misinformation often goes unnoticed.

Groups that are politically aligned and composed of strangers are mostly groups created around a politician or political party. In these groups, users often only share politically aligned

content to avoid being confronted. This can lead to the perception of consensus (Chadwick, Vaccari, et al., 2023). However, research has pointed out that people are more likely to accept social correction from similar others, suggesting that correction might be more frequent in these groups (Pasquetto et al., 2022).

Participants talk about groups related to work, conversations with other school parents, and neighbourhood groups, which are characterized by both weak ties and low congruity. In these conversations, political topics are mostly frowned upon. This is corroborated by Masip et al. (2021), who identify groups gathered around specific reasons or goals and which self-regulate in that they condone any content outside of the group's central purpose.

Lastly, some groups fall in between these four main sets. Groups with political divergencies and medium-strength ties, such as groups of former colleagues and Thiago's conversation with fellow churchgoers, often are the set for conflict. While rules for political information avoidance sometimes only emerge after conflict, in these medium-strength groups, individuals are less concerned with their relationships, and these rules might never be set. Conflict only subsides when individuals in the political minority either leave the group or stop engaging with it.

In summary, these groups' social norms and expectations, not only exclusive to WhatsApp but also present in "real life," shape the appropriate behaviour in each of them. Consequently, these groups shape individuals' perceptions of the information shared and their credibility assessment process. The following section summarizes the findings of this chapter, answering research questions 2 and 3.

5.5 Key Insights from RQ2 and RQ3

This chapter aimed to answer research questions 2 and 3 by exploring participants' perceptions of creators, sharers and social interactions in the diaries and the interviews. Regarding the connections between the perceived sources of information and the practices and criteria used in its evaluation (RQ2), the results show that individuals identify different actors at various stages of the communication process as sources, including its creators, sharers and intermediaries in the information path.

It is interesting to compare what makes the creators and sharers credible in the context of political information shared on WhatsApp and how each element influences the credibility assessment process for the participants. While creator credibility is based mainly on collective perceptions of that actor, such as reputation and name recognition, the sharer's credibility is supported by personal judgements based on individual experiences with the sharer and aspects that appear in the information user-sharer relationship, such as the strength of bonds and similarity. This means that the more significant the role of the sharer and the groups in the credibility assessment, the more subjective this evaluation is.

Both creators and sharers are heuristics in assessing the credibility of political information on WhatsApp. Nevertheless, many participants report that information frequently arrives without creator cues or in formats, such as images, that hinder their ability to trace its origin. In such instances, participants typically judge the information as not credible immediately or rely on message cues to deduce characteristics of the creator. In these cases, the political affiliation of the creator often plays a bigger role, with individuals taking elements such as colors to determine its ideology. At the same time, when the creator of the information is not available, the sharer credibility becomes more important.

Creators and sharers also affect the credibility assessment process in other ways.

Participants noted that the creator's political ideology influences their approach to the information, enabling them to differentiate between facts and interpretations. With this insight, they look for other sources to compare facts and various opinions, allowing them to form their own conclusions. As discussed in Chapter 4, cross-validation is a common strategy used to assess information. For most participants, the traditional news media of their choice act as "safe harbours" that they can count on for information comparison or learning. Differently, when it comes to sharers, participants distinguish between those they can trust implicitly, those whose messages are likely to contain misinformation, and those whose information requires additional evaluation before being believed.

Several factors, such as information topic, available cues, and meso- and macro-context, influence the weight of each source on the credibility assessment. In Débora's example, the perceived lack of other resources for small-town news led her to rely solely on the sharer. In other cases, like Ivan's at the start of this chapter, the creator's credibility suffices despite the other actors associated with the information (Instagram profile, person that shared the post with him).

Another important insight is the importance of creator- and sharer-based heuristics over message-related ones. While individuals use all these strategies, some participants prefer creator- and sharer-based ones. One possible explanation for this is the ease of recognizing the creator or sharer, when available and known, compared with identifying possible information manipulation, decontextualization, issues with argumentation, or conducting cross-validation. Another possible explanation is that individuals' political beliefs and group affiliations influence their assumptions about what constitutes a reliable source. For example, Thiago describes how in

his church group, anything the Pope says will be regarded as credible, while TV Globo, often vilified by Bolsonaro, is seen as untrustworthy.

Regarding RQ3, this chapter first shows the importance of the existing relationships between users in the credibility assessment of the sharer. This evaluation is based on previous experiences and social bonds between the information users and the sharer. Further, results demonstrate how social norms within conversations shape users' behaviours on WhatsApp and the credibility assessment process. These norms guide people's engagement with each other and with political information. Participants describe three forms of social interaction related to political information on WhatsApp: misinformation correction, conflict avoidance, and social support for credibility assessment.

Participants characterize groups by their political congruency and strength of ties. While in politically congruent groups, misinformation correction is more accepted, these conversations are also characterized by aligned content. In politically incongruent groups, implicit or explicit rules against political content and norms of conflict avoidance mean that misinformation is often not corrected.

These interactions show that users' evaluations of the credibility of information shared on WhatsApp are not isolated. Instead, as the literature suggests (Flanagin & Metzger, 2008; Rieh & Hilligoss, 2008), group and social engagement are critical factors in credibility assessment, and individuals' perceptions of their networks affect the heuristics used in the evaluation (Sohn & Choi, 2019).

Chapter 6 - Affordances

The last two chapters have explored many strategies and criteria participants used to assess the credibility of political information on WhatsApp. Some essential contextual elements have been discussed, including social and cultural norms, existing relationships between the actor and the source, and time and space constraints. However, to understand how this process occurs on WhatsApp, it is necessary to examine how the application shapes this context. The concept of affordances has been chosen as a guide to avoid a technological deterministic approach. This chapter aims to answer the last research question:

RQ4. How do WhatsApp's affordances impact the practices and criteria used to assess the credibility of political information received on the app?

This chapter first establishes how affordances like synchronicity, mobility, and availability—associated with the multiple roles played by WhatsApp—nurture in participants feelings of being “always online.” Unable to disconnect and occupying multiple contexts at once, both physical and digital, these individuals recall often experiencing context collapse (Marwick & boyd, 2011).

Secondly, WhatsApp options for information triage often fall short for some of them interviewees, leading them to receive unwanted content and experience what is referred to here as content collapse. This phenomenon happens when discussions about one topic infiltrate conversations guided by the norms of different contexts. This is especially noticeable when political content is shared in family groups. Section 6.1.2 discusses the concept of content collapse further, while Section 6.2 describes the existing affordances for triaging, and how they often fail.

In Section 6.3 the lack of visibility afforded by WhatsApp and its consequences for the credibility assessment process are discussed. The reduced visibility that makes WhatsApp be described as a “near-sighted environment” (Evangelista & Bruno, 2019) constraints possible strategies for information evaluation, such as cross-validation directly from the app or using other people’s comments to facilitate the assessment⁶.

Finally, Section 6.4 details how the affordances of WhatsApp support the social interactions discussed in Section 5.4, and explores the relativity and different perceptions of affordances for different interviewees.

6.1 WhatsApp Context and Use

Participants describe WhatsApp as an environment of constant connection, passive reception of information and lack of control. Their experiences are characterized by context collapse (Marwick & boyd, 2011) and content collapse. While context collapse is characterized by people from outside their immediate context being able to reach them, content collapse, is a term used in this research for the experience of receiving messages from one context in conversations belonging to another. Ultimately, political information is received and evaluated amidst the daily use of WhatsApp in a context that blends both personal and professional practices. This section discusses how the different affordances of WhatsApp shape this environment and the user experience (McVeigh-Schultz & Baym, 2015; Nagy & Neff, 2015).

However, it is important to note that affordances do not construct this environment alone. While they can promote, allow or constrain certain practices, social norms and uses also shape

⁶ Since or just before the interviews, WhatsApp has released updates that are expected to impact the credibility assessment process, including Communities, Channels, Meta AI, new admin powers, and several privacy-related features. The potential changes caused by these updates will be addressed in the Discussion chapter to avoid confusion.

this context. For instance, while WhatsApp affords availability and synchronicity, it is a social norm that guides users not to leave others “on read.”⁷ Among these practices, one crucial aspect for participants is the major role WhatsApp plays in their lives, performing multiple roles previously spread over other media.

6.1.1 The Multiple Roles of WhatsApp

Participants describe how WhatsApp is embedded in their lives and routines through diverse roles. In the admission survey, 94% of respondents said they use WhatsApp to connect with friends and family, and 78% used it to contact work colleagues. People also use WhatsApp to discuss specific themes, including hobbies (44%) and fun and entertainment (53%). Additionally, 65% of respondents use WhatsApp as a work tool. News and information are minor roles of WhatsApp, at 38% of respondents, along with using it for social and political mobilization (38%).

The interviewees explain their use of WhatsApp in more detail. Nearly all interviewees mention their family groups as an important part of their use of the application, while half of them simultaneously use the app for work. WhatsApp is also used to deal with day-to-day things, including one participant who is part of a group with the parents of his kid’s colleagues and two others who used the app for shopping and services. Four interviewees are part of religious and religious organization chats. While only two are part of news-focused chats, at least a third of interviewees are part of politically centred conversations. Exemplifying this diversity of roles, Ana Paula describes how she uses the app:

Interviewer: What kind of conversations do you have on WhatsApp?

⁷ Dictionary.com defines “left on read” as “a person is *left on read* when a recipient has read, but not responded to, a sender’s message.” (n.d)

Ana Paula: Everything (laughs). Doctor's appointments, questions about medical exams, political discussions, silly conversations. When am I going to play a game at your mother's house, for example.

Ultimately, participants' narratives around WhatsApp suggest an accumulation of functions that cross boundaries between personal, public and professional contexts. Due to this indispensability, disconnecting from the application is harder. Participants express the "need "to be always online." These feelings can be tied to several of WhatsApp's affordances and social norms followed in the application.

Mascheroni and Vincent (2016) describe the "always on" nature of WhatsApp as an outcome of the affordances of *availability* or *visibility*. Although the users have several features that allow them some control over their visibility on the app, interview participants made it clear that social norms and expectations dictate that messages should not go unanswered for long.

Additionally, the application's *synchronicity* and the speed at which new information arrives make participants constantly aware of being connected, even if they temporarily distance themselves from their cell phones. In combination with features such as notifications, WhatsApp synchronicity persistently demands participants' attention. For Alexandre, that means different behaviours on WhatsApp compared with other social media.

I think WhatsApp is faster. I can go many days without logging into Facebook and Instagram; in particular, I hardly log in. On WhatsApp, I look at every message they send me. Also, on Facebook, there's the timeline; I don't know; there's a lot of stuff going on. I can ignore a thousand things. On WhatsApp, I don't ignore anything. I can ignore it for a while, and then after a while, I go into that particular group and look at it. There may be hundreds of messages, but I'll look at them all. Not Facebook. I don't try to catch up. "Oh

no, gee, I haven't been on Facebook for a month. I have to see everything they've posted".
I don't do that.

Furthermore, WhatsApp affords *mobility* - indirectly through cell phones – which hinders disconnection. Through mobility, participants can engage with the application in different physical contexts, at work, at home or even in transit. Participants discuss how they incorporate WhatsApp throughout their day, particularly at work. Rafael, for example, talks about having WhatsApp on his computer: “My WhatsApp is directly connected to my computer. [...] I'm an architect, but I work practically all the time on computer stuff, so I have two screens. One I work on, and the other is WhatsApp.” Alexandre also receives notifications constantly, including during the interview. Pamela takes breaks from work to look at WhatsApp. Henrique is the only one who mentions having to disconnect while he is teaching but also discusses how he is online between classes.

In combination, the many roles performed by WhatsApp within several life contexts, the affordances that allow for constant connection, and the social norms that demand it, participants experience context collapse (Marwick & boyd, 2011). They talk about receiving messages from one context while their surroundings and tasks are part of another. For example, receiving messages from family members during their workday. Swart et al. (2019) argue that context collapse can be seen as a characteristic of social media platforms because it alters users' practices. For instance, Lucas complains about his contacts sending many messages while he is at work, disturbing his focus.

6.1.2 Active Seeking and Passive Receiving

Participants also discuss WhatsApp's insufficient triage options and their lack of agency within the app. These topics and their related affordances are detailed in Sections 6.2 and 6.3.3,

respectively. While on other media, including other social media, people actively seek information by accessing specific applications or websites, on WhatsApp participants discuss only being able to receive information. This can be understood as limited searchability and selectivity in the app. Simultaneously, the constant connection on WhatsApp and insufficient filtering means that information reaches users at undesirable times and in unexpected contexts. Ivan frames this as a dichotomy between active seeking and passive receiving, which he describes as the most significant difference between WhatsApp and other media. He explains:

I think the big difference is that for... When I'm on Twitter, for example, [...] I'm on this site because I want to be. I went to Twitter and came across that news item because I did it on purpose, in quotation marks. I did it consciously. I looked for that source of information. The big issue with WhatsApp is that you're a passive recipient of information. [...] [on Twitter or news websites] I actively sought out that information from something, which could be from an internet search, whatever. On WhatsApp, almost always [...] I'm the passive recipient of information.

Consequently, participants end up receiving undesirable content, suggesting that they have little control over the content that reaches them in the application. In some cases, they express feeling invaded or intruded. For instance, Débora talks about how she receives messages that include topics of war and death and how receiving them, rather than seeking them, makes her uncomfortable:

I know it exists [war and death], but I don't like it... You know? "In my house?" I did not go looking, you know? If I went after it, I would not have a problem. [...] I just do not like being invaded by something like that when I am not seeking it, which sometimes happens. You are on WhatsApp and then the photo just appears.

Note how Débora's "in my house" indicates how she perceives WhatsApp as a personal space, which can be invaded by unwanted and distressing content.

Additionally, the confluence of roles and contexts on WhatsApp was frequently associated with the sharing of messages in conversations they deemed inappropriate. Participants mention political or personal messages shared in work groups, but this is described for other topics as well. Lucas shares one example where a work colleague shared about watching a movie (personal content) in a work conversation (professional context).

In this research, the experience of receiving messages of one context in an incongruent or unwanted context is termed content collapse. Unlike context collapse (Marwick & boyd, 2011), which focuses on the relationships between individuals, content collapse can occur even if these boundaries are kept, but rather occurs when content perceived as belonging to one context is shared within another. While context collapse is often expected on WhatsApp, within many of the conversations described by participants, content collapse is seen as a disruption and is avoided through social norms and rules.

In conclusion, participants describe their experiences on WhatsApp as incorporating multiple roles in their daily live, traversing multiple contexts. A combination of affordances of availability, synchronicity and mobility with social norms creates a need for constant connection. Additionally, the application is characterized by a lack of triaging and content selection features. Consequently, users feel they lack control and that their personal spaces are often intruded on. The following quote from Lucas summarizes these findings:

I think it's because of the way and the speed with which it [information] is disseminated. So, it's more intrusive. You get the story in your face, on your cell phone. The others [social networks] don't; you have to look for it. "Oh, I'm going to go to the website." Not

WhatsApp. WhatsApp is a work tool. So, you're always connected. [...] So, I need to have my cell phone next to my computer. And the cell phone next to the computer means what? WhatsApp is buzzing all the time. Unlike Facebook, Instagram, which sometimes you go to the bathroom because that's where you go and it's the right place to read the information.

Ultimately, participants paint a scenario of constant connection on WhatsApp where context collapse occurs, making them accessible to others outside of their immediate physical context. Furthermore, WhatsApp messages on different topics are often shared in groups with other focuses, including political information being shared in personal conversations. In this research, this experience is called content collapse.

This way, WhatsApp sets the environment in which content is received and evaluated. Ultimately, it means that the credibility assessment of political information is not made in a political or news context but rather amidst several types of content and publics. The idea that political information or news on WhatsApp is shared and engaged within the context of daily use, relationship maintenance, social cohesion, and image and identity construction is not new, with several studies and frameworks indicating the same (Boczkowski, 2010; Chadwick, Vaccari, et al., 2023; Masip et al., 2021; Swart et al., 2019; Valenzuela et al., 2019). Section 7.1.2, in the Discussion Chapter, returns to this topic and how it informs the credibility assessment process of political information.

The following section discusses the existing affordances for content triaging on WhatsApp and how they are insufficient. Section 6.3 delves into the limited visibility that characterizes the application and how it affects the credibility assessment process.

6.2 Affordances for Triage

Chapter 4 explored how, when faced with information overload, participants go through a triaging process to decide whether to engage with a piece of information. Chapter 5 indicated how participants use information avoidance and disconnection practices to circumvent conflict. The previous section described how participants experience context and content collapse, which makes them feel intruded. While participants depict WhatsApp as a medium that affords the user little control, they also explain their strategies for information triage. For that, they make use of WhatsApp's affordances.

Participants mention three of WhatsApp's affordances that allow them some control over the information they receive in the application: personalization, disconnection, and segmentation. However, they also discuss situations when these affordances failed, and WhatsApp did not deliver according to their expectations. In the end, participants understand WhatsApp as a medium where they have some, but not enough, control over the information that reaches them.

6.2.1 Personalization

The participants of this study feel they have control over the information they receive on WhatsApp through their choices of contacts and group membership. Without algorithmic content selection, WhatsApp is characterized by social curation in which the information that reaches one user is selected by the people they have conversations with. This way, participants understand that their decisions over the conversations they are part of afford control through social curation.

Masip et al. (2021) call this affordance personalization. Participants understand that receiving information from people they know, and most importantly, people who know them, is related to receiving relevant political information. They explain that personalization is connected to the affordance of replicability, allowing users to share information for whom they think it will

be relevant. For example, Débora talks about the information she has received from her mother:

“I think she knows that I get touched by these things about Atibaia⁸. I think she knew this kind of thing would interest me because she stopped sending me these political things so often.”

According to Masip et al. (2021), although personalization is not an affordance exclusive to messaging applications, these platforms afford higher levels of it.

In addition to being an affordance, personalization is often used as a heuristic for triaging and credibility assessment. Ana Paula, who receives little political information outside of the electoral period, believes that people selectively curate information she will find credible. “It's because lately, I think people know what I'm like, so if they're going to send me things, they're going to send me things that I think are trustworthy.”

Overall, participants feel WhatsApp affords them personalization through the choices of group membership and contact maintenance. Personalization, in turn, resulted in control over the content received in the application and the information to be more relevant and credible.

6.2.2 Affordances of Disconnection

Participants also talk about using WhatsApp's features to manage what information can reach them and deal with information overload, context collapse, and conflict avoidance. These features give users control of several affordances within WhatsApp. Mannell (2019) understands this control to be a modulation of the availability affordance, the connection to other people and the messaging application, done through several “smaller” affordances that nest under it. Her typology of disconnective affordances can help to understand how participants use WhatsApp's features to triage conversations and information. Mannell (2019) names five disconnective affordances: delay, disentanglement, jamming, modulation, and suggestiveness.

⁸ Atibaia is a town nearby São Paulo

In simple terms, the affordance of delay allows participants to avoid engaging in conversations they are not interested in and only do so later. Delay relies on the affordance of persistence and features such as unread message counts. Alexandre gives an example of the use of delay when he gets notifications from groups that he “can ignore for a while, and then after a while, I'll go into that particular group and look at it.”

Participants also rely on features that silence and hide chats but still allow them to receive messages. Chapter 4 discussed Gustavo's example, in which he keeps the “more radical” group muted and archived. Mannell (2019) calls this control over what gets users' attention the affordance of disentanglement. Other features that enable disentanglement are control over notifications or even features at the device level, such as leaving the cellphone behind or putting it away and turning it to “do not disturb mode.”

When users block the transmission of the message, Mannell suggests they are using the affordance of jamming. On WhatsApp, jamming can be done by blocking one individual or group or at the device level through “airplane mode.” Jamming can be temporary or permanent. In the interviews, blocking other users is rarely mentioned. Eduardo discusses blocking political candidates who send him unwanted propaganda, but this is an exception. This behaviour is seen as disrupting potentially relevant communication.

On the other hand, several participants mention witnessing chat members leaving the conversation during the election period or doing it themselves to avoid conflict. As will be detailed later in this chapter, conflict avoidance was the primary goal of this behaviour. Still, some participants suggest they did so to avoid encountering information that caused discomfort.

For Mannell (2019), ignoring (disentanglement or delay) is preferred over blocking (jamming) for one-to-one conversations because it allows for ambiguity, creating less risk of

relationship damage. On the other hand, the large volume of messages from group chats makes ignoring ineffective. In Mannell's study, group conversations were muted to avoid disruption. This research suggests that users often leave groups during periods of greater political polarization and conflict.

Participants also comment on doing what Mannell (2019) calls *suggestiveness*, using instant messaging expressive capabilities to suggest disinterest without causing issues in the relationship with the message sender. Débora says she looks at most of the information she receives and avoids “leaving people on read.” However, “if it is something I do not think has anything to do with me, or if it is something I do not think I care about, then I do not respond to it either, or I just give it a like.”

WhatsApp allows users to control their availability and connection on the platform. Different disconnective affordances are employed depending on how comfortable the individual is with severing relationships and how much or how long they want to filter out a conversation. Features at the platform level (blocking users, disabling notifications) and on the device level (leaving it behind, putting it in airplane mode) enable disentanglement affordances.

6.2.3 Segmentation

Lastly, participants talk about the affordance of segmentation. Chapter 4 presented Gustavo's example of categorizing two of his conversations and deciding which he will engage more often. He also talks about keeping one of these groups muted and archived, but not the other. WhatsApp allows users to act differently in each conversation. Mannell (2019) and Masip et al. (2021) consider this potential an affordance, although with different names (modulation and segmentation, respectively).

Mannell (2019) describes modulation as the opportunity to control availability in relation to specific people or groups. For Masip et al., (2021) segmentation allows WhatsApp users to interact in one-on-one or group conversations. Furthermore, groups can be further divided according to their types. Both agree that segmentation is an affordance that affects or modifies other affordances. For example, jamming can be done for all conversations, when putting the cellphone in airplane mode, for a specific group, such as when Débora left her family group, or for one contact, as Eduardo does with the politicians that message him.

Segmentation also affects information triaging by itself. It allows users to divide conversations, for example, starting a political discussion in a one-to-one conversation rather than a group chat. Additionally, it can be used to hierarchize conversations and adjust the amount of attention users devote to each one (Masip et al., 2021). All participants describe using segmentation in one way or another, even if they did not block or silence a conversation.

However, these mechanisms often fail, leaving individuals to deal with undesirable content.

6.2.4 When Triage Fails

Through the affordances described above, participants feel they have some control over the information they receive on WhatsApp and the conversations they engage with. However, some participants comment that WhatsApp's triage affordances have failed them. Pamela talks about two instances where she felt she had lost control over her filters. First, when she was added to a group conversation without her permission.

Next thing you know, your number is in a group (chat) where you don't know the person.

How did they find you? Next thing you know, you're in a group. I said, "Guys, what's this group for? What's it for?" "Oh, no, I got your number and decided to start a group." You

don't have these filters. Then, you have to leave the group, report the group. Because you didn't ask to be there. You don't have a filter; you don't have permissions. Like the old ICQ had. WhatsApp is very good on the one hand but very bad on the other.

By default, on WhatsApp, a user can be added to a group by anyone with their cell phone number. Recently, options have changed, and users can restrict those who can include them in groups to their contact list and even exclude some known people from doing so (which can be used to block anyone from adding them to groups). However, being able to do so depends on the user's knowledge and skills. For example, Débora complains about being unable to control who gets to add her in groups: "I think some people can do it. I can't block WhatsApp so that I won't be included in a group." This same complaint is also found in Karapanos et al. (2016).

Pamela also questions whether her filters can be manipulated. She recounts questioning a friend about a piece of information he had sent, but the friend, whom she trusts, denied sending it despite his name showing on the message. Pamela then doesn't know what to believe. "So, the question is, did he not send it to me, or did someone use his name and send it to me because he was in a Bolsonarist group?" Although it is impossible to be sure of what Pamela experienced, this example shows how affordances often emerge through users' perceptions and uses of the technology.

Ultimately, Pamela and Débora consider that these triage gaps affect the spread of misinformation on WhatsApp. They suggest that people may be more susceptible to receiving misinformation if these unsolicited and unfiltered conversations get mixed with the desired ones.

Furthermore, users only have control over the conversations they are part of but generally do not exert influence over the content shared in these chats (the exception being group rules). That means that undesirable content can still reach them.

6.2.5 Balancing Control and Intrusions

In conclusion, participants describe triaging information when they first receive it on WhatsApp, particularly when faced with a large number of messages. They use three affordances, personalization, availability, and segmentation, to reduce the noise created by unwanted conversations.

WhatsApp affords personalization by allowing participants to choose which groups they belong to and what conversations to keep. By maintaining conversations with people who know them, they hope to receive relevant information. For participants, personalization additionally acts as a heuristic for the credibility of the information.

Second, WhatsApp allows users to modulate their availability on the app through disconnective affordances. Disconnective affordances of delay, jamming, disentanglement, and suggestiveness are actionable information filters.

Lastly, these interactions are shaped by the segmentation of WhatsApp conversations. Through the affordance of segmentation, or modulation (Mannell, 2019), participants are able to act separately for different groups and individuals, deciding which ones they wish to triage out and which ones they would triage in.

Overall, participants perceive WhatsApp as a platform where they can exercise some control over their group membership. However, as seen in this previous section, due to WhatsApp's multiple roles in people's lives, participants are often prevented from leaving chats, blocking individuals, or even distancing themselves from the application for a period. Additionally, this control ends in their behaviour, and other users can still share unwanted content. For these reasons, participants express a lack of filtering options on WhatsApp and often feel intruded on the platform.

6.3 WhatsApp Limited Visibility

Treem and Leonardi (2012) define visibility as “the ability to make their behaviors, knowledge, preferences, and communication network connections that were once invisible (or at least very hard to see) visible to others in the organization” (pp. 10-11). Visibility is a higher-level affordance that can be understood through lower-level affordances, such as anonymity and searchability.

Participants’ experiences and descriptions of WhatsApp suggest that the app’s low visibility impacts the credibility assessment process and their experience with political information and news within it. In addition to constraining the cues and strategies users can employ in the credibility assessment process, it hinders their agency in the application so that they cannot seek new content or select what information may reach them. Several of the issues discussed in Section 6.1 can be connected to WhatsApp’s visibility constraints, which are discussed in relation to its lower-level affordances of verifiability, searchability, discoverability and selectivity.

Participants compare the verifiability of WhatsApp to that of other social media. Their perception is that being visible to many other users not only stimulates an individual to verify the information before sharing it, but the open nature of other social media platforms allows information to be collectively verified by other users, specialized fact-checking agencies, and the platform itself. This allows the user to “just check the comments, and you will see people saying it is not true” (Henrique). Contrarily, on WhatsApp, only the people who are part of a conversation can see the information and verify it. Henrique continues:

I think this verification process is much less rigorous on WhatsApp than it is on other media, for example. I think it's part of WhatsApp for the simple fact that, for example, on

Instagram or Facebook, when someone shares fake news, you have more people willing to check that information. [...]

For Henrique, this visibility constraint puts the responsibility of verifying the information solely on the user. Similarly, Pamela feels burdened by the lack of visibility on WhatsApp. Her main concerns are the additional barriers and steps she must take to evaluate the information. She complains that “WhatsApp always asks something of me.”

Any additional research about a piece of information on WhatsApp, including cross-validation, must be done outside the application. Pamela believes increased searchability would facilitate the credibility assessment for her and other people who “are too lazy to check the news.” She even suggests how this could work, mentioning Brazil’s Supreme Electoral Court (TSE) use of WhatsApp and chatbots to combat misinformation during the 2022 elections (Justiça Eleitoral, 2022). Users shared specific information or links to their conversations with the chatbot. In turn, it would check the content against a database of information verified by fact-checking agencies or TSE. The content was forwarded to fact-checking agencies for verification, in case no match was found.

These results align with existing research suggesting that searchability is perceived as a critical affordance for finding credible news (Aharoni et al., 2022). Although most participants report leaving WhatsApp to conduct searches about the information, it seems that, at least for Pamela, the additional step inhibits her credibility assessment process.

6.3.1 Lack of Selectivity and Discoverability

Participants further comment on the application's lack of selectivity and discoverability. Aharoni et al. (2022) identified that “The ability to consume content selectively was thus perceived as a condition for news trust” (p. 9). Similarly, this research finds that participants

connect selectivity to access to traditional news media, official news sources, or their preferred sources. In addition to selectivity, participants describe how WhatsApp constrains their ability to find unexpected and often cross-cutting information, which is called discoverability.

While other social media, such as X, Instagram, and Facebook, are described as affording content selectivity, WhatsApp is a platform for contact with existing relationships. Participants frequently compare the content they receive on the messaging application with that sought or encountered in other media. Consequently, they also describe how this affordance impacts their behaviour on each platform. Gustavo compares the messaging application with Instagram:

“Because on Instagram, I can segment the information more. On WhatsApp, it's not all the people I have on WhatsApp. [...] On Instagram I can segment it, I can go after a specific journalist, I can go after the CEO of a brand, a writer. WhatsApp doesn't have that possibility. So, however much I agree or disagree with these people on Instagram, I can read [their content] there more easily. On WhatsApp, it's all about consuming information from the people around you.”

As Gustavo indicates, Instagram allows users to select different sources of information. Similarly, Débora comments that, on Instagram, people can follow a particular topic or media outlet to receive specific information, while on WhatsApp, “it is more indiscriminate.” As discussed in the previous section, WhatsApp affords users personalization through group membership. However, it does not have features that give them control over what they see.

For this reason (and ease of sharing), participants describe an increasing preference for Instagram for political information and news. Many younger participants claim Instagram is their most significant news source, and one older interviewee reports a move from WhatsApp to the application. On Instagram, participants feel they can seek reliable information and sources and

discover content they would not encounter otherwise. Among this content often is politically diverging information.

Associated with selectivity, WhatsApp's social and technological structure does not create the preconditions for discoverability. Any form of discoverability supported on WhatsApp is based on membership in conversations where cross-cutting information might appear. On the other hand, other social media allow users to seek cross-cutting information without further commitment. Open social media additionally has algorithms that can promote unexpected content. For example, Ivan describes his engagement on WhatsApp and X.

Because the bubble I live in on WhatsApp ends up sharing information that is more similar, and one way or another, I have to actively seek out information that is more different [...] It [the information] is different because Twitter is basically the place where I can, with a lot of mental suffering, look at what is being discussed and displayed, especially by the political right.

The interviews show that the participants are seeking traditional and official news sources, are willing to engage with diverging opinions, and know they will not find this content on WhatsApp without the risk of engaging in conflict. While WhatsApp plays a role in political information, primarily facilitating discussion and debate, discovering information is a role attributed to other social media platforms. For this, participants are turning to Instagram.

In summary, according to participants' accounts, WhatsApp's limited visibility constrains users' evaluation of information's credibility and, simultaneously, it hinders their contact with new and diverging content. It makes WhatsApp an environment isolated from other media, especially when considering economic barriers such as reduced data plans.

At the same time, participants fail to mention several features and cues present in WhatsApp that can be used for the credibility assessment process. For example, only one of the interviewees mentioned the tags forwarded or forwarded many times, and none talked about the magnifying glass that appears with frequently shared messages. Instead, a more frequently used cue is the presence of a link in the message, which is positively associated with credibility.

As discussed in the introduction chapter, Evangelista and Bruno (2019) describe WhatsApp as a "near-sighted environment" in which users cannot see the path of the information they receive. This metaphor might be even more appropriate in the case of credibility assessment, as the lack of visibility restricts the cues used in this process.

Next, this chapter discusses how several affordances were connected to the social interactions that emerged from the interviews. It shows how some of the already mentioned affordances produced different practices and outcomes concerning user interactions.

6.4 Affordances for Social Interactions

Chapter 5 describes the three forms of social interaction that emerge in the interviews: misinformation correction, conflict avoidance, and social support for credibility assessment. Several affordances support these interactions. While misinformation correction is connected to affordances of visibility, segmentation, and synchronicity, those grouped under affordances for triage are significantly used for conflict avoidance. Participants also bring up the affordances of multimodality, intervention, filter-ing, and persistence that allow them to engage in discussions without causing animosity. This section examines each of the three interactions and how WhatsApp's affordances support, constrain, or stimulate them.

Two insights emerge from examining these affordances and participants' testimonies. First, visibility on WhatsApp is not seen as binary; it is characterized by many levels, and the

transition from one level to another is essential for WhatsApp's social functions. Second, between the persistence of content in the application and the synchronicity of conversations, participants showed diverse perceptions of how timing works on WhatsApp. The last part of this section (6.4.4) provides further discussion on this topic.

6.4.1 Affordances for Misinformation Correction

As discussed in section 6.3, participants associate WhatsApp's low visibility with reduced content verification and selectivity. However, concerning the information they share in the application, participants indicate that WhatsApp affords a range of visibility, from low-visibility one-on-one conversations to semi-public group chats and statuses.

This visibility range is essential in decisions concerning correcting misinformation, balancing the responsibility of correction, risk of conflict, relationship damage, and personal capacities. Users can move from one visibility level to another depending on the context or situation of the correction. In a previous example, Camila moved from individual conversations and group chats to WhatsApp statuses when the amount of information she received became unmanageable. Similarly, she would turn to private conversations if discussions in group chats got out of control.

Multimodality is another WhatsApp affordance that supports social correction. Participants share evidence in different formats to support their corrections. For example, Ivan shared a link to the family group, while Rafael prefers to screenshot fact-checking websites and share the images. This allows users to choose the format they believe will be most efficient when correcting misinformation.

When social correction or discussions lead to disagreements, participants discuss how they use different affordances to avoid conflict.

6.4.2 Affordances for Conflict Avoidance

Strategies for conflict avoidance involve social control over information sharing (e.g. group rules), individual control over information reception (e.g. triaging), and individual control over information sharing (e.g. sharing in politically congruent groups).

At the time of data collection, WhatsApp conversations did not include a permanent dedicated space for existing rules if these were explicit and formalized (like a fixed post). However, collectively created rules are enforced by expelling participants from groups. Henrique and Alexandre, two participants who engage in political debate, have experienced being removed from the groups during the conflict. While some expulsions are used as warnings, others are permanent. These examples can be seen as the use of the intervention affordance. According to Van Raemdonck and Pierson (2021), “Intervention affordances impact establishment and enforcement of norms in groups” (p. 4). Intervention is not an affordance for all WhatsApp users in all their conversations. Instead, it is restricted to group administrators. On WhatsApp, intervention is done through features such as member exclusion, deletion of messages, and reporting of messages for review. Out of these three functionalities, participants only discuss exclusion from groups.

Another form of rule enforcement and conflict avoidance, at the collective level, occurs when participants voluntarily shift between the different visibility levels previously discussed. In some of the discussed examples, when a larger discussion emerges in a group chat, the participants involved are expected to “open a group just to fight” (Rafael) and move the discussion to the new chat. This allows group members to reinforce that political discussions do not belong in that conversation and that easy measures can be taken to move the debate to another venue.

For the second strategy, individual control over information reception, participants adopt the same affordances described in the “Affordances for Triage” section. Participants exercise control over their engagement with the information through disentanglement from the conversation, such as not opening the messages or silencing a group. However, unlike when triaging information due to its large quantities, there are more accounts of individuals voluntarily leaving chats because of conflicts. While some members have returned to the groups, others have not rejoined. Beatriz comments:

They wanted to impose their position so much that people left. [...] And that is fine, they can even meet in the street and talk to each other. I think that....But they do not use it anymore, they are not in the group anymore.

While control over information reception is done through filtering, control over information sharing is achieved through filter-ing. Kini et al. (2022) define filter-ing (with the hyphen) as “an affordance for the inclusions-exclusions involved in the multiple and varied realizations of sociotechnical potentialities of social media” (p. 1587). Participants use filter-ing when they purposely share political information and content only in politically congruent groups to avoid creating discussions. Filter-ing also appears when participants are concerned about “saving face” and maintaining their reputation. For example, filter-ing allows Thiago to comment on political topics in the church’s group chat but avoid answering questions about his political affiliations.

Lastly, Henrique recalls a situation in which his family members utilized affordances of filter-ing and visibility at the user level to avoid discussions. The relatives use the last seen feature, which makes Henrique’s online status visible to his contacts, as an indication of when they should refrain from sharing political content to avoid his immediate social correction. This

behaviour further includes the expectation that WhatsApp's ephemerality will cause the political information to disappear among new messages before Henrique returns online. Conversely, Henrique understands that WhatsApp's persistence enables him to engage in the discussions later.

This divergence can be understood through WhatsApp's differing degrees of persistence (boyd & Papacharissi, 2010) or ephemerality (Van Raemdonck & Pierson, 2021). Content on WhatsApp is persistent since all messages are backed up, allowing individuals to access their past conversations. However, WhatsApp's synchronicity and chronological presentation of messages create a sense of ephemerality. In the last example, Henrique's relatives view the conversation as ephemeral, while he perceives it as persistent, as he is willing to trace political information in his family chat. It is important to note that WhatsApp has recently introduced disappearing message options, rendering some conversations entirely ephemeral.

This example also reinforces the idea that affordances are constructed through the uses and imaginaries surrounding the technology. Furthermore, different users perceive and interact with WhatsApp's affordances in varied ways. This is even clearer when discussing the role of affordances in the social support of credibility assessment.

6.4.3 Affordances for Social Support

Participants have different perspectives on how WhatsApp affords or constrains social support and other interactions. Some participants value how the app helps them get informed about political news. Interestingly, while one participant describes this as a result of synchronicity, others concern themselves with the app's segmentation affordance. Others discuss how the app's persistence and interactivity support political discussions and opinion sharing.

For Camila and Alexandre, WhatsApp keeps them updated on recent political news. Camila views this as a result of segmentation, which leads her to pay particular attention to specific groups that may share news she hasn't seen yet. In contrast, Alexandre emphasizes how WhatsApp's synchronicity or "speed" ensures that news reaches him quickly. While both participants benefit from the same features, their perceived outcomes vary.

WhatsApp also promotes social support through positive discussions and debates. Participants note that the app's interactivity, synchronicity, and persistence make it an ideal platform for discussion. Synchronicity reduces the time between messages, while persistence retains messages for asynchronous communication, allowing users to respond at their convenience. For this reason, Henrique says: "On WhatsApp, in particular, it is easy to have asynchronous conversations with people. So, it is a way for us to debate politics without necessarily taking up a person's whole day because often they are working and everything."

On the other hand, Lucas strongly opposes using WhatsApp for political discussions. He believes some of the same affordances valued by other participants make it inappropriate for in-depth conversations. For instance, he mentions the lack of time to compose messages with proper argumentation and difficulty following conversations. These aspects can be seen as outcomes of affordances such as synchronicity and practices like using WhatsApp during work hours. Lucas also notes that WhatsApp is not suitable for discussions, as political opinion groups are segmented, which limits the presence of diverging points of view.

WhatsApp provides various ways for users to support one another in evaluating the credibility of political information. Furthermore, these results show that affordances are perceived differently, used differently, and result in different outcomes.

6.4.4 The Relativity of WhatsApp's Affordances

This section describes how WhatsApp affords or constrains the three social interactions identified in Chapter 5: misinformation correction, conflict avoidance, and social support for credibility assessment. It also provides insights into how WhatsApp's affordances are relative to its users and the context in which it exists, resulting in different perceptions of these affordances and outcomes (uses).

The previous section, "6.3 WhatsApp Limited Visibility," outlines participants' perceptions of the application's lack of searchability and discoverability, viewed as affordances associated with visibility. These descriptions are categorical: WhatsApp does not afford searchability or discoverability. However, participants also reveal another perspective: one in which WhatsApp offers varying levels of visibility and the opportunity for users to transition between them. This range of visibility is crucial for WhatsApp's social functions.

Additionally, participants talk about how they use affordances for triaging, (discussed previously) and filter-ing to control what information they receive and share in hopes of avoiding conflicts. Unlike previously discussed in Section 6.2, participants discuss how users frequently exit groups when the goal is conflict avoidance. In the end, triage and filter-ing lead to a scenario where individuals are less likely to encounter contentious or cross-cutting information.

Finally, participants' experiences and accounts reveal that individuals can interpret the same features and functionalities in diverse ways. Although WhatsApp provides synchronicity/immediacy and content persistence, participants viewed the timing dynamics of the app differently. For some, the chronological display of content and synchronicity suggest a fleeting nature, while others interpret persistence as indicative of asynchronicity.

These varied perceptions highlight the relational nature of affordances, shaped not only by the technology but also by the user's unique needs, social expectations, and broader cultural contexts. Ultimately, they also shape users' behaviours differently.

Taking these learnings into account, the next section summarizes this chapter, aggregating the affordances that affected participants' experiences on WhatsApp and aiming to answer the last research question.

6.5 Key Insights from RQ4

This chapter explored how affordances of WhatsApp shaped the credibility assessment process on the application, aiming to answer RQ4 and identify how the application's affordances connect to the practices and criteria of the credibility assessment process. Participants indicate their perceptions and experiences with the affordances of visibility, synchronicity, availability, segmentation, and more.

The findings from this research present a different picture from that in the current literature, which describes messaging applications as valued for their content curation, differing from the content overload they encounter in other media, and reduced context collapse (Masip et al., 2021; Valenzuela et al., 2019; Valeriani & Vaccari, 2018). Conversely, participants perceive WhatsApp as a medium where they lack control over the messages received, through which contextual boundaries are crossed, and where they experience context collapse and information overload. These experiences are caused by the combination of the application's different affordances and social norms forged around it.

WhatsApp is indispensable in Brazilians' daily lives. It is used in different contexts and crosses boundaries between personal life, work, and political and public engagement. Participants describe their relationships with the app as one of constant connection, which stems

from the affordances of immediacy, availability, and mobility combined with social norms, such as the expectation of a quick reply. In practice, this often means that users are accessible to others outside their immediate context, leading them to experience context collapse (Marwick & boyd, 2011).

Additionally, due to the combination of restricted selectivity, limited triaging, and the multiple roles played by WhatsApp - and despite group rules and social norms - content also traverses contexts. Participants described receiving unwanted content, which ultimately makes them feel intruded. This is the case for much of the political information shared on family, friends and work groups. This experience of content from one context intruding into conversations from another is here named content collapse.

WhatsApp's affordances were also directly connected to participants' interactions with information in the app and its credibility evaluation. The application's limited visibility puts the responsibility of verifying the information in the hands of an individual user or small group of people, removes potential cues for the credibility assessment, restricts the actions that can be taken within the platform and adds additional steps for cross-validation and research. This creates additional barriers to a more comprehensive credibility assessment, demotivating users to do so.

In addition to restrictions to information seeking, participants discuss have limited triage options. The triage phase of the credibility assessment process, described in section 4.4, uses several affordances such as segmentation, delay, disentanglement, jamming, and personalization. However, while WhatsApp offers some strategies for triaging information - through features such as group membership decisions, muting or blocking individuals or conversations – some participants still feel they do not have enough control over the information that reaches them.

Political information credibility is evaluated in this scenario of context collapse, content collapse, limited triage options and constrained visibility. For example, checking messages during work breaks, as some participants do, may mean that any assessment and response need to be quick, with a less thorough evaluation of information. In other cases, participants with limited mobile data plans are more likely to evaluate the information based only on the cues in the message, which may be insufficient.

It remains to be seen what changes could be prompted by the new features of WhatsApp that seem to address some of these concerns: Meta AI (searchability), communities and channels (selectivity), chat filters (personalization), additional control for group and community admins (intervention), exiting groups without notifying other members (blocking). And what effect other features, such as disappearing messages and view once photos and videos, have on the credibility assessment.

Chapter 7 – Discussion and Conclusion

Literature often describes WhatsApp and other instant messaging applications as different from more open social media, frequently identifying characteristics that affect the credibility assessment process of information. Characteristics such as intimacy and security make the study of the credibility assessment process on IM particularly important; however, it also restricts research on the platform. Provoked by the numerous cases of political misinformation spread on WhatsApp, including its use for disseminating political rumours by political campaigns (Campos Mello, 2018), this research set off to understand the credibility assessment process of political information on WhatsApp. Based on existing literature on credibility, recent research on the political use of WhatsApp, and affordances theory, four research questions were proposed:

RQ1. How does the process of credibility assessment of political information occur on WhatsApp?

RQ2. How do the sources of political information on WhatsApp, as perceived by users, impact the practices and criteria used to assess its credibility?

RQ3. How do social interactions among WhatsApp users impact the practices and criteria used to assess the credibility of political information received on the app?

RQ4. How do WhatsApp's affordances impact the practices and criteria used to assess the credibility of political information received on the app?

Overall, findings indicate that a combination of WhatsApp's affordances and its social dynamics distinguishes the credibility assessment process of political information on this platform from that of more frequently studied social media. While results align with existing models of credibility evaluation, such as indicating different depth levels of assessment and a set of known heuristics, the app's lack of visibility and verifiability and the intimacy and private

nature of chats lead to a credibility assessment process that relies more on the user's existing knowledge, personal connections, and previous experiences.

This chapter aims to further integrate the findings with existing theory by focusing on three key areas: the credibility assessment process on WhatsApp compared to existing credibility models, the role of social relationships and norms for information evaluation, and the application's affordances that reinforce the issues surrounding credibility assessment in networked media. The potential issues for credibility assessment on WhatsApp, as discussed in Chapter 2, are re-examined in light of the impact of WhatsApp's social norms and affordances on the credibility assessment explored in this research.

Moreover, this chapter provides three areas of focus for reducing misinformation issues on WhatsApp through better credibility evaluation. These areas focus on behavioural and structural problems identified in the research. Lastly, methodological limitations and advantages are discussed. The chapter concludes with a summary of key contributions and final reflections.

7.1 WhatsApp Credibility Assessment Process in the Context of Existing Models

Chapter 2 presented six models of credibility assessment developed between 2002 and 2012 (Fogg, 2003; Hilligoss & Rieh, 2008; Lucassen et al., 2013; Metzger, 2007; Sundar, 2008; Wathen & Burkell, 2002). These models explain the credibility assessment process, identifying its variables and their effect on the final evaluation. They present two main commonalities. First, they show the credibility assessment process as occurring in several levels of engagement, from a more superficial approach to a more in-depth engagement with the variables and their characteristics. They also indicate that ability and motivation are the main factors determining the depth of the assessment. Second, they highlight the importance of context in the credibility assessment process. Context can shift the credibility evaluation by affecting the process (e.g.,

constricting time and access to information) and the final review (e.g., limiting what is considered credible in one scenario).

The findings of this present study align with the existing models of credibility assessment concerning the varying levels of engagement with the information, the contextualized nature of the credibility assessment, and the influence of ability and motivation on the evaluation process. Additionally, the participants' reliance on surface-level heuristics and cross-validation is consistent with the literature.

This study further reveals a pre-engagement phase where participants chose whether to consider the information at all. While previous research identifies phases that precede credibility assessments (Metzger, 2007; Rieh & Hilligoss, 2008), the triage stage observed here serves a different function. This section will first discuss the similarities between WhatsApp's credibility assessment process and existing models, then examine how triage behaviours fit into the broader literature and complement the credibility assessment process.

7.1.1 Depth of Assessment and Its Variables

Consistent with the existing models of credibility assessment, the present results demonstrate an evaluation process of political information received on WhatsApp that is mostly heuristic, with participants conducting more in-depth evaluations on rarer occasions. The heuristics used in the credibility assessment are based on the surface characteristics of the message, particularly presentation and authenticity/integrity, the consistency between the information presented and that seen in other sources, and heuristics based on the source and sharer of the message.

Concerning more comprehensive credibility evaluations, participants named interest and time availability as the main variables that affect the depth of the process. These factors align

with traditional dual-process models of information processing, which identify motivation and ability as the main variables affecting the elaboration path taken by individuals (Chaiken, 1987; Petty & Cacioppo, 1986; Metzger, 2007). Specifically, these models include interest, issue involvement and personal relevance as variables affecting one's motivation (Chaiken, 1987; Petty & Cacioppo, 1986).

This research identified three main goals participants had in the cases where they conducted a more comprehensive evaluation of the information's credibility: understanding political information, correcting others and self-presentation. Most interestingly, these three goals can be understood through the multi-motive framework and seen as the three types of motivation: accuracy, defence and impression (Chaiken et al., 1996). Accuracy motivation is reflected in cases where the primary motivation of the participant was to understand the information, such as Camila, who was concerned with reading multiple interpretations of a piece of news to ensure she did not have a biased understanding. Defence motivation appears in the many instances participants sought additional sources to defend their points of view, both in misinformation correction and to prepare counterarguments. Additionally, the defence motivation guided participants who considered themselves knowledgeable and engaged with politics to verify political information to maintain that identity. Finally, impression motivation appeared in the many cases in which participants considered the information in more depth because they feared any harm to their image. This was clear in Ana Paula's example, who frequently researched any information she wished to forward to friends due to the fear of sharing misinformation and politically incongruent sources.

These motivation types reveal how and why individuals invest effort in assessing credibility. As suggested by the multi-motive framework (Chaiken et al., 1996), motivations

affect the depth of the cognitive process, in this case, credibility assessment, and shape its selectivity and focus. The type of motivation can guide the choice of sources, as well as the main criteria determining the credibility of a message.

The second variable affecting the depth of the credibility assessment process is ability. Supporting the literature's focus on intrinsic cognitive abilities, including information skills, critical thinking, and skill with the medium (Metzger, 2007), in this study, participants focused on how their skills and previous knowledge allow them to conduct a more detailed evaluation of the information. For example, recall how Gustavo indicated how his prior experience with digital marketing allowed him to have a critical eye toward a video, finding several editions.

In addition to cognitive abilities, participants also suggest a significant role of situational or contextual factors affecting ability, such as available time to engage with the information, the number of messages received, and their emotional state. This may indicate that on WhatsApp, where context collapses, and quick responses are expected, addressing contextual factors can improve credibility evaluation and reduce misinformation spread.

The findings of this study closely align with existing literature on information processing and credibility, reinforcing the role of motivation and ability in determining the depth of the credibility assessment process. However, while prior research on information elaboration has discussed the impact of different types of motivation on processing, the study of credibility and the models created in the early 2000s focused on the strength of motivation, overlooking the possible effects of its different types. This study highlights how accuracy, defence and impression motivations were clearly distinguished among participants' experiences, suggesting that these types may significantly shape how credibility is evaluated. Future research would

benefit from a deeper exploration of these motivation types within credibility assessment frameworks.

7.1.2 The Importance of Context

The credibility assessment models also suggest that credibility is contextual and guided by an individual's "social, relational, and dynamic frame of reference" (Hilligoss and Rieh, 2008, p. 1473). Context can shape the credibility assessment process and bind the evaluation to specific scenarios. Section 4.2 discussed the macro-context's impact on an individual's credibility assessment. This section explores the role of WhatsApp in the context of credibility assessment of political information, turning to the meso- and micro-contexts of the application and its use through its affordances and the social norms that guide its conversations.

WhatsApp functions within various contexts, encompassing personal, public, and professional dimensions of communication, which often collapse with each other. In Brazil, particularly, WhatsApp is deeply integrated into people's lives, being used to keep in contact with family and friends, work, and daily errands, such as to schedule doctor's appointments. The recruitment survey aligns with previous research showing that news and information play minor roles on WhatsApp (Gagnani, 2018). As described in Section 6.1.1, these multiple roles performed by the application, in combination with the affordances of availability, synchronicity and mobility, lead users to experience context collapse with messages from one context intruding into their surroundings from another (e.g. personal messages during the workday) (Marwick & boyd, 2011). Participants also experienced what is termed here as content collapse, when content from one topic is shared in conversations guided by norms and expectations of other contexts. Political information is received and interacted with within this context, during the daily use of

WhatsApp, often intruding in conversations created with different goals, mixed with content on diverse topics.

Literature has recently examined this characteristic of the application. Valenzuela et al. discuss “the incidental nature of news in the context of WhatsApp use in Chile” (2019, p. 15). According to them, news consumption and sharing fulfill relational and social goals in platforms such as WhatsApp, which are built for these goals. Similarly, Masip et al. (2019) describe news consumption on WhatsApp as embedded in the context of everyday entertainment or practical purposes. Chadwick, Vaccari et al. (2023) conceptualize personal messaging as hybrid public-interpersonal communication, in which news and misinformation are layered into the intimacies of everyday relationships and, therefore, guided through the norms that shape them. Looking specifically at the context of Brazil and WhatsApp as a mundane technology, Parreiras (2024) describes:

“What a platform like WhatsApp does is create a temporal tension and also expand the formats through which conversations can occur (audio, video, images, stickers, gifs, emojis). As such, messages can arrive at any moment and without prior warning, and be accompanied by any of the forms allowed by the platform.” (p. 13)⁹

Engaging with political information in this blending of contexts has implications for its credibility assessment. Looking at incidental news consumption on social media, Boczkowski et al. (2018) describe it as partial and brief, focusing on headlines, images, and leads. Participants recounted similar experiences in which information reading was superficial and done throughout

⁹ Translated from original: “O que uma plataforma como o WhatsApp faz é criar uma tensão temporal e também uma ampliação dos formatos a partir dos quais as conversas podem ocorrer (áudio, vídeo, imagens, stickers, gifs, emojis). Assim, as mensagens podem chegar a qualquer momento e sem aviso prévio e ser acompanhadas por qualquer uma das formas permitidas pela plataforma.”

their day. Here, individual use of the application plays a role. For instance, recall how Beatriz described being able to read longer texts during work hours but not at home (Section 4.7.1).

Furthermore, Boczkowski et al. (2018) propose that incidental news is experienced without hierarchy and is recontextualized. In other words, in social media, news loses its privileged position, is decontextualized away from other news stories, and recontextualized among the diverse information found on platforms. Similarly, in participants' experiences, different types of political information, from memes to news articles, including misinformation texts and user opinions, were frequently shared at an equal standing, and often how they approached that information was defined by the sharer or group in which it was forwarded (Sections 4.3 and 4.5.4).

Lastly, while WhatsApp is used in various contexts, most conversations are personal and intimate (Gragnani, 2018). Literature suggests that the interaction with the information received in this context is influenced by the social dynamics and norms that guide these relationships (Chadwick, Vaccari, et al., 2023). Participants put more effort into evaluating political information when sharing information in larger groups or with close others, considering the perceived social consequences (Section 4.7.1). They may also avoid correcting misinformation or sharing political content in a politically incongruent group to avoid conflict (Section 5.4.2). Another example is participants taking information from close others as credible or considering their conversations as filters for relevant and credible content (Section 5.3). Social norms also played a big part in examples such as groups where it was expected that the information would be verified by someone (Section 5.4.1). This research is consistent with existing literature, including Chadwick, Vaccari et al. (2023) and Kanthawala and Maddox (2022).

In summary, the results of this research describe WhatsApp as a medium in which and through which diverse contexts collapse and guided by norms of socialization and bonds make it unique for the credibility assessment process of political information. By navigating these contextual overlaps, users evaluate information credibility and determine how to interact with other users around political information.

7.1.3 Triage as a Pre-Engagement Phase

In networked media, users face large amounts of information and often feel they cannot establish control over what reaches them. While existing research diverges on whether individuals experience information overload (Kanthawala & Maddox, 2022) or not on WhatsApp (Masip et al., 2021; Valenzuela et al., 2019; Valeriani & Vaccari, 2018), this study's results suggest that they still encounter more political information than they can handle, some of which is often unwanted. This present study indicates that on WhatsApp, participants added a step before engaging with the information to triage what information they will engage with. This section compares the preceding and initial stages of the different credibility assessment models with the research findings, arguing that considering this phase in the evaluation process is valuable for these models.

Triage is best understood as a set of strategies and rationales to make decisions about whether and how to engage with messages delivered via WhatsApp. The participants in this research used triage to manage the large amounts of information received, avoid unwanted content and filter for relevance. They used several strategies, some based on WhatsApp features, to avoid this content and most often participants used sharer and group-related heuristics in this decision.

Among these heuristics are credibility related ones, such as the credibility of the sharer or the conversation members. In this scenario, triage is informed by credibility. It is possible to argue then that in these cases, triage becomes part of the credibility assessment process, or even the entire process itself, if the information user does not engage with it. However, this is not always the case, and triage decisions can be made entirely based on non-credibility factors. For instance, Alexandre belongs to two group chats he believes are very similar, and not expecting to get anything new from one of them, ignores it.

Despite that, even when triage is not driven by credibility, triage may have important influences on the credibility assessment process. First, by filtering what gets assessed all. Second, triage partially frames the context of the evaluation, shaping the emotional, cognitive, temporal, and social conditions in which it is made. For example, an individual may delay engagement with a piece of information to a moment when they have more available time, or by triaging out several messages, this process allows more time for the evaluation of the information that is engaged with. Third, triage often uses heuristics that are also employed in the credibility assessment process. By applying these criteria, triage potentially highlights them and make them more likely to be used in the credibility evaluation. More research is needed to understand the impact of heuristics used in triaging information on the credibility assessment process.

To better understand the role of triage within the credibility assessment process, it is useful to compare it with existing models.

Rieh and Hilligoss (2008) describe predictive judgements as evaluations that guide information-seeking strategies. These predictions reflect expectations like reading time, the success of actions, and the utility of resources. Expectations of credibility may influence these judgments, but factors like time, convenience, task relevance, and familiarity also matter. Thus,

credibility is not always a determining factor in the predictive judgment of information. Users act on these judgments to seek information and then conduct evaluative judgments to determine if it meets their expectations and goals.

Similarly, in political information encounters on WhatsApp described in this study, the triage phase guided participants' actions, deciding whether they will engage with a message. As seen in Chapter 4, the credibility of the sharer or the conversation often informed triage, but, other aspects, including interest, novelty, or expected relevance of the information, also shape the engagement decision. Thus, triage mirrors this idea of the predictive-judgement phase; however, instead of guiding the user in information seeking, it guides their engagement with encountered information. For this same reason while predictive judgements are oriented towards information-seeking goals, triage reflect management goals, like minimizing overload.

Triaging can also be compared to the exposure phase of the Dual Process Model of Credibility Assessment (Metzger, 2007), which determines the depth of the evaluation process. However, while the exposure phase assumes some level of contact with the content, triage occurs before any direct engagement with the information. This way, although Metzger (2007) identifies factors in the exposure phase which are part of triage and predictive judgements, others, such as type of information, are not available during triage.

These reflections on triage have important implications for models of credibility assessment. First, they call for an inclusion into the credibility assessment process of the decisions done even before the user engages with the information. The decision to ignore, delay engagement, or prioritize information already involve credibility-related assumptions. This blurs the bounds between non-assessment and assessment, with triage decisions, often representing the credibility assessment at its most superficial level. Additionally, the triage phase may use some

of the same heuristics that impact the credibility evaluation of the information, particularly sharer and group credibility, that then become easily accessible and may more easily be when evaluating the information (Sundar, 2008). Therefore, these early judgements made in the triage step influence not only what gets evaluated, but also how this evaluation is made once users engage with the information.

Furthermore, the comparison between triage and other models points to a strong focus on information seeking behaviours in these frameworks. Both Rieh and Hilligoss's (2008) predictive judgements and Metzger's (2007) Dual Step Model, were developed in the context of users actively seeking information. However, on WhatsApp and other platforms people encounter information passively. In these cases, credibility assessment is not done as part of an information need or goal. In the case of this research, participants were motivated by information management. This way, the traditional models, which focus on intentional information seeking, should expand or adapt to encompass credibility assessment in more passive information encounters to account for how other goals shape the evaluation process.

Several questions remain about how triage practices and decisions are made and how it shapes and interacts with credibility assessments. Future research could examine how often triage decisions are based on credibility-related criteria versus other non-credibility criteria. Additionally, research could explore how triage influences the depth of the credibility assessment when users engage with the information and the heuristics used in this process. Studies could also investigate whether a similar triage process occurs on other platforms and how its affordances shape this behaviour. This future research can better inform how models can incorporate triage as part of the credibility assessment process.

7.2 How Real Are the Potential Issues of Credibility Assessment on WhatsApp?

WhatsApp is characterized by many aspects and features that affect the credibility assessment process in other media. Yet, except for Masip et al. (2019) and Malhotra (2023a), research has not addressed how WhatsApp's characteristics affect the credibility assessment of political information received on the app. In response, Chapter 2 discussed four potential issues of information credibility assessment in networked media and how they can emerge in instant messaging applications.

In the following sections, the potential issues raised in the literature review are considered in relation to the findings from this research. Ultimately, this research's results support the four potential issues, detailing how they materialize on WhatsApp. In addition to the shift from traditional gatekeeping to social and personal curation and the loss of important cues due to poor information selection and lack of visibility, this research also highlights the decontextualization of the information as a significant problem in political content shared through the platform. Supporting existing literature (Kligler-Vilenchik, 2022), participants perceived sources as multiple and layered and evaluated the credibility of traditional news media and sharers differently. Lastly, this research illustrates how the credibility assessment of information on WhatsApp is a social process. However, it also identifies positive social behaviours that can support better credibility evaluation.

7.2.1 Disruption of Traditional Gatekeeping

Due to limitations imposed by its closed and encrypted structure, gatekeeping in WhatsApp is primarily characterized by social and personal forms of content curation and moderation (Santini et al., 2021; Thorson & Wells, 2016). While traditional gatekeepers still play a role in the creation and triaging of some of the content that enters WhatsApp, particularly news, a lot of the information is created by other sources, from alternative media to unknown

authors. Furthermore, to enter conversations on WhatsApp, information must be shared by a user. This study supports expectations of disruption of traditional gatekeeping, additionally demonstrating some of the ways, some expected and others not, that personal and social curation affect the credibility assessment process of political information.

Participants discussed the lack of quality of the information they received on WhatsApp, which was often incomplete, inaccurate or disorganized. The visibility constraints of the platform simultaneously restrict external content curation or collective verification of the information and hinder discoverability from reliable sources. Participants talked about how the reduced verifiability of the application puts the responsibility of evaluating the credibility of the information solely on their hands while limiting their access to credibility cues (Section 6.3.1).

Literature suggests that group admins' moderation acts as another form of gatekeeping (Shahid et al., 2024). While participants described their experiences in news- or political-focused groups, only one interviewee was a member of a group administrated by traditional gatekeepers, such as news media vehicles and journalists. Cases of news or political-focused groups were often created and moderated by news enthusiasts rather than experts. On the other hand, more participants commented on social norms as guides for moderation in group conversations (Section 5.4). As Kligler-Vilenchik (2022) discussed, establishing group norms for content verification and misinformation correction can help users make better judgements of information and news.

At the same time that traditional gatekeepers have a reduced role, the affordances of personalization, selectivity, and disconnection shape personal and social curation on WhatsApp. They allow participants to distinguish between conversations worthy of attention and those not. However, the literature also presents that personal curation can exacerbate information

selectivity (Merten, 2021), making WhatsApp an environment where users encounter much information confirming their biases (Santini et al., 2021). Participants' accounts of choosing not to engage in politically divergent groups also exemplified this (Section 5.4.2).

On the other hand, participants frequently reported that the control over the information on the app was insufficient. Affordances such as availability and immediacy, in combination with WhatsApp's roles and existing social norms around the app, produce experiences of information overload, context and content collapse. These results align with research that shows that the ongoing connection and large amounts of information lead users to experience content overload on WhatsApp (Garcia & Vivacqua, 2021; Mols & Pridmore, 2021; Yeshua-Katz, 2021). However, other studies suggest that other characteristics make this experience less severe in the instant messaging application (Masip et al., 2021). Information overload is associated with heuristic and superficial evaluations of the information (Metzger, 2007).

In summary, on WhatsApp, the present results suggest that traditional gatekeeping is replaced with user-led curation, both personal and social, indicating a decentralization of content curation and moderation. This research's findings support the claim that disruptions to the traditional gatekeeping model and the downfalls of how personal and social curation take form on WhatsApp present issues to the quality and the quantity of information received on the app, ultimately affecting the credibility assessment process of political information.

7.2.2 Loss of Traditional Cues of Credibility

On WhatsApp, affordances such as replicability, persistence, and scalability (boyd & Papacharissi, 2010), made possible by end-to-end encryption, forwarding functionality and self-contained conversations, create what Evangelista and Bruno (2019) call a “near-sighted environment” in which traditional credibility cues can be lost, content is often decontextualized,

and meaning is changed. The results of this research support the concerns over potential issues for credibility assessment. Not only does the near-sighted environment hinder information verifications by others, as discussed in the previous section, but it imposes challenges to individual's evaluations of messages.

Supporting existing research (Machado et al., 2019; Pellegrino, 2018), participants mentioned that political information often misses critical aspects for its credibility assessment, with the absence of source cues being the most significant. This poses a challenge for the credibility assessment of information on WhatsApp because, as indicated by the research results and corroborated by existing literature (Flanagin & Metzger, 2014; Pornpitakpan, 2004; Shen et al., 2019), sources play an essential role in the evaluation process, both in heuristic processing, cross-verification and for in-depth evaluation of the information. Without source information, participants conducted the credibility assessment with the existing information or assumed the source by extrapolating the content presented.

On the other hand, cues and features created by WhatsApp to increase user awareness and prevent disinformation spread – such as the ‘forwarded many times’ tag, reactions, and the magnifying glass for frequently shared messages – were scarcely mentioned by participants. This put into question the positive effect of these tags and tools. This finding is consistent with literature that has shown that the usefulness of these tags is questionable, and users have different interpretations of their meanings (Hall et al., 2023; Feng et al., 2022).

Consistent with boyd's (2010) expectation of networked media, participants indicated that a much bigger problem was the decontextualization of the information that occurred through the edition of videos and images, the selection of slices of the information, and the addition of

subtitles and commentaries that changed its intended meaning. This happens even though images and videos are not edited on WhatsApp, as with other social media (Bösch & Divon, 2024).

The context of the information is essential for its credibility evaluation (Rieh & Hilligoss, 2008). Outside its original context, a piece of information can lose its intended meaning, even suggesting a completely different message, as some participants have indicated. Participants described issues with evaluating the message and were more worried about relying on their assessment when the information lacked context.

While the limited sample may have skewed results, participants indicated that, in the case of lack of context, they would search for the origin of the information to evaluate it better, especially when interest was high. However, individuals must recognize that the message has been manipulated and decontextualized. This can be particularly challenging, especially when research has indicated that memes on WhatsApp present all the contextual information necessary for comprehension (Chagas, 2023).

Lastly, the results support the idea that WhatsApp's constraints on discoverability, verifiability, and searchability convolute users' evaluation of information. WhatsApp's features create additional steps for individuals, inhibiting in-depth assessment or searching for missing information. Going against the literature's suggestion (Evangelista & Bruno, 2019), data plans did not appear to be a limitation for the participants. Conversely, the lack of time and interest to engage with political content and the additional constraints added to the information search were the barriers to a more thorough assessment process.

Ultimately, participants' experiences on WhatsApp support concerns introduced by the literature about the absence of essential cues for the credibility assessment, the decontextualization of information, and the increased barriers to additional research and

verification. WhatsApp challenges the credibility assessment of information on two fronts: the cues users can see and the information they can seek. This scenario is concerning, given the importance of source information and context to a proper credibility assessment and participants' indications that they often evaluate with only the available resources, in suboptimal conditions.

7.2.3 Sources are Complex and Layered

In networked media, the definition of the source is increasingly complex, with information being attributed to several and multiple actors along the communication process (Flanagin, 2017; Metzger et al., 2003). Because the source is an essential component of information credibility (Pornpitakpan, 2004; Tandoc, 2019), this complexity results in varied credibility assessments, with the credibility of the perceived sources interacting in their effect on the information credibility (Kang et al., 2011; Sterrett et al., 2019). Due to WhatsApp's limited visibility, loss of source cues and increased importance of social factors, the literature suggests a similar relationship between possible perceived sources; however, research on the messaging application has not focused on this subject.

In this research, participants perceived different, and sometimes multiple, actors as sources, reflecting the literature's expectations of networked media as layered and multiple (Flanagin, 2017; Metzger et al., 2003). Participants mentioned content producers (creators), the individuals sending them the message (sharer), and intermediaries between them, such as social media profiles.

Previous research notes that sharers impact message trust more significantly and consistently than the source (Sterrett et al., 2019). Additionally, research has described that the role of proximal and distal sources in credibility evaluation varies with levels of involvement (Kang et al., 2011). This research revealed that several factors affect whether individuals rely

more on sharers or creators, including the availability of creator cues, the topic of information and context. For instance, sharers were more important for small-town news than for national or international topics.

This research finds that creators and sharers, even though often conceptualized and studied together (Tandoc, 2019), are evaluated based on different, if not opposing, aspects. Creator credibility is evaluated through collective perceptions of that actor, such as reputation and familiarity (name recognition). When the creator is unclear or unknown a receiver relies on other aspects, such as creator presentation or ideological congruency, to evaluate it. In contrast, sharers' credibility is based on an individual's relationship with the sharer, created through existing bonds, previous experiences, and similarities. Similar results have been identified in Feng et al. (2022).

On the one hand, this paints a positive picture in which traditional news media is still considered a credible source of political information and the primary reference for most participants. On the other hand, if the creator is less known, participants use the information available to make inferences about its credibility, often employing elements they associate with parties or political positions as rules of thumb. Additionally, in the frequent cases where the source is not indicated in the message, individuals are likely to use the sharer, an always present source, as the main heuristic for credibility assessment. In this case the subjective evaluation of a sharer's credibility can pose bigger issues for the evaluation of the information.

Ultimately, this research supports the argument that in networked media, and specifically on WhatsApp, sources are complex and layered. In addition to identifying several actors in the path of communication as sources, participants evaluated them through very different criteria. Furthermore, the presence of clear creator cues has a critical impact on the impact of political

affiliation and the sharer's perceived credibility in the information assessment process. This way, the creator cues available to the information user have a strong influence on the information's perceived credibility.

7.2.4 Credibility is Networked and Social

Existing literature indicates that networked media increases reliance on social validation through increased access to social cues and reduced dependence on traditional authorities, making credibility especially networked and social (Metzger et al., 2010; Self & Roberts, 2019). On WhatsApp, where users interact directly with close ties and like-minded others, credibility assessments become particularly relational and dependent on social norms and trust networks. This study's findings confirm these expectations through the increased importance of the information sharer, homophilic groups, and social norms in the credibility assessment.

As previously discussed, information credibility is often evaluated based on the characteristics of its sharer or the group to which it was sent. WhatsApp's closed structure and intimate and social nature make users more reliant on social aspects for credibility assessment, including an increased focus on the sharer. Unlike creators, individuals evaluate sharers based on personal experiences, bonds and similarities, a more subjective approach to credibility.

Consequently, sharers who align politically with the individual are often seen as more credible. This behaviour stimulates the formation of homophilic groups, where individuals are not exposed to politically diverging information (Chagas, 2023). Participants' perceptions of their politically focused groups and their accounts of sharing political information only in congruent conversations support concerns about the closed environments where political information is discussed on WhatsApp. Research has already pointed out that reliance on

homophilic environments complicates the development of critical thinking concerning oppositional content (Masip et al., 2021).

On the other hand, participants also indicated that misinformation correction and social support for credibility assessment were standard practices in their conversations. Findings suggest that social correction is a highly strategic practice, with users having to balance the risk of damaging relationships with the possible harm of the misinformation and their sense of responsibility. For this reason, they were more likely to correct misinformation in politically congruent groups and groups with strong ties, echoing findings from Rossini et al. (2020) and Pasquetto et al. (2022), the exception being family groups with extended family where strong ties were combined with political divergence (Malhotra, 2023).

Lastly, credibility assessment is made in a social context guided by social norms such as conflict avoidance, expectation of constant connectivity, or accountability. Dynamics like these guide credibility assessment, with some groups focusing on conflict avoidance, which may allow misinformation to go unchallenged, creating a perception of consensus and reducing critical evaluation within groups (Chadwick, Vaccari, et al., 2023). On the other side, groups that encourage verification foster accountability and a more rigorous evaluation of the information (Kligler-Vilenchik, 2022). In addition to misinformation correction, these social interactions highlight the importance of social relationships for information evaluation and show how credibility assessment of political information is deeply tied to social dynamics.

While the networked and social nature of credibility assessment is not inherently a problem, its focus on social aspects may limit other vital factors of information credibility, such as source expertise or argument quality. This research illustrates these issues through the importance of sharers and groups to political information evaluation, the increased trust in close

and similar others, the tendency to belong to homophilic groups, and conflict avoidance in conversations where opposing opinions are encountered. As this study highlights, the social nature of credibility – through dynamics like social correction and supportive discussions – can be used to mitigate the issues of networked credibility assessment, reducing the belief in misinformation.

Overall, this research has supported the four “potential issues of credibility assessment on WhatsApp.” The messaging application is characterized by social and personal curation through which misinformation and lower-quality information are spread in the same manner as political news. Constraints on visibility hinder external and collective verification of information and add barriers to an individual’s evaluation. This research has also described how decontextualization of information is a frequent issue on WhatsApp.

Participants’ experiences supported the expectation of sources being increasingly complex and layered in networked media. They recognized actors in different steps of the communication process as sources of the information, that would be used in different ways in the credibility assessment. Particularly, findings portray a clear distinction between news media vehicles, official organizations and journalists on one side, whose credibility was based on collective perceptions of reputation and familiarity (name recognition), and information sharers on the other, evaluated through one’s previous experiences and emotional bonds with them.

Lastly, this research illustrates how credibility assessment on WhatsApp is social and networked. Close and similar others are particularly important for the evaluation of the information, as are politically congruent groups. The credibility assessment is made under social norms such as conflict avoidance, which inhibits misinformation correction. However, unlike the descriptions in the literature review, it finds positive aspects of the social nature of the credibility

assessment, with participants recounting users' experiences supporting each other in this process through positive discussion, the sharing of complementary material and constructive misinformation correction that does not lead to conflict.

Considering how this research supports the four potential issues of credibility assessment on WhatsApp, it is pertinent to identify the origin of these issues, aiming to understand not only how the credibility assessment process occurs on WhatsApp but also what has led to the many misinformation and disinformation issues reported worldwide.

7.2.5 Where Lies the Problem?

In recent years, academic literature and news media have highlighted the spread of misinformation on WhatsApp and the use of the application for disinformation campaigns, particularly about politics (Baulch et al., 2022; Evangelista & Bruno, 2019; Kirby, 2018). Researchers, organizations, governments and businesses – including WhatsApp– are trying to combat misinformation and reduce its negative consequences. To effectively accomplish these objectives, it is imperative to identify the sources of these issues.

For the research interviewees, the issue is user behaviour, not the platform. For participants, WhatsApp users believe in close ties despite their lack of qualifications, and people are only willing to trust politically congruent information. Additionally, participants think people lack the skills for information verification due to insufficient formal and informal education. Lastly, they point out that users lack motivation, suggesting that most individuals only evaluate the information heuristically, if at all.

However, the findings indicate that WhatsApp's affordances also play a role. Private chats, connected by personal bonds or similarity, triage, and filter-ing affordances (Kini et al., 2022) stimulate selective exposure. WhatsApp's synchronicity and always-on nature demand

quick responses and promote heuristic evaluations, while the lack of triage options overwhelms users with large amounts of information. Its closed and “near-sighted” structure, with limited verifiability, discoverability, selectivity, and searchability, limits paths for information verification and adds barriers to the ones still open.

In the end, both social and technological aspects interact. WhatsApp’s constraints on available information for credibility assessment and barriers to additional research make whatever cues are available, including personal connections, more relevant. This increases selective exposure to politically congruent information and confirmation bias. Lack of visibility creates additional use barriers, disincentivizing in-depth evaluation and encouraging heuristic assessment of information credibility. While availability and synchronicity are central to users’ experience on WhatsApp, its accumulated functions in people’s lives and norms and expectations of conversations make users feel that they are always connected, experience context and content collapse. While behaviour guides norms of conflict avoidance, WhatsApp allows users to control the information they receive and share.

Of course, other factors can also be blamed for widespread misinformation in messaging applications. In Brazil, illegal mass messaging practices that aim to reproduce authentic political information sharing have contributed to misinformation spread and affected the electoral process (Kirby, 2018). Additionally, the political polarization that has characterized the country in the past decade has increased distrust in traditional news media, increased political news consumption through alternative channels (Newman et al., 2024) and fomented defense-motivated information evaluation.

7.3 Credibility in Context: Brazil

This study's findings must be understood within the broader Brazilian context of WhatsApp as both a political communication tool and a mundane everyday infrastructure. As outlined in Chapter 1, research has shown how WhatsApp in Brazil is shaped by its domestication into daily life (Parreiras, 2024) and its role in large-scale disinformation campaigns (Nemer & Marks, 2025; Ozawa et al., 2023). These dynamics are essential to better situate the credibility assessment of political information described in this research.

Chapter 1 presented how in pro-Bolsonaro groups, Nemer and Marks (2025) identified a “human infrastructure of misinformation.” They also add that in these public spaces, average users often felt secure to believe the political information shared, due to the strong support expressed by influencers and the “Bolso-army,” while any contradicting or questioning voices were excluded from the conversations and labelled as leftists, or Petistas. In contrast, the present research focused on more intimate contexts. Participants talked about the private group they were part of, with some mentioning chats connected by political groups, hobbies or communities (e.g. church groups). In these familiar chats, participants were exposed to a broader range of views, and correction was more likely. Pre-existing relationships between members, reduced exclusion and created space where the questioning or correction of political information was possible.

Parreiras (2025) ethnographic work on favelas in Rio de Janeiro, presents similar results to those of this research. The participants of her research often accepted political information without scrutiny because it was shared by trusted others. Parreiras (2025) describe this as “community resonance,” a process in which disinformation is circulated and legitimized within tightly knit, digitally connected social spaces. Although these results are similar, her work also highlights the importance of accounting for social and infrastructural inequalities when analyzing how political information is received and evaluated. Her analysis shows how disinformation

campaigns in the 2018 presidential elections in Brazil disproportionately targeted marginalized communities using tailored appeals and emotional triggers. In combination with the zero-rated data plans, this meant that favela residents were unequal in terms of content exposure (more disinformation), and their access to fact-checking resources.

Together, these findings reinforce the importance of examining the credibility assessment process not only as an individual process, but as one embedded in specific sociotechnical, relational and infrastructural contexts. The Brazilian case, shaped by WhatsApp's ubiquitous use, embeddedness in everyday life, and its infrastructural quality, provides a valuable lens to understand how credibility is assessed in the real world. Building on this, the following section outlines practical recommendations and identifies directions for future research.

7.4 Recommendations and Future Research

In conversation with existing literature on credibility assessment and other studies on WhatsApp and other instant messaging applications, this research proposes three key areas of focus for improving the credibility assessment of political information on WhatsApp. These recommendations and areas for future research are not meant to be exhaustive, but to offer concrete directions based on the learnings of this present study. Instead of focusing on what individual users can change in their behaviours, these recommendations propose how institutional actors, including WhatsApp, policy makers, NGOs and researchers, can do. The three areas of focus are: Reducing structural barriers to credibility assessment on WhatsApp, supporting realistic information literacy strategies, and promoting shared responsibilities of information verification and misinformation correction.

7.4.1 Area of Focus 1: Addressing Structural Barriers to Credibility Assessment

The findings of this research suggest that structural barriers, such as the end-to-end encryption, and the inability to see the origin of the information or its path throughout the messaging application, limits people's visibility within the app and hinder their credibility assessment process. Participants described how the absence of key credibility cues, such as the original creator of the message or the original context, often leads them to rely on more readily available cues, such as the sharer of the information, less than ideal heuristic for information assessment. Additionally, constrained discoverability and searchability, which does not allow users to seek information, particularly, that from traditional news media outlets, discouraged systematic assessment of the message by adding extra steps and requiring the user to leave the platform. Notably, additional cues added by the platform, such as the "forwarded," "forwarded many times," and the magnifying glass icon were mentioned by only a couple of participants, findings consistent with other research that show limited awareness or understanding of these features (Feng et al., 2022; Hall et al., 2023).

At the same time, these structural limitations intersect with social practices in Brazil, such as the zero-rated data plans for the app, which may lead to people avoiding leaving the application to evade additional charges. This way, as existing research suggests (Evangelista & Bruno, 2019), either due to lack of affordability or lack of motivation, users are less likely to cross-verify with additional sources.

WhatsApp faces the challenge of addressing these visibility barriers and facilitating the credibility assessment process, while maintaining the privacy and security that attract its users. While more technical solutions might be possible, this research suggests that WhatsApp can reinvest integrated verification tools within the app. The messaging application has, in the past, collaborated with fact-checking organizations and Brazil's Supreme Electoral Court (Justiça

Eleitoral, 2022) to introduce in-app verification tools (WhatsApp, n.d.), many of these efforts have been temporary, not broadly disclosed to users, or had a restricted scope. However, these initiatives address issues of misinformation within the constraints of the application. While this recommendation may be particularly relevant for countries, like Brazil, where WhatsApp benefits from special access, participants' accounts, which describe the barriers to more in-depth assessment going beyond financial constraints, suggest that integrated verification tools may be relevant for other contexts. At the same time, Brazilian policy makers have a role to play ensuring WhatsApp invests in these types of information verifications tools and infrastructures.

Recent changes to WhatsApp, done after the data collection period of this research, such as the introduction of Meta AI, may provide new ways for users to access external content. However, the impact of these features remains unclear. Future research should investigate whether such affordances help reduce verification barriers, or whether users continue to use heuristic-based assessments even when reliable credibility cues are not accessible. It also remains to be seen whether increasing the salience and education around the existing additional cues ("forward" tags, magnifying glass) leads to changes in behaviour.

7.4.2 Area of Focus 2: Priorize Realistic Information Literacy Initiatives

This research shows that credibility assessments on WhatsApp as mostly heuristic, shaped by limited time, low motivation and an overwhelming amount of information. Therefore, effective literacy initiatives must be grounded in this everyday WhatsApp use, based on low-effort, practical strategies that match users existing behaviours within it. Rather than focusing on ideal behaviours, education initiatives should prioritize what users are willing and able to do.

Participants in this study described relying on a mix of readily available cues, such as message tone and presentation, sharer and creator credibility, and quick checks against other

sources, to evaluate the credibility of political information shared on WhatsApp. These strategies reflect the everyday reality of WhatsApp use: high-volume of messages, crossing between contexts, and several contextual constraints like time, which result, as indicated by this research's participants, in users rarely pausing to assess a message systematically.

Based on these findings, literacy programs should emphasize strategies that are both reliable and realistic. These include teaching users how to recognize poor presentation, audiovisual content manipulation, decontextualization and extreme or exaggerated claims. For users who consider mainstream media outlets generally credible, like most of the participants of this research, initiatives can promote cross-verification and the use of these sources as “safe harbours.” Others, like participant Alexandre, who distrust some mainstream outlets, may need programs that can better teach them about how professional journalism works and guide them in selecting a preferred source to keep as a reference.

Finally, these efforts should consider the conditions under which they are implemented and the context of WhatsApp use in Brazil, including: limited data access, political polarization, and varying levels of education and digital fluency among the population. Understanding what users are willing and able to do when assessing the political information received on WhatsApp is a necessary first step.

Despite the extensive scholarship on digital and information literacy, fact-checking and education initiatives, there is still a gap in our understanding of how well these initiatives work combating misinformation spread on WhatsApp in Brazil. While NGOs and civic organizations are actively developing and delivering information literacy programs focused on WhatsApp, there has been little empirical work evaluating their effectiveness. Future research can investigate the efficiency of these NGOs and civic organizations and explore the best platform-

specific teaching strategies, especially in contexts where a lack of cues, contextual barriers and social trust often override message content.

7.4.3 Area of Focus 3: Promoting Collective Norms of Social Correction

Another topic approached by this research was the role of group norms and interpersonal dynamics in group conversations on WhatsApp and their impact on the participants' assessment process. Many described their inner negotiations of correction, deciding how to correct others, balancing the risks of allowing misinformation to spread with that of creating conflict or discomfort within their social circle. Norms of conflict avoidance led to rules on political information sharing, but also to silence and allowed false information to go unchecked. At the same time, some participants described practices of social correction and collaborative verification. Particularly in politically aligned groups, participants felt more comfortable raising doubts, asking for sources, or challenging misleading content. These findings echo existing literature, which shows that misinformation correction is more likely to be accepted when they come from strong ties and politically aligned others (Pasquetto et al., 2022). The results of this present study reinforce the notion that WhatsApp is not inherently hostile to correction, on the contrary, it enables it possible through a range of visibility, multimodality and its intimate scale.

The present research follows scholars such as Kligler-Vilenchik (2022) and Chadwick, Vaccari, et al. (2023), in proposing that misinformation correction should not be treated as an individual responsibility but as a collective practice. Kligler-Vilenchik (2022) suggests that social correction should be approached as a collective practice, involving the co-construction of social norms of information verification and misinformation correction. She states that collective social correction helps users make better-informed judgements and reduce the spread of misinformation, particularly for political information, where distinguishing truth from falsehood

presents significant challenges. Examples from this present research support the effectiveness of collective social correction. Expectations that shared information will be verified, such as with Beatriz's group, incentivize self-correction, promote accountability, and stimulate in-depth credibility assessment, reducing the chance that misinformation will go unnoticed.

In practice, Kligler-Vilenchik suggests that collective social correction can be achieved “Through the day-to-day employment of information verification practices such as raising doubt, contradicting, or discussing source credibility, the admin's behaviour, as well as that of many group members (...)” (2022, p. 315). Chadwick, Vaccari et al. (2022) recommend person-focused interventions, instead of content-focused interventions, that can support WhatsApp users in dealing with the contradictions between conflict avoidance social norms and feelings of responsibility for misinformation correction. They propose promoting “empathetic, dialogue-based engagement” and misinformation initiatives that build on the bonds of interpersonal trust (p. 25). Vijaykumar et al. suggest (2022) that resources could be created to support social media users' ability to function as community-based misinformation watchers (p. 40). This research suggests that, while conflict may arise in WhatsApp groups, positive interactions also emerge, contributing to the credibility assessment of political information.

Moving forward, initiatives aimed at curbing misinformation must consider the relational dynamics of WhatsApp use. NGOs and civil society groups should explore interventions that support low-conflict, group-based correction strategies and promote group norms of information verifications and standard. This can include campaigns and resources that model positive dialogue. These initiatives should be careful to consider cultural aspects of the populations they are targeting. WhatsApp can also work on creating features that support group-based verification and correction, such as in-app prompts or other tools for conversation admins. Policy makers and

researchers also have a role in supporting the development of community-driven approaches to misinformation correction. Future research should investigate how group admins, community leaders and even WhatsApp can facilitate sustainable cultures of correction and verification, especially across different types of WhatsApp groups, political contexts and cultures.

These three areas of focus, structural barriers, information literacy, and collective social correction, reflect the complexity of the credibility assessment of political information on WhatsApp. Instead of placing the burden solely on the users, the recommendations emphasize platform design, social norms and context-specific strategies.

By addressing what is known, from existing literature and the findings of this research, highlighting open questions, and offering actionable steps for different actors, this section points to more realistic interventions. Ultimately, improving the credibility assessment of political information on WhatsApp requires an approach that recognizes everyday constraints, structural barriers and fosters verification as a shared practice.

7.5 Limitations of Study and Areas for Future Research

Previous chapters have already discussed the research's limitations. However, it is relevant to restate them and further acknowledge their impact on the research findings.

This research's sample presents a lack of diversity. First, the sampling strategy could not account for all the many relevant variables in credibility literature, and education level and interest in politics were not included in the property space. Despite that, the researcher tried to account for these variables in the sample selection. However, due to the recruitment strategy and lack of incentives, individuals with higher levels of education, greater political interest and those in older age groups were oversampled. It is possible that these individuals had more information

skills, experience with traditional news media, and political knowledge than the average population, which affected the results.

Self-selection bias may have increased this issue, with volunteer participants being more likely to be already more reflective or confident about their media use and political information habits. This may have influenced the kinds of practices and justifications captured by the data, while other less critical perspectives may be underrepresented.

Surprisingly, even though political opinion was accounted for, and the sample included individuals from all sides of the political spectrum, none, as far as the data collected shows, expressed an attitude pro-Lula or pro-Bolsonaro. The lack of representation of this polarization leaves this critical aspect of the current political context in Brazil outside of this research. It is possible that the more moderate results, with participants expressing a dislike for extremist behaviour or seeking multiple opinions, result from this sampling limitation.

The underrepresentation of lesser-educated or more partisan individuals also limits the generalizability of findings. Without including individuals with different levels of access to technology, education and political voice, this study cannot fully capture how credibility assessments vary across different segments of the Brazilian. However, this limitation serves as an opportunity for a more in-depth exploration of these groups' diverse attitudes and behaviours.

A second limitation comes from the diary data. Despite the measures taken to avoid participant drop-out, the final number of diaries collected was smaller than expected, in total numbers and for each participant. Additionally, the data was not as rich as anticipated. Many diary responses were vague, incomplete or skipped entirely. This gap limited the analysis of specific variables and added uncertainty to the interpretation of some of the disclosed practices. Still the diaries showed insights into participants' main heuristics in their daily interactions with

political information on WhatsApp and each entry provided a complete picture of context, content, and user response. The interviews were essential in complementing and deepening these observations.

Taken together, these limitations point to valuable avenues for future research. Studies that include more polarized, less educated, or less digitally connected participants would offer a more complete picture of the credibility assessment process across different social groups in Brazil. Future research can also investigate how structural inequalities shape users' ability to assess information. Lastly, research can explore the use of diary-methods and messaging apps as data collection tools to yield more detailed, real-time insights into everyday political information encounter on private messaging platforms.

7.6 Key Contributions

This study contributes to the existing literature by describing the credibility assessment process of political information on WhatsApp and highlighting the important strategies and criteria used in this evaluation. Based on participants' accounts it describes this process as initiating with a triage phase, in which individuals decide whether to engage with the information. Following, the information is most often evaluated through a superficial heuristic approach, with the main heuristics used in this process being message presentation and congruency, consistency and source credibility. Last frequently, WhatsApp users conduct a more comprehensive evaluation of the information's credibility, usually by doing additional research or asking other users. These findings add to the literature on credibility assessment models with two suggestions.

First, these research findings suggest that credibility assessment models and credibility assessment research could benefit from incorporating types of motivation in the factors affecting

this process (Chaiken et al. 1996). This study illustrated accuracy, defence and impression motivations for in-depth assessment of political information on WhatsApp. Further studies could explore the relationship between different types of motivation and its effects on the paths taken and choices made in the credibility assessment process.

Second, this study introduces triage as an essential phase in the credibility assessment process. Triage encompasses the decisions and practices users make about whether to engage with the information at all. These decisions can rely on credibility-related heuristics, in some cases, making triage the credibility evaluation process at its most superficial level. Triage may affect the credibility assessment process by filtering which information gets evaluated, shaping the context in which the process is made, and potentially influencing the heuristics used in the evaluation. Recognizing triage as an information behaviour often intrinsically connected to the credibility assessment process pushes for an extension of existing models to encompass this pre-engagement phase and shifts to incorporate information-encountering behaviours, rather than active information seeking.

Supporting the existing literature on credibility assessment in networked media and research on WhatsApp, this research upholds the four potential issues for credibility assessment described in Chapter 2. It echoes previous research (Flanagin, 2017; Metzger et al., 2003) suggesting that WhatsApp sources are perceived as layered and multiple. Furthermore, it identifies the factors that determine creator and sharer credibility and how these heuristics are used in the assessment process. It also shows how several contextual factors, including the frequent lack of source cues in the message, may reduce the role of traditional gatekeepers while supporting the importance of social and personal curation on the app. Finally, supporting

previous literature (Chadwick, Vaccari, et al., 2023; Kligler-Vilenchik, 2022), this research explored the central role of social norms in the evaluation process.

Further, this research describes the context in which political information received on WhatsApp is evaluated. Aligning with the research that describes users experiencing information overload on WhatsApp (Kanthawala & Maddox, 2022), this research indicates WhatsApp's affordances of availability and immediacy, constraints on information selection, and WhatsApp's role across different contexts (personal, public, professional), generate experiences of context and content collapse. These findings also connect with the literature on incidental news consumption (Boczkowski, 2010; Masip et al., 2021; Valenzuela et al., 2019), which indicates how this context can affect the credibility assessment process.

Lastly, this study's findings showed how WhatsApp's visibility limitations affect the credibility assessment of political information on the app. Research has already shown that WhatsApp is a "near-sighted environment" in which users cannot follow the path of the information through the app, nor can it be verified by external actors (Evangelista and Bruno, 2019). This study shows how visibility constraints also affect an individual's verification process, creating additional barriers that often discourage more in-depth evaluation. Participants discussed the onus of leaving the application to encounter external verification or cross-validate with other sources.

7.7 Final Reflections

In conclusion, this research explored the credibility assessment process of political information on WhatsApp through the sources, the social relationships, and the affordances of the application. It contributed to understanding how these factors make the credibility assessment process of political information on WhatsApp unique. The findings describe the complex

credibility assessment process on WhatsApp, where intimate social dynamics and platform affordances shape users' evaluations of political information. They present a scenario of credibility marked by personal trust, social norms, selective exposure to information, constrained visibility and blurring of contexts.

Through a combination of interpretive methods, the study captured the nuances of users' attitudes and behaviours despite constraints imposed by the closed nature of the platform. Furthermore, this approach captured a process that is often fast and automatic (Sundar, 2008). Finally, the diaries provided essential contextual information that supports the understanding of the credibility assessment process.

This research suggests that credibility assessment models can benefit from considering a pre-engagement phase in which individuals triage whether they will look at a piece of information. Additionally, considering types of motivation – accuracy, defence, and impression – can stimulate a more comprehensive understanding of how users' goals influence the paths and criteria used in the credibility assessment.

Lastly, based on what was learned from this study, in combination with existing literature, this work identifies three recommendations that can support better credibility evaluation of political information on WhatsApp. The three areas identified are behavioural, social, and structural.

The findings of this research extend beyond WhatsApp, reflecting challenges in the networked media environment, particularly in social platforms where the lines between public and private are increasingly blurred. The closed nature of these platforms increases the role of users in information curation, verification and correction.

Future research should continue exploring the intersection of media affordances and social dynamics in the credibility assessment. In addition to a more diversified sample that could increase the generalizability of findings, research can focus on other cultural and political contexts to investigate how distinct social norms affect behaviours and attitudes. Furthermore, future studies could examine if and how the new features implemented by WhatsApp, Channels and Meta AI, affect the credibility assessment process.

Ultimately, this research highlights the complexities of the credibility assessment on WhatsApp. Understanding the interplay of platform constraints, social bonds, and cognitive processes can support initiatives for reducing misinformation beliefs.

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Appendices

Appendix 1

Consent for Admission Survey and Diaries

(Original Portuguese Version)

O processo de avaliação da credibilidade de informação política no aplicativo de mensagem

WhatsApp no Brasil

██████████

Departamento de Comunicação, Faculdade de Artes, Universidade de Ottawa

██████████

Sob a supervisão de:

██████████

Departamento de Comunicação, Faculdade de Artes, Universidade de Ottawa

Convite para participar: Você está convidado(a) para participar na pesquisa acima mencionada que será conduzida por ██████████ para sua tese de doutorado, sob a supervisão da ██████████

Objetivo do Estudo: O objetivo do estudo é entender como as pessoas avaliam a credibilidade da informação política que recebem no WhatsApp.

Participação: Sua participação irá consistir em:

- Completar um questionário online (15 minutos) na plataforma Qualtrics, no qual você será perguntado sobre suas características pessoais, hábitos e uso de mídia, opinião política e sobre quais critérios são importantes para avaliação de informações políticas recebidas no WhatsApp.

Se chamado(a) para a segunda fase da pesquisa você precisará:

- Responder a um segundo questionário online (10 minutos) em 10 dias diferentes. Você receberá uma notificação na hora no celular na hora de responder à pesquisa, em horários e dias aleatórios espalhados durante quatro semanas. Em cada um dos diários você irá falar sobre uma mensagem política específica que você receber no WhatsApp, incluindo o contexto no qual essa mensagem foi recebida, por exemplo se foi em uma conversa individual ou de grupo e a fonte da informação, e sobre como você decidiu se essa informação era crível ou não.

Riscos: Sua participação no estudo implicará que você compartilhe algumas de suas informações pessoais e discuta tópicos sensíveis como sua opinião política, o que pode causar algum desconforto. Todos os esforços serão feitos para minimizar esses riscos, e você tem o direito de retirar sua participação da pesquisa a qualquer momento e de pedir que seus dados sejam deletados. Você também tem a opção de recusar responder a qualquer questão. Sua identidade será protegida por diversas medidas de confidencialidade e privacidade da pesquisa.

Benefícios: Sua participação nesse estudo irá contribuir o conhecimento sobre como pessoas avaliam a credibilidade de informações políticas, em especial numa mídia importante como o WhatsApp. Você terá também a oportunidade de refletir sobre seus hábitos políticos, uso de mídia e engajamento.

Confidencialidade e privacidade: Toda a informação que você compartilhar será mantida estritamente confidencial. O conteúdo será utilizado somente para esse projeto de pesquisa, incluindo artigos acadêmicos e uma monografia. Sua identidade será protegida com números únicos de identificação e pseudônimos. Somente os pesquisadores terão acesso a qualquer informação que possa te identificar.

Esse estudo será conduzido através da plataforma Qualtrics, sediada nos Estados Unidos da América e, portanto, sujeita ao Patriot Act (Lei Patriota). O Patriot Act dos EUA dá ao Departamento Federal de Investigação (FBI) a autoridade de acessar qualquer base de dados sem uma ordem judicial, e a Lei proíbe o proprietário da base de dados de informar outras pessoas ou companhias sobre o acesso pelo FBI. Portanto, as informações pessoais que você fornecer nesta pesquisa podem ser legalmente acessadas pelo FBI sem o seu conhecimento e dos pesquisadores.

Recursos de segurança da Qualtrics: Qualtrics é compatível com GDPR (Regulamento geral de proteção de dados) e CCPA (Lei de privacidade do consumidor da Califórnia). Os participantes podem solicitar que seus dados sejam apagados ou corrigidos a qualquer momento.

A fim de minimizar o risco de violações de segurança e ajudar a garantir sua confidencialidade, é recomendado que você use medidas de segurança padrão, como sair da sua conta, fechar seu navegador e bloquear seu dispositivo quando não estiver mais usando / quando tiver concluído o estudo.

Conservação de dados: Todos os dados coletados (respostas da pesquisa, entradas no diário, e formulários de consentimento) serão mantidos de maneira segura sob senhas e arquivos protegidos. *Todos os dados coletados serão destruídos em 31 de janeiro de 2029.*

Participação voluntária: Você não tem nenhuma obrigação de participar nesse estudo, e se você escolher participar pode retirar sua participação a qualquer momento, ou se recusar a

responder qualquer pergunta, sem sofrer nenhuma consequência negativa. Se você decidir retirar sua participação, pode pedir aos pesquisadores que todos os seus dados coletados até aquele momento sejam removidos do estudo e não utilizados na pesquisa. Caso contrário, os dados serão usados, contando com as mesmas proteções de confidencialidade e privacidade.

Se você tiver qualquer dúvida sobre o estudo, entre em contato com a pesquisadora ou sua supervisora.

Esse estudo foi avaliado e aprovado pelos Escritório de Ética e Integridade da Universidade de Ottawa e pelo Comitê em Ética em Pesquisa com Seres Humanos (CEP) da FFLCH/USP. Se você tiver qualquer dúvida a respeito da conduta ética desse estudo entre em contato com um dos comitês de ética em pesquisa.

Escritório de Ética em Pesquisa e Integridade da Universidade de Ottawa (Canada)

e-mail: ethics@uottawa.ca

Telefone: 613-562-5387

550 Cumberland Street, Room 154

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Comitê em Ética em Pesquisa com Seres Humanos (CEP) da FFLCH/USP

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Rua do Lago, 717, Sala 110, Prédio da Administração da FFLCH

São Paulo, SP, Brasil

05508-080

É recomendado que você baixe uma cópia deste formulário de consentimento no website:

Aceite: Ao preencher e devolver este questionário, estou consentindo em participar deste estudo de pesquisa.

(English Translation)

The credibility assessment process of political information on WhatsApp in Brazil

██████████

Department of Communication, Faculty of Arts, University of Ottawa

██████████

Under the supervision of:

██████████

Department of Communication, Faculty of Arts, University of Ottawa

██████████

Invitation to Participate: You are invited to participate in the above mentioned research study conducted by ██████████, for her Doctoral thesis, under the supervision of ██████████.

Purpose of the Study: The purpose of the study is to *understand how people make their assessment of the credibility of political information they receive on WhatsApp.*

Participation: Your participation will consist of:

- Completing an online questionnaire (15 minutes) on the platform Qualtrics in which you will be asked about your personal characteristics, habits and media use, political opinion and about what criteria are important for the evaluation of political information received on WhatsApp.

If called for the second phase of the research, you will:

- Answer a second questionnaire (10 minutes) on 10 different days. You will receive a notification on your mobile phone at the time that you need to answer the survey, in random times and days spread across 4 weeks. In each one of the diary entries you will talk about one

political message that you received on WhatsApp, including the context in which this message was received, for example if it was sent in a private or group conversation and the source of this information, and how you decided if the information as credible or not.

Risks: Your participation in this study will entail that you volunteer some personal information and discuss sensitive topics such as your personal political opinion and this may cause you to feel discomfort. Every effort will be made to minimize these risks. You have the right to withdraw at any moment, ask for your data to be deleted, and you have the option to refuse to answer any questions. Your identity will also be protected by the researcher's confidentiality and privacy measures.

Benefits: Your participation in this study will contribute to the knowledge of how people evaluate the credibility of political information, especially in an important media such as WhatsApp. You will also have the opportunity to reflect on my media and political habits and engagement.

Confidentiality and Privacy: All the information that you share will remain strictly confidential. The contents will be used only for the current research project, including peer-reviewed academic articles and a monograph. Your identity will be protected with unique identifying numbers and pseudonyms. Only the researchers will have access to any identifying information.

This study is being administered through Qualtrics, a company based in the USA that is subject to the Patriot Act. The U.S. Patriot Act gives the Federal Bureau of Investigation (FBI) the authority to access any database without a court order, and the Act prohibits the owner of a database from telling others about any access by the FBI. Therefore, personal information that

you provide in this survey may legally be accessed by the FBI without your knowledge or the knowledge of the researchers.

Qualtrics Security features: Qualtrics is GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act) compliant. Participants can request their data to be erased or rectified at any moment.

In order to minimize the risk of security breaches and to help ensure my confidentiality, it is recommended that you use standard safety measures, such as signing out of your account, closing your browser, and locking your device when you are no longer using it/when you have completed the study.

Conservation of Data: The data collected (survey datasets, diary datasets, and consent forms) will be kept in a secure manner kept under password and key protected files. *All data collected will be destroyed on January 31th, 2029.*

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you choose to withdraw, you can ask for all data gathered until the time of withdrawal to be removed from the dataset and not used in the study. Otherwise, the data will be used, counting with the same protections of confidentiality and privacy.

If you have any questions about the study, you may contact the researcher or their supervisor.

This study was evaluated by the Office of Research Ethics and Integrity of the University of Ottawa and by the Committee of Ethics in Research with Human Beings of the Faculty of Philosophy, Languages and Social Sciences (FFLCH) of the University of São Paulo (USP). If

you have any questions about the ethical conduct of this study you can get in contact with one of these ethics committees.

Office of Research Ethics and Integrity of the University of Ottawa (Canada)

e-mail: ethics@uottawa.ca

Telephone: (+1)613-562-5387

550 Cumberland Street, Room 154

Ottawa, ON, Canada

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Committee of Ethics in Research with Human Beings of the Faculty of Philosophy,

Languages and Social Sciences (FFLCH) of the University of São Paulo (USP)

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São Paulo, SP, Brasil

05508-080

It is recommended that you *download a copy* of this consent form for your records from (website).

Acceptance: By completing and returning the survey, I am consenting to participate in this research study.

Appendix 2

Admission Survey Questionnaire

(Original Portuguese Version)

1) Qual é o seu gênero?

- Feminino
- Masculino
- Eu não tenho uma opção que se aplica a mim. Eu me identifico como (por favor especifique)

2) Em que ano você nasceu?

3) Onde você vive?

- Cidade de São Paulo
- Outra cidade da Zona Metropolitana de São Paulo
- Outra cidade

4) Qual das opções a seguir descreve melhor seu nível de educação mais alto?

- Fundamental incompleto
- Fundamental completo
- Ensino Médio incompleto
- Ensino Médio completo
- Ensino superior incompleto
- Ensino superior completo

- 5) Agora vamos imaginar que nesta linha o número 1 corresponder a “esquerda, o número 5 a “centro” e o número 10 a “direita”. Como você pode ver, uma pessoa que é muito de esquerda estaria no número 1 e uma pessoa que é muito de direita estaria no 10. Onde você se colocaria?

1– 10

Não sei dizer

- 6) Você se interessa por política ou questões sociais?

(1 = nada interessado – 7=muito interessado)

- 7) Com qual frequência você usa as seguintes mídias para consumir informação sobre política ou questões sociais?

1 Nunca – 2 Menos de uma vez ao mês – 3 Algumas vezes por mês – 4 Algumas vezes por semana - 5 todos os dias ou quase todos os dias – 6 Várias vezes por dia

- a. Facebook
- b. Twitter
- c. YouTube
- d. WhatsApp
- e. Telegram
- f. Facebook Messenger
- g. Notícias online
- h. Jornais

- i. Radio
- j. Televisão

8) Para quais motivos você utiliza WhatsApp? Marque todos que forem verdadeiros.

- Para manter contato com família e amigos
- Para discutir temas específicos (por exemplo, futebol)
- Para receber informações e notícias
- Para manter contato com colegas de trabalho
- Para diversão e entretenimento
- Como ferramenta de trabalho
- Como ferramenta para mobilização social e política
- Para aprender uma nova língua
- Nenhuma das opções acima

9) Considerando as suas conversas de grupo (com 3 ou mais pessoas) você é membro de algum grupo público (que pode ser acessado por link e não necessita de convite) no WhatsApp

- Sim
- Não

10) Geralmente, você recebe mais informações políticas em conversas de grupo (com 3 ou mais pessoas) ou conversas individuais (só você e mais uma pessoa)?

- Conversas de grupo
- Conversas individuais

- Eu não sei

11) Geralmente, de quem você recebe informações políticas no WhatsApp? Marque todas as respostas que se aplicam a você.

- Amigos
- Família
- Colegas de estudos ou trabalho
- Conhecidos
- Pessoas que eu não conheço pessoalmente
- Ninguém

12) Com qual frequência você recebe os seguintes tipos de informação política no WhatsApp?

1 Nunca – 2 Menos de uma vez ao mês – 3 Algumas vezes por mês – 4 Algumas vezes por semana - 5 todos os dias ou quase todos os dias – 6 Várias vezes por dia

- Notícias dos principais veículos
- Outras notícias
- Conteúdo oficial do governo
- Conteúdo oficial de partidos ou políticos
- Conteúdo político criado por usuário
- Conteúdo político criado por movimento social
- Blog político
- Meme
- Sátira

- Junk news/Notícias-lixo

13) Você recebe algum tipo de comunicação política no WhatsApp que não foi incluída na pergunta anterior?

14) Cada pessoa tem critérios diferentes para avaliar a credibilidade de informação política no WhatsApp. Para você qual é a importância dos seguintes critérios na avaliação da credibilidade de informação política recebida no WhatsApp?

(Nada importante, pouco importante, importante, muito importante)

- a) A informação foi criada por um especialista
- b) A fonte da informação é oficial
- c) A fonte da informação é acadêmica
- d) A informação é imparcial
- e) A informação é precisa (ao ponto)
- f) A informação é completa
- g) A fonte da informação é confiável
- h) A fonte da informação é uma autoridade
- i) A informação é atual
- j) A informação é livre de erros

15) Você concorda em ser contatado(a) para participação na próxima fase da pesquisa?

- Sim
- Não

16) Se você concorda, por favor adicione seu e-mail ou número de telefone para contato.

(English Translation)

1) What is your gender?

- Woman
- Man
- I don't have an option that applies to me. I identify as (please specify) ____.

2) In what year were you born?

3) Where do you live? – Multiple choice

- City of São Paulo
- The metropolitan region of São Paulo
- Other

4) Which of the following best describes your highest level of education?

- Middle school incomplete
- Middle school complete
- High school incomplete
- High school complete
- Superior education incomplete
- Superior education complete

5) Now let's imagine that on this line the number 1 corresponds to "left," the number 5 to "center," and the number 10 to "right." As you can see, a person who was very left-wing would be at number 1, and one who was very right-wing would be at 10. Where would you place yourself?

1. 1-10
2. I don't know

6) Are you interested on politics or social issues?

(1- Not interested, 7- Very interested)

7) How frequently have you used the following media to consume information about politics or social issues?

1 Never - 2 Less than once a month - 3 a few times a month - 4 a few times a week - 5

Every day or Almost everyday - 6 Several times a day

- a. Facebook
- b. Twitter
- c. YouTube
- d. WhatsApp
- e. Telegram
- f. Facebook Messenger
- g. Online news
- h. Newspapers
- i. Radio

j. Television

8) For what reasons do you use WhatsApp? Mark all that are true for you.

- To get in touch with friends and family
- To discuss specific themes (football, for example)
- To receive information and news
- To keep in contact with work colleagues
- For fun and entertainment
- As a work tool
- As a tool for social or political mobilization
- To learn a new language
- None of the above

9) Considering your group conversations (with 3 people or more) are you a member of any public groups (groups that can be accessed via link and do not require invitation) on WhatsApp?

- Yes
- No

10) Do you usually receive more political information in group conversations (with 3 or more people) or individual conversations (just you and someone else)?

- Group conversation
- Individual conversation

- I don't know

11) From whom do you usually receive political information on WhatsApp? Mark all that apply to you.

- Friends
- Family
- Work or school colleagues
- Acquaintances
- People I don't know personally
- No one

12) How often do you receive the following types of political information on WhatsApp?

1 Never – 2 Less than once a month – 3 A few times a month – 4 A few times a week
– 5 Every day or almost every day – 6 Several times a day

- Major News
- Other news
- Official government content
- Official party/politician content
- Political content created by user
- Political content created by a social movement
- Political blog
- Meme
- Satire

- Junk news

13) Do you receive any type of political communication on WhatsApp that was not included in the previous question?

14) Each person has different criteria to evaluate the credibility of political information on WhatsApp. For you, what is the importance of the following criteria for evaluating the credibility of political information received on WhatsApp?

Not important, a little important, important, very important

- The information was created by an expert
- The source of the information is official
- The source of the information is academic
- The information is unbiased
- The information is accurate (precise)
- The information is complete
- The source of the information is reliable
- The source of the information is an authority
- The information is current
- The information is free of errors

15) Do you agree to be contacted for participation in the next phase of the research?

Yes – No

16) If you agree, please add your email or phone number for contact.

Appendix 3

Diary Study Questionnaire

(Original Portuguese Version)

Para responder as perguntas desse questionário considere a última informação política que você recebeu no WhatsApp, independentemente do formato, conteúdo, ou conversa na qual você a recebeu. Pense sobre o momento em que você leu essa informação pela primeira vez, quando você a recebeu, e não faça nenhuma pesquisa adicional sobre ela.

1. Por favor, descreva um pouco essa informação. Qual é o tópico, como ela foi apresentada? Inclua os links se possível.

2. Qual é o formato dessa informação política? (marque todas as respostas válidas)
 - a) Imagem
 - b) Texto
 - c) Áudio
 - d) Vídeo
 - e) Link para o YouTube
 - f) Link para alguma rede social
 - g) Link para site de notícias
 - h) Link para outro site
 - i) Sticker

- j) Outro (por favor especifique)
3. Qual é o conteúdo dessa informação política? (Marque todas as respostas válidas)
- a) Notícias dos principais veículos
 - b) Outras notícias
 - c) Conteúdo oficial do governo
 - d) Conteúdo oficial de partidos ou políticos
 - e) Conteúdo político criado por usuário
 - f) Conteúdo político criado por movimento social
 - g) Blog político
 - h) Meme
 - i) Sátira
 - j) Junk news/Notícias-lixo
 - k) Eu não sei
 - l) Outro (por favor especifique)
4. Você recebeu essa informação em uma conversa de grupo ou conversa individual?
- a) Conversa de grupo
 - b) Conversa individual

Conversa de grupo

5. A. Qual é a relação entre as pessoas dessa conversa de grupo?
- a) Família

- b) Amigos
 - c) Colegas de trabalho ou estudos
 - d) Grupo com um objetivo/assunto único (pais de alunos da mesma sala, moradores do mesmo condomínio)
 - e) Grupo com interesses em comum – membros na maioria se conhecem
 - f) Grupos com interesses em comum – membros na maioria não se conhecem
 - g) Eu não sei
6. Considerando um grupo fechado aquele que só pode ser acessado por convite e um grupo público aquele que pode ser acessado por um link sem necessidade de convite, você recebeu essa informação em um grupo fechado ou um grupo público?
- a) Fechado
 - b) Público
 - c) Não sei dizer

Conversa individual

- 5) B. Qual é sua relação com a pessoa que te mandou essa informação na conversa individual?
- a) Família
 - b) Amigos
 - c) Colegas de trabalho ou estudos
 - d) Conhecidos
 - e) Eu não conheço essa pessoa

Continuação

7. Quem ou o que você considera como fontes dessa informação? (Questão aberta)

- Fonte 1
- Fonte 2
- Fonte 3
- Fonte 4

Para as próximas perguntas, se refira às suas respostas na questão 7

8. O quão confiável você considera cada uma dessas fontes? (Tabela)

- a) Muito confiável
- b) Um pouco confiável
- c) Um pouco não confiável
- d) Muito pouco confiável

9. Quando você viu que a (fonte 1) publicou ou compartilhou essa informação, isso fez você:

- a) Muito mais provável a confiar na informação
- b) Mais provável a confiar na informação
- c) Nem mais nem menos provável de confiar na informação
- d) Um pouco menos provável de confiar na informação
- e) Muito menos provável de confiar na informação

10. Quando você viu que a (fonte 2) publicou ou compartilhou essa informação, isso fez você:

- a) Muito mais provável a confiar na informação
- b) Mais provável a confiar na informação
- c) Nem mais nem menos provável de confiar na informação
- d) Um pouco menos provável de confiar na informação
- e) Muito menos provável de confiar na informação

11. Quando você viu que a (fonte 3) publicou ou compartilhou essa informação, isso fez você:

- a) Muito mais provável a confiar na informação
- b) Mais provável a confiar na informação
- c) Nem mais nem menos provável de confiar na informação
- d) Um pouco menos provável de confiar na informação
- e) Muito menos provável de confiar na informação

12. Quando você viu que a (fonte 4) publicou ou compartilhou essa informação, isso fez você:

- a) Muito mais provável a confiar na informação
- b) Mais provável a confiar na informação
- c) Nem mais nem menos provável de confiar na informação
- d) Um pouco menos provável de confiar na informação
- e) Muito menos provável de confiar na informação

13. Você considera essa informação crível?

1 = De modo nenhum – 5 = Muito

14. Explique como você decidiu que essa informação é crível ou não? (Questão aberta)

15. Você tomou alguma das seguintes medidas para verificar essa informação? (Marque todas as respostas válidas e não faça nenhuma dessas ações agora)

- a) Checou quem era o responsável
- b) Checou as qualificações do autor
- c) Procurou a fonte original
- d) Checou quem compartilhou a informação
- e) Consultou outras fontes para validar a informação
- f) Examinou o design da mensagem
- g) Certificou-se que a informação estava bem escrita
- h) Checou o conteúdo, sem dar atenção a esses atributos
- i) Nenhuma opção
- j) Outro _____

(English Translation)

For this diary entry we would like you to think about the last time you received political information on WhatsApp. It doesn't matter the format or who sent it to you. Think about the moment you first encountered this information and anything you did to check it until this moment. Do not do anything else to check the information now.

1) Please describe this information a little bit. What was the topic, how was it presented?

Include any links if possible. (Open ended question)

2) What is the format of this political information? (Check all that apply)

- a) Image
- b) Text
- c) Audio
- d) Video
- e) Link for Youtube
- f) Link for any social media
- g) Link for news site
- h) Link for another media
- i) Sticker
- j) Other (please specify)

3) What is the content of this political information? (Check all that apply)

- a) Major News
 - b) Other news
 - c) Official government content
 - d) Official party/politician content
 - e) Political content created by user
 - f) Political content created by a social movement
 - g) Political blog
 - h) Meme
 - i) Satire
 - j) Junk news
 - k) I don't know
 - l) Other, please specify
- 4) Did you receive this information in a group chat or in an individual conversation?
- a) Group chat
 - b) Individual conversation

Group chat

- 5) A. What is the relation between the people of this group conversation? (Check the primary one)
- a) Family
 - b) Friends
 - c) Work/study colleagues

- d) Group with one objective/one subject (parents of students in the same class, residents of the same building)
- e) Group with similar interests – members mostly know each other
- f) Group with similar interests – most members do not know each other
- g) I don't know

6) Considering a closed group one that can only be entered through invitation and a public group one that can be access through a link and do not require invitation, did you receive this information in a closed or public group?

- a) Closed
- b) Public
- c) I don't know

Individual chat

5) B. What is your relationship with the person that sent you the information in the individual chat?

- a) Family
- b) Friends
- c) Colleagues
- d) Acquaintances
- e) I don't know this person

Continuation

7) Who or what do you consider a source of this information?

- Source 1
- Source 2
- Source 3
- Source 4

For the next question please refer to your answers to question 7

8) How trustworthy do you find each of the sources above? Table question

- a) Very trustworthy
- b) Somewhat trustworthy
- c) Somewhat untrustworthy
- d) Very untrustworthy

9) When you saw that [Source 1] published or shared this information, did that make you:

- a) Much more likely to trust the information
- b) Somewhat more likely to trust the information
- c) Neither more nor less likely to trust the information
- d) Somewhat less likely to trust the information
- e) Much less likely to trust the information

10) When you saw that [Source 2] published or shared this information, did that make you:

- a) Much more likely to trust the information
- b) Somewhat more likely to trust the information
- c) Neither more nor less likely to trust the information

- d) Somewhat less likely to trust the information
 - e) Much less likely to trust the information
- 11) When you saw that [Source 3] published or shared this information, did that make you:
- a) Much more likely to trust the information
 - b) Somewhat more likely to trust the information
 - c) Neither more nor less likely to trust the information
 - d) Somewhat less likely to trust the information
 - e) Much less likely to trust the information
- 12) When you saw that [Source 4] published or shared this information, did that make you:
- a) Much more likely to trust the information
 - b) Somewhat more likely to trust the information
 - c) Neither more nor less likely to trust the information
 - d) Somewhat less likely to trust the information
 - e) Much less likely to trust the information
- 13) How much do you believe in this information? (Scale)
- 1 = not at all 5 = a whole lot
- 14) Explain how you decided whether this information is credible or not. (Open question)
- 15) Did you take any of the following measures to check this information? (Check all that apply, and do not do any of the actions right now)
- a) Looked at who was responsible

- b) Looked at the author's qualifications
- c) Tracked down the original source
- d) Looked at who linked to the information
- e) Consulted other sources to validate
- f) Examined the design of the (website) message
- g) Made sure the information was well written
- h) Looked just at the content, paying no attention to these attributes
- i) Other _____
- j) None of the above

Appendix 4

Diary Guide

(Original Portuguese Version)

Caro(a) participante,

Obrigada por se voluntariar a participar desse estudo. O objetivo dessa pesquisa é entender como as pessoas avaliam informação política recebida no WhatsApp. Então, primeiramente, não se preocupe, não existem respostas certas ou erradas. Nós queremos saber como você faz essa avaliação normalmente. Por favor, não mude nada durante o período da pesquisa.

Sua participação nessa parte da pesquisa consiste no seguinte: responder a um questionário, online 10 vezes. Essas 10 vezes serão distribuídas em 4 semanas de (datas da onda da qual o participante fará parte). Você receberá uma mensagem de WhatsApp no seu celular e terá 2 horas para responder ao questionário. Nós iremos entrar em mais detalhes ao longo deste guia.

Se você tiver qualquer pergunta ou encontrar algum problema durante a sua participação nesse estudo, você pode entrar em contato com a pesquisadora através do seu e-mail (██████████) ou pelo WhatsApp (██████████).

A pesquisa

Durante o seu período de participação você responderá ao questionário 10 vezes. Tudo o que você precisa fazer é responder às questões, mas vamos repassar alguns pontos importantes para fazer sua experiência a mais tranquila possível.

A notificação

Você receberá uma mensagem pelo WhatsApp todas as vezes que você precisar responder ao questionário. Você pode clicar no link na mensagem para ir ao questionário.

Uma vez que você receber a mensagem você terá duas (2) horas para responder ao questionário, depois disso ela não será mais válida. Se você perder um dos questionários, não se preocupe, você terá outras oportunidades de completar as 10 entradas, até o final do seu período de participação.

Respondendo ao questionário

Quando você preencher o questionário, nós queremos que você pense na última informação política que você recebeu no WhatsApp. Fique à vontade para olhar suas conversas para lembrar qual foi a última informação, mas pedimos que você não faça mais nada em relação a essa informação e responda as perguntas em referência a primeira vez que você entrou em contato com ela. Então, por exemplo, se você não clicou no link da mensagem quando você leu ela a primeira vez, não clique no link após receber a notificação e enquanto faz o questionário.

Se algum tempo passou entre o momento que você recebeu a notificação e o momento em que você começou o questionário, você pode responder às perguntas com base na última informação política que você viu antes de começar a pesquisa, ou com base na última informação política que você viu antes de receber a mensagem. Essas são as duas únicas opções, por favor não escolha outra informação política que você tenha recebido. Se você acha que você avaliou a informação de forma diferente depois que recebeu a notificação, nós preferimos que você escolha a informação política que você recebeu antes disso.

As questões

As perguntas são sobre a sua percepção da informação política e o que você fez para avaliar a credibilidade dela. Como já dito, não existem respostas certas ou erradas, quanto mais próximo à sua experiência real você compartilhar conosco, melhores serão nossos resultados. Também não existe jeito certo ou errado de avaliar a informação política, credibilidade é relativa e pessoal. Lembre-se também que toda a informação que você compartilhar conosco será mantida estritamente confidencial e somente a pesquisadora principal [REDACTED], terá acesso a qualquer informação que possa te identificar.

No questionário existem duas questões nas quais é pedido que você escreva um pouco, ao invés de escolher entre opções. Para essas perguntas esperamos que você responda com umas duas frases. Se você experienciou alguma coisa relevante ou queira compartilhar mais conosco, fique à vontade para escrever o quanto quiser.

Alguns conceitos que podem ajudar a responder às questões

Credibilidade: Todas as avaliações de credibilidade de informações devem ser feitas de acordo com a sua percepção. Não existe certo ou errado e nós não iremos avaliar as informações nós mesmos. Queremos saber sobre o seu processo de avaliação e a sua percepção da credibilidade das informações que você encontra no WhatsApp.

Informação política: Política pode ser definida de forma ampla, e as definições variam de pessoa a pessoa. A política está amplamente ligada a material relacionado a políticas públicas, eleições, legislatura e figuras políticas. Esse conteúdo pode estar em notícias, textos opinativos, publicidade em meios tradicionais como TV e jornal, mas também em outdoors e na internet, memes, posts no Twitter, no Facebook e outras redes sociais, conversas cara-a-cara e assim por diante.

Conversas de grupo: quaisquer conversas no WhatsApp com 3 ou mais pessoas

Conversas individuais: quaisquer conversas no WhatsApp com apenas 2 pessoas. Você e mais alguém.

Conversas públicas: Grupos públicos são aqueles que qualquer pessoa pode acessar com um link, mesmo que eles não conheçam ninguém dentro do grupo.

Conversas privadas/fechadas: Grupos fechados ou privados são aqueles nos quais uma pessoa precisa ser convidada ou adicionada por outro membro do grupo ou administrador para entrar.

Grupo com um objetivo/um tópico: são grupos que foram criados com um único objetivo e a conversa se mantém neste tópico. Por exemplo, pais de alunos na mesma sala de aula, moradores do mesmo condomínio, estudantes no mesmo curso, grupo criados momentaneamente para organizar um evento ou encontro.

Grupo com interesses similares: são grupos que são criados com pessoas que têm um interesse em comum, como um time de futebol, opinião política ou hobby, mas que os tópicos das conversas podem variar e desviar do interesse em comum.

Fontes de informação política: Informação política pode vir de qualquer lugar, e certamente não precisa vir de uma mídia formal. Informação política pode vir de jornais, canais de televisão, e rádio. Mas também pode vir do Twitter, posts de Facebook e Instagram, memes, mensagens de texto, vídeos de YouTube, conversas cara-a-cara e assim por diante. Tente ser o mais específico(a) e completo(a) quando listar as fontes da informação política.

Perguntas frequentes

(English Translation)

Dear participant,

Thank you for volunteering to participate in this study. The goal of this research is to understand how people evaluate political information on WhatsApp. So, firstly, don't worry, there is no right or wrong way to do this. We want to know how you do it naturally. Please don't change anything.

Your participation in this section of the research consists of the following: answering a questionnaire 10 times. These 10 times will be distributed in 4 weeks from (dates of the wave the participant will be a part of). You will receive a WhatsApp message at the time to answer the survey and have 2 hours to answer the questionnaire. We will go into more detail on the questionnaire later.

If you have any questions or any problems during your participation in the diary study, you can contact the researcher through her email ([REDACTED]) or through WhatsApp ([REDACTED]).

The survey

During your participation period you will answer the survey 10 times. All you must do is answer the questions but let's go over some important things to make the experience as smooth as possible.

The notifications

You will receive a WhatsApp message every time you need to answer the questionnaire. By clicking the link on the message, you will be taken to the survey.

Once you get the message, you will have two hours to answer the questionnaire, after this your answer won't be valid anymore. If you miss one of the questionnaires, don't worry, you will have other opportunities to complete the 10 entries until the end of your participation period.

Doing the survey

When you fill out each questionnaire, we want you to think about the last piece of political information you have received on WhatsApp. Feel free to look at your conversations to remember what the last information was, but we ask that you do not do anything else regarding that information and answer the questions regarding the first time you saw it. So, for example, if you did not click on a link you received and only looked at the title, do not click on the link after you receive the message and while you do the survey.

If it took some time between the moment you received the notification and the moment you started the questionnaire, you can do the questionnaire based on the last piece of political information you saw before starting the survey or the last piece of information you saw before getting the notification. These are the two options; please do not choose another piece of political information that you received. If you think you did things differently after receiving the notification, we prefer that you choose the piece of information that you received before it.

The questions

The questions are about your perception of the political information and what you have done to evaluate it. As said, there is no right or wrong answer; the more truthful your actual experience you share with us, the better our results will be. There is also no right or wrong way to evaluate political information, credibility is relative and personal. Also, remember that all the

information that you share will be kept strictly confidential, and only the primary researcher, Ms. [REDACTED], will have access to any identifiable information.

There are two questions in which you are asked to write a little bit instead of just choosing options. For these questions you are expected to answer with a couple of sentences. If you have experienced something relevant or would like to share more with us feel free to write as much as you wish.

Some concepts that may help you answer the questions:

Credibility: All evaluations of the credibility of the information should be done according to your perception of it. There isn't any right or wrong, and we won't be evaluating the information ourselves. It is all about your perception and assessment process.

Political information: Politics can be defined broadly, and definitions will vary from person to person. Politics is broadly concerned with material related to public policy, elections, the legislature, and political figures. This content can be in news stories, commentary pieces, advertisements and lawn signs, memes, tweets, Facebook posts, face-to-face discussions, and so on.

Group chats: are any conversations with 3 or more people.

Individual chats: are conversations that involve only 2 people. You and some other person.

Public conversations: Public groups are those that anyone can get access with the use of a link, even if they do not know anyone else in the group in person.

Private conversations: are groups in which a person needs to be invited or added to the group by another member or group admin.

Group with one objective/one subject: are groups that were created for one goal only and usually keep the conversation within this topic. For example, parents of students in the same class, residents of the same building, students in the same course, and groups created momentarily to arrange an event.

Group with similar interests: Are groups that were created with people that have one interest in common, for example, a football team, a political opinion or a hobby, but the topics may vary and can diverge from the common interest.

Sources of political information: Political information can come from almost anywhere, and it certainly doesn't have to be a formal media source. Political information can come from newspapers, television stations, and radio. But it can also come from people that you know or don't know, blogs, sites, online or in person. Try to be as specific and thorough as possible when listing the sources of political information.

Frequently Asked Questions

Appendix 5

Consent for Interview

(Original Portuguese Version)

O processo de avaliação da credibilidade de informação política no aplicativo de mensagem WhatsApp no Brasil

Tese de doutorado

██████████

Departamento de Comunicação, Faculdade de Artes, Universidade de Ottawa

██████████

Sob a supervisão de:

██████████

Departamento de Comunicação, Faculdade de Artes, Universidade de Ottawa

██████████

Convite para participar: Você está convidado(a) para participar na pesquisa acima mencionada que será conduzida por ██████████, para sua tese de doutorado, sob a supervisão da ██████████.

Objetivo do Estudo: O objetivo do estudo é entender como as pessoas avaliam a credibilidade da informação política que recebem no WhatsApp.

Participação: Você irá participar de uma entrevista de 45 minutos gravada em áudio. Durante a entrevista você será perguntado(a) sobre informações políticas recebidas no WhatsApp, o contexto em torno dessas informações e como você as avaliou.

Riscos: Sua participação no estudo implicará que você compartilhe algumas de suas informações pessoais e discuta tópicos sensíveis como sua opinião política, o que pode causar algum desconforto. Todos os esforços serão feitos para minimizar esses riscos, e você tem o direito de retirar sua participação da pesquisa a qualquer momento e de pedir que seus dados sejam deletados. Você também tem a opção de recusar responder a qualquer questão. Sua identidade será protegida por diversas medidas de confidencialidade e privacidade da pesquisa.

Durante a sua participação também será necessário que você compartilhe informações específicas para marcar a entrevista, como melhor localização e características físicas. Todos os esforços serão feitos para minimizar esse risco e que nenhum registro dessas informações será mantido.

Benefícios: Sua participação nesse estudo irá contribuir o conhecimento sobre como pessoas avaliam a credibilidade de informações políticas, em especial numa mídia importante como o WhatsApp. Você terá também a oportunidade de refletir sobre seus hábitos políticos, uso de mídia e engajamento.

Confidencialidade e privacidade: Toda a informação que você compartilhar será mantida estritamente confidencial. O conteúdo será utilizado somente para esse projeto de pesquisa, incluindo artigos acadêmicos e uma monografia. Sua identidade será protegida com números únicos de identificação e pseudônimos. Somente os pesquisadores terão acesso a qualquer informação que possa te identificar.

A fim de minimizar o risco de violações de segurança e ajudar a garantir sua confidencialidade, é recomendado que você use medidas de segurança padrão, como sair da sua conta, fechar seu navegador e bloquear seu dispositivo quando não estiver mais usando / quando tiver concluído o estudo.

Conservação de dados: Todos os dados coletados (áudio e transcrição da entrevista) serão mantidos de maneira segura sob senhas e arquivos protegidos. *Todos os dados coletados serão destruídos em 31 de janeiro de 2029.*

Compensação: Você será reembolsado por quaisquer custos de viagem de ida ou volta para o local da entrevista, apresentando o recibo ou descrição dos custos (para transporte público). Se você decidir se retirar do estudo após a entrevista, você continuará recebendo o reembolso.

Participação voluntária: Você não tem nenhuma obrigação de participar nesse estudo, e se você escolher participar pode retirar sua participação a qualquer momento, ou se recusar a responder qualquer pergunta, sem sofrer nenhuma consequência negativa. Se você decidir retirar sua participação, pode pedir aos pesquisadores que todos os seus dados coletados até aquele momento sejam removidos do estudo e não utilizados na pesquisa. Caso contrário, os dados serão usados, contando com as mesmas proteções de confidencialidade e privacidade.

Se você tiver qualquer dúvida sobre o estudo, entre em contato com a pesquisadora ou sua supervisora.

Esse estudo foi avaliado e aprovado pelos Escritório de Ética e Integridade da Universidade de Ottawa e pelo Comitê em Ética em Pesquisa com Seres Humanos (CEP) da FFLCH/USP. Se você tiver qualquer dúvida a respeito da conduta ética desse estudo entre em contato com um dos comitês de ética em pesquisa.

Escritório de Ética em Pesquisa e Integridade da Universidade de Ottawa (Canada)

e-mail: ethics@uottawa.ca

Telefone: 613-562-5387

550 Cumberland Street, Room 154

Ottawa, ON, Canada

K1N 6N5

Comitê em Ética em Pesquisa com Seres Humanos (CEP) da FFLCH/USP

e-mail: ceph-fflch@usp.br

Telefone: (11) 2648-6560

Rua do Lago, 717, Sala 110, Prédio da Administração da FFLCH

São Paulo, SP, Brasil

05508-080

É recomendado que você baixe uma cópia deste formulário de consentimento no website:

Aceite

Eu (nome do participante) aceito participar desse estudo.

(English Translation)

The credibility assessment process of political information on WhatsApp in Brazil

Doctoral Thesis

██████████

Department of Communication, Faculty of Arts, University of Ottawa

██████████

Under the supervision of:

██████████

Department of Communication, Faculty of Arts, University of Ottawa

██████████

Invitation to Participate: You are invited to participate in the above mentioned research study conducted by ██████████, in the context of a Doctoral thesis, under the supervision of

██████████

Purpose of the Study: The purpose of the study is to *understand how people make their assessment of the credibility of political information they receive on WhatsApp.*

Participation: Your participation will consist of participating in one 45-minutes audio recorded interview. During the *interview*, you will be asked *about the political information you receive on WhatsApp, the context surrounding them, and how you evaluate that information.*

Risks: Your participation in this study will entail that you volunteer some personal information and discuss sensitive topics such as my personal political opinion and this may cause you to feel discomfort. Every effort will be made to minimize these risks. You have the right to

withdraw at any moment, and ask for your data to be deleted, and you have the option to refuse to answer any questions. Your identity will also be protected by the researcher's confidentiality and privacy measures.

Your participation in this study will also entail that you volunteer specific information to set up the interview such as best location and physical characteristics. Every effort will be made to minimize these risks and no record will be kept of this information.

Benefits: Your participation in this study will contribute to the knowledge of how people evaluate the credibility of political information, especially in an important media such as WhatsApp. You will also have the opportunity to reflect on my media and political habits and engagement.

Confidentiality and Privacy: All the information that you share will remain strictly confidential. The contents will be used only for the current research project, including peer-reviewed academic articles and a monograph. Your identity will be protected with unique identifying numbers and pseudonyms. Only the researchers will have access to any identifying information.

This study is being administered through Qualtrics, a company based in the USA that is subject to the Patriot Act. The U.S. Patriot Act gives the Federal Bureau of Investigation (FBI) the authority to access any database without a court order, and the Act prohibits the owner of a database from telling others about any access by the FBI. Therefore, personal information that you provide in this survey may legally be accessed by the FBI without your knowledge or the knowledge of the researchers.

Qualtrics Security features: Qualtrics is GDPR (General Data Protection Regulation) and CCPA (California Consumer Privacy Act) compliant. Participants can request their data to be erased or rectified at any moment.

In order to minimize the risk of security breaches and to help ensure my confidentiality, it is recommended that you use standard safety measures, such as signing out of your account, closing your browser, and locking your device when you are no longer using it/when you have completed the study.

Conservation of Data: The data collected (survey datasets, diary datasets, and consent forms) will be kept in a secure manner kept under password and key protected files. *All data collected will be destroyed on January 31th, 2029.*

Compensation: *You will be reimbursed for any travel costs to take me to and from the interview location when presenting the receipt or description of costs (for public transportation).* If you choose to withdraw from the study, you will still receive this compensation.

Voluntary Participation: You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If you choose to withdraw, you can ask for all data gathered until the time of withdrawal to be removed from the dataset and not used in the study. Otherwise, the data will be used, counting with the same protections of confidentiality and privacy.

If you have any questions about the study, you may contact the researcher or their supervisor.

This study was evaluated by the Office of Research Ethics and Integrity of the University of Ottawa and by the Committee of Ethics in Research with Human Beings of the Faculty of

Philosophy, Languages and Social Sciences (FFLCH) of the University of São Paulo (USP). If you have any questions about the ethical conduct of this study you can get in contact with one of these ethics committees.

Office of Research Ethics and Integrity of the University of Ottawa (Canada)

e-mail: ethics@uottawa.ca

Telephone: (+1)613-562-5387

550 Cumberland Street, Room 154

Ottawa, ON, Canada

K1N 6N5

Committee of Ethics in Research with Human Beings of the Faculty of Philosophy,
Languages and Social Sciences (FFLCH) of the University of São Paulo (USP)

e-mail: ceph-fflch@usp.br

Telephone: (11) 2648-6560

Rua do Lago, 717, Sala 110, Prédio da Administração da FFLCH

São Paulo, SP, Brasil

05508-080

It is recommended that you *download a copy* of this consent form for your records from (website).

Acceptance

I, (name of participant), accept to participate in this study.

Appendix 6

Interview Schedule

(Original Portuguese Version)

1. Me fale sobre como você se informa sobre política.
2. Quais são as diferentes mídias que você utiliza para se manter informado?
 - a. Você pode me dizer como utiliza cada uma delas? Existem diferenças na forma como você as utiliza?
 - b. Por que você as utiliza de maneira diferente? O que as diferencia? O que as caracteriza?
3. O que você faz quando encontra ou recebe uma informação política?
 - a. Você tem o hábito de verificar a informação?
 - b. Em que isso depende?
 - c. O que torna uma informação confiável para você?
4. Você já recebeu ou encontrou fake news? Como descobriu que aquela informação estava errada ou enganosa?
5. Agora, gostaria de focar no WhatsApp. Com que frequência você utiliza o WhatsApp? Para que você o utiliza? Com quem você mais conversa no WhatsApp?
6. Qual é o papel do WhatsApp no seu processo de se manter informado? (Se isso não foi mencionado antes) Ou o WhatsApp é importante no seu processo de se manter informado?

- a. Você costuma receber notícias de jornais via WhatsApp? Como elas são enviadas?
7. O que você faz quando recebe informações políticas no WhatsApp?
- a. Você tem alguma reação imediata?
 - b. Em que isso depende?
 - c. Você pode me dar um exemplo?
 - d. Você costuma compartilhar informações políticas no WhatsApp?
8. Ainda pensando quando você recebe informações políticas no WhatsApp, como você decide se uma informação é confiável ou não?
- a. Você costuma fazer alguma coisa? (Verifica os fatos, busca mais informações, compartilha com alguém?)
 - b. Você se lembra de alguma situação em que achou que uma informação era confiável e depois mudou de opinião? O que mudou? O que aconteceu?
9. Você faz algo diferente quando recebe informações políticas no WhatsApp em comparação com quando as recebe de outras mídias? Ou deixa de fazer algo?
10. Você acha que as informações políticas que recebe no WhatsApp são semelhantes ou diferentes das informações políticas que recebe em outras mídias? Por quê?
- b. Você acha que o WhatsApp tem informações mais confiáveis do que outras mídias? Ou menos confiáveis? Por quais motivos?
 - c. Você disse que informações confiáveis são ____? Algumas dessas características são mais importantes no WhatsApp?

d. Você já recebeu notícias ou outras mídias escritos ou criados por acadêmicos ou outros pesquisadores?

11. Se não foi abordado antes: o que você acha que são as principais diferenças entre o WhatsApp e outras mídias?

Você recebeu alguma informação política recentemente no WhatsApp? Você pode escolher uma para conversarmos a respeito?

a. Você pode descrever um pouco essa informação? O que você lembra sobre ela?

b. Como você se sentiu ao receber essa informação? Teve alguma reação imediata?

c. Você conhece a fonte dessa informação?

d. Você conhece a pessoa que compartilhou isso com você? Essa pessoa já compartilhou outras informações políticas com você?

e. Você considerou essa informação confiável ou não confiável?

12. Informação confiável

a. Como você decidiu que essa informação era confiável? Foi imediato? Ou você procurou verificar? (Se o participante não se lembrar, use as respostas da interação na pesquisa)

b. Você ficou satisfeito com o processo que utilizou para avaliar a informação? Se não, o que você acha que faltou?

13. Informação não confiável

a. Como você detectou que essa informação era pouco confiável? Foi imediato? Como você descobriu?

b. Você fez alguma verificação de fatos a respeito? Pode falar mais sobre o que fez?

c. Você ficou satisfeito com o processo que utilizou para avaliar a informação? Por quê, por favor, explique.

14. Com base em nossa conversa, quais você acha que são os principais desafios que as pessoas enfrentam ao avaliar a credibilidade de informações políticas no WhatsApp?

15. Na sua opinião, o que poderia ser feito para enfrentar esses desafios? Existem soluções potenciais que vêm à mente?

17. Após participar da primeira parte da pesquisa, você passou a notar mais sobre seu processo de avaliação de informações políticas no WhatsApp? O que você notou? Pode dar um exemplo?

a. Você mudou algo em seu comportamento? Pode dar um exemplo?

A. Conclusão e agradecimentos

18. Há algo que você gostaria de me dizer?

(English Translation)

1. Tell me about how you get informed about politics.
2. What are the different media that you use to keep informed?
 - a. Can you tell me how you use each one of them? Are there any differences in the way you use each one?
 - b. Why do you use each of them differently? What differentiates them? What characterizes them?
3. What do you do when you encounter or receive a piece of political information?
 - a. Do you have the habit of fact checking it?
 - b. What does it depend on?
4. Have you ever received or encountered fake news? How did you find out that that information was wrong or misleading?
5. I would like to focus on WhatsApp. How often do you use WhatsApp? What do you use it for? Who do you most talk to on WhatsApp?
6. What part WhatsApp plays in your process to be informed? (If this wasn't talked about before) or Is WhatsApp important in your process to keep informed?
7. What do you do when you receive political information on WhatsApp?
 - a. Do you have any immediate reaction?
 - b. What does it depend on?
 - c. Can you give me an example?

- d. Do you often share political information forward?
8. Still thinking about when you get political information on WhatsApp, how do you decide if a piece of information is credible or not?
 - a. Is there anything that you usually do? (Do you fact-check it, go look for more information, share it with someone?)
 - b. Do you remember any situation in which you thought that one information was credible and later changed your opinion about it? What changed? What happened?
 9. Do you do anything different when you get political information on WhatsApp than when you get it from other media? Or do you stop doing something?
 10. Do you think the political information you get on WhatsApp is similar or different than the political information you get in other media? How so?
 - a. Do you think WhatsApp has more credible information than other media? Or less? For what reasons?
 - b. What makes an information credible for you? Are some of these characteristics more important on WhatsApp?
 11. If not addressed before: What do you think are the main differences between WhatsApp and other media?

Have you received any political information recently on WhatsApp? Can you choose one for us to talk about? (If the participant does not have a recent piece of political information to discuss, use one of the diaries).

- a. Can you describe this information a little bit? What do you remember about it?

- b. How did you feel about receiving this information? Did you have any immediate reaction?
- c. Do you know the source of this information?
- d. Do you know the person that shared this with you? Has this person shared any other political information with you?
- e. Did you find this information credible or not credible?

12. Credible information

- a. How did you decide that this information was credible? Was it right away? Or did you look to check it? (If participant does not remember use the answers from interaction question in diary).
- b. Were you satisfied with the process you did to evaluate the information? If not, what do you think was missing?

13. Non-credible information

- a. How did you detect that this information was unreliable? Was it right away? How did you find out?
- b. Did you do any fact checking about it? Can you talk more about what you did?
- c. Were you satisfied with the process you did to evaluate the information? Why, please explain.

- 14. Based on our conversation, what do you think are the main challenges that people face when evaluating the credibility of political information on WhatsApp?

15. In your opinion, what could be done to address these challenges? Are there any potential solutions that come to mind?
16. Let's talk specifically about news. Do you often receive political news on WhatsApp?
How are they sent? What format?
17. After you participated in the diary study, did you start noticing more about your process to evaluate political information on WhatsApp? What did you notice? Can you give me an example?
 - a. Did you change anything in your behaviour? Can you give me an example?
18. Is there anything that you would like to tell me?