Powerful Communication Style on Twitter: Effects on Credibility and Civic Participation

Estilo comunicativo súbito en Twitter: efectos sobre la credibilidad y la participación cívica

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ABSTRACT
The aim of the present study was to examine the effect of two linguistic styles used in Twitter messages on engaging users in civic participation activities, understood as participation by citizens in community improvement actions. Using a socio-linguistic approach, an experimental intervention was carried out in which 324 university students evaluated the messages posted by the head of an environmental NGO on Twitter. The gender of the NGO head (male vs. female) and the linguistic style used for the posts were manipulated in terms of a «powerful» (e.g., assertive, direct) or «powerless» style (e.g., indirect, ambiguous). The gender of the evaluators was also manipulated in order to analyze potential differences among the overall impressions and evaluations between men and women. The results showed that «male» and «female» versions of the NGO head were perceived as more credible when they used a powerful as opposed to a powerless linguistic style. This effect was observed irrespective of the evaluator’s gender. Moreover, the test for indirect effects suggested that credibility mediated the relationship between a powerful style and the likelihood of engaging users to participate in the NGO’s agenda. The results are discussed in terms of the relevance of this type of communication for promoting civic participation in social media.

RESUMEN
El presente trabajo tuvo como propósito examinar el efecto de dos estilos lingüísticos en mensajes de Twitter sobre su capacidad de atraer e involucrar a usuarios en actividades de participación cívica, entendida esta como la participación de ciudadanos en acciones de mejora comunitaria. A partir de una aproximación sociolingüística, se realizó un estudio experimental en el que 324 estudiantes universitarios evaluaron los mensajes publicados por el líder de una ONG medioambiental en su página de Twitter. Se manipuló el género del líder de la ONG (hombre o mujer) y el estilo lingüístico empleado en la redacción de los mensajes en términos de un estilo «súbito» (ejemplo: asertivo, directo) o un estilo «dócil» (ejemplo: indirecto, ambiguo). El género de los evaluadores también fue manipulado con el fin de analizar potenciales diferencias entre hombres y mujeres. Los resultados mostraron que cuando los líderes «hombre» y «mujer» emplearon un estilo lingüístico súbito en sus mensajes fueron percibidos como más creíbles sin importar el género de los evaluadores. Además, el análisis de efectos indirectos registró que la credibilidad percibida hacia el líder medió la relación entre el estilo súbito y la probabilidad de que los seguidores se involucraran en las iniciativas de la ONG. Los resultados son discutidos en términos de la relevancia de este tipo de comunicación para la participación cívica en las redes sociales.

KEYWORDS | PALABRAS CLAVE
Social media, civic participation, linguistic style, gender, credibility, Twitter, NGO, environmental protection.
Redes sociales, participación cívica, estilo lingüístico, género, credibilidad, Twitter, ONG, protección del medio ambiente.
1. Introduction

In view of their popularity and relevance, social network platforms such as Facebook or Twitter have become representative of what are known as «social media», which are used not only for creating and maintaining interpersonal relationships but also for staying on top of public issues. Twitter’s speed and reach have made it a communication tool used widely by public figures to attract the attention of users, creating emotional bonds with their followers and, ultimately, mobilizing people to undertake a concrete action (for example: attending a film premiere, making donations for charitable causes, voting on election day). However, knowledge of which type of communication is more effective for engaging users to perform those actions is scant.

Theoretical approaches which adopt the impression formation perspective on Internet suggest that people form impressions about their communication partners from attributions associated with their communication styles (Walther, 1992). Accordingly, it is possible to form a more or less accurate impression of the communication partner in terms of personality, education background or socioeconomic status from the linguistic choices he or she makes, as well as if the user is perceived to be credible or not (Walther, 1996). For its part, credibility is a basic condition for persuading users of marketing web pages or information sources in social media (Shi, Messaris, & Capella, 1996). Fot its part, credibility is a basic condition for persuading users of marketing web pages or information sources in social media, which are used not only for creating and maintaining interpersonal relationships but also for social mobilization (Bacallao, 2014; Rodríguez-Polo, 2013) or political participation (Baek, 2015; Kruikemeier, 2014). Alternatively, other scholars have focused on the participation of citizens in humanitarian or charitable activities (Boulianne, 2009; Gil-de-Zúñiga, Jung, & Valenzuela, 2012). However, little is known about what determines the persuasive impact of the messages exchanged on Twitter and on other social network platforms. If users are likely to form impressions from variations in their interlocutors’ communication style, then it would be relevant to investigate which styles have greater influence than others in terms of persuasion. The relatively small number of studies in this area (for example: Lee & Oh, 2012) have examined Twitter’s persuasive potential in terms of traditional political participation (voting intention, for instance) but its effects on other types of participation or in times other than election periods have not been studied.

The purpose of the present work is to analyze the manner in which users form impressions about their counterparts from their communication style on Twitter and the potential of these impressions to work at a persuasive level. Specifically, the study has two objectives: firstly, to verify the effect of message style on the user’s impressions from a socio-linguistic approach. In other words, if the source is perceived as more or less credible based on the communication style used in the messages. Secondly, to propose an explanatory mechanism for how messages work in persuading users, that is to say, the way in which messages may persuade users to engage in civic participation activities.

1.1. Linguistic style and source credibility

Scholars of the socio-linguistic approach to communication have demonstrated that people tend to use different communication styles that rely on the social context in which they communicate. These stylistic differences relate, for instance, to education background (Xiao & Tao, 2007), ethnic and cultural group (Sudweeks & al., 1990), or the interlocutors’ gender (Mulac, Bradac, & Gibbons, 2001). Moreover, linguistic style has a direct impact on the impressions and overall evaluations of the communication partner in terms of social attributions of power (Bradac & Street, 1989; Newcombe & Aronoff, 1979). These impressions are quickly and automatically generated from social categories used for interpreting a group position on the social scale (Burgoon & Miller, 1987; Gallois & Callan, 1991). Erickson, Lind, Johnson, and O’Barr (1970) noted that people who used a linguistic style labeled «powerful» (direct, succinct, accurate) were assessed by participants as being more credible and attractive than people who used a «powerless» language (indirect, tentative, ambiguous).

Lakoff (1973) suggested that these linguistic differences can be observed in masculine and feminine speech. She reported that women usually use powerless language in the form of rhetorical particularities such as hedges (for example: It is «kind of» boring), intensifiers (for example: It was «really» shocking), tag questions (example: The weather is nice, «isn’t it?»), and certain other linguistic features more than men (Mulac, Bradac, & Gibbons, 2001). Conversely, other scholars posit that these differences are not as clear as has been argued (Adrianson, 2001; Mizokami, 2001).

The persuasive capability of powerful language presents some inconsistencies in the results obtained from empirical testing (Sparks, Areni, & Cox, 1998) although the association between this style and increased perceptions of credibility is recurrent (Burrell & Koper, 1998). Credibility, at the same time, is crucial for the persuasive capability of messages. The el-
boration likelihood model (Petty & Cacioppo, 1986) suggests that persuasion occurs in the receiver through a central route and a peripheral route in a continuum of cognitive effort (elaboration). While the central route requires more concentration and self-implication, the peripheral route utilizes cues that do not demand much cognitive effort. Among the cues used most are source credibility and attraction: if the source is credible or attractive, it will be simpler to accept the argument included in the message (Booth & Welbourne, 2002; Shi, Messaris & Capella, 2014). From this model a powerful style on Twitter can be expected to produce the impression that the source is credible and this perception will boost a favorable attitude towards the content of the message and the intention to perform a requested action (Ajzen & Fishbein, 1980).

1.2. Linguistic style and impression formation in online communication

Impression formation in computer-mediated communication has been a pivotal point in explaining communicative dynamics in electronic media. Based on the «cues-filtered-out» model (Short, Williams, & Christie, 1976), the social information processing theory posits that users build their impressions holistically from brief information excerpts in the textual codes exchanged, in such a way that they can infer or deduce their interlocutors’ communication goals (Walther, 1992). It is also possible to deduce personality traits or even the gender of the communication partner from his/her communication style (Thomson & Murachver, 2001). Adkins and Brashers (1995), for example, confirmed that using a powerful style in virtual communications produces impressions similar to face-to-face conversations. These researchers found that virtual groups in which powerful language was used were rated higher in scores of credibility, attraction, and persuasion than groups in which confederates used powerless language. Meanwhile, Zhou, & al. (2004) interpreted the use of powerless language as a strategy to increase social distance among users withholding certain information from others.

Conversely, impression formation in social media is an as yet emerging line of research. Mou, Miller and Fu (2015) suggested that increases in the speaker’s credibility and attraction depend on the extent to which the topics published in messages and the expected type of communication for the social category to which the source belongs (for example: the expected speech for a Tenure) are consistent. On the other hand, Westerman, Spence and Van-der-Heide (2013) proposed that the credibility of the source is associated with the immediacy of the messages published: in other words, a constant updating of messages would produce greater perceptions of credibility.

In a similar perspective, Hughes and colleagues (2014) manipulated a series of messages published by fake users who either attacked or supported the credibility and expertise of a fictional character leading a civil association. The objective was to test the impact of the messages on the manner in which the character was assessed. The results suggested that the association leader was perceived as more credible and attractive when the messages supporting her outnumbered the messages attacking her. Moreover, the likelihood of users engaging in the association’s activities depended on the credibility attributed to the leader.

1.3. Civic participation on Twitter

Civic participation is a key indicator of the quality of democracy (Verba, Schlozman, & Brady, 1995) and is also a major asset in exercising full citizenship and strengthening the social fabric (Norris, 2000; Putnam,
Participation on the Internet, with special representation in the social media, has increased markedly in a relatively short period of time. In this sense, there is evidence of the positive relationship between civic participation and social media use in both online and offline settings (García-Galera, del-Hoyo-Hurtado, & Fernández-Muñoz, 2014; Kim, Hsu, & Gil-de-Zúñiga, 2013). Several studies have analyzed the communication between politicians and citizens under the civic participation umbrella (Bekafigo &

McBride, 2013; Harlow & Guo, 2014; Houston & al., 2013; Park 2013). Even in other researchers have opted to separate political action from social action. Accordingly, Valenzuela, Park and Kee (2009) distinguish between political participation (the behavior aimed at influencing government actions) and civic participation (individual or collective behavior aimed at solving community problems). Whereas the former includes traditional activities such as voting, supporting political campaigns or using stickers with ostensible political messages (Verba, Schlozman, & Brady, 1995), the latter consists of volunteer work, donations to non-governmental organizations and/or supporting environmental causes.

There is evidence confirming this link between political messages and political engagement by users. For instance, Lee and Oh (2012) observed that the personalized messages of a political candidate on Twitter (including self-references or anecdotal content), in contrast to depersonalized messages (without any self-reference, such as in newspaper articles), increased the positive evaluations of the candidate as well as intentions to vote for him. Kruikemeier (2014) found similar results from heightened levels of interactivity between candidates and their followers. On the contrary, there is a research gap in the civic participation of Twitter users. In their correlational study, Gil-de-Zúñiga & al. (2012) confirmed that consuming news on social media is related to increases in civic participation (volunteer work in non-political associations, raising money for charity, attending neighbors’ meetings, and others), whereas Valenzuela & al. (2009) found that the intensity of Facebook use positively predicts civic participation in offline settings. None of these studies has examined which type of communication would be more effective in stimulating these activities and engaging users to participate actively.

With the aim of verifying the effect of two communication styles on persuading Twitter users to engage in civic participation activities, an experimental intervention was carried out in which the gender identity of an NGO leader (male or female) and his/her linguistic style (powerful or powerless language) were manipulated. According to the literature reviewed, if each linguistic style is associated to masculine or feminine speech respectively, then men are likely to be expected to use a powerful style more than women. In this regard, there is more evidence confirming the relationship between powerful language, credibility, and attraction. Therefore, the first hypothesis predicts:

- H1. A powerful communication style in Twitter messages will affect user impressions regarding the source, in such a way that the person will be perceived as being more a) credible and b) attractive than the source using a powerless style, with impressions about the male leader using powerful style being the most intense.

In accordance with the likelihood elaboration model, which takes source credibility as a peripheral cue for persuasion effects, it can be expected that, if the source is perceived as credible, users might be more prone to persuasion. As there is a limit of 140 characters for messages on Twitter, the information contained in each message is relatively short and may work more as a peripheral cue rather than as an extensive document that fosters deep reflection. If the persuasive effect is expected in terms of civic participation, the next hypothesis postulates that:

The model of indirect effects introduced in the study has confirmed the persuasive effect of this type of communication on Twitter. The mechanism by which users of this platform may engage in civic participation activities, in this case promoted by an NGO, relies on the extent to which its head is perceived as credible when sharing information or making appeals to the community.
• H2. The engagement of users in the NGO’s activities will depend on the extent to which the leader is perceived as credible. In other words, the more credible he/she is perceived, the higher the users’ intentions of participating in the NGO’s activities.

2. Material and methods

2.1. Participants

334 undergraduate students (69.8% female) enrolled in one of the biggest universities in northeastern Mexico participated in the study. Their mean age was 18.33 years (SD=1.66). All students received extra course credits for their participation.

2.2. Design

An experiment was carried out based on a 2 (linguistic style: powerful/powerless) x 2 (leader’s gender identity: male/female) x 2 (evaluator’s gender: male/female) between-subjects design. All participants were randomly assigned to one of the experimental conditions.

2.3. Procedure

Upon arrival, participants were instructed to access a fictional NGO webpage that presented several proposals for reducing pollution levels in the city (for example: signing a referendum, attending a protest rally, taking action on recycling). Participants were then asked to visit the NGO profile on Twitter, which ostensibly showed a photo of its leader as a profile picture, and to read each of the messages published on the page. The software used in the study randomly presented the picture of a man or a woman as the NGO leader, along with a group of messages published with either a powerful or a powerless style. Afterwards, the participants completed an online questionnaire and were allowed to leave.

The published messages (12 in total) asked followers to join the organization and its activities, and shared information regarding the city’s pollution levels. The messages with a powerless style included hedges, intensifiers and tag questions (example: The subway service is «kind of» inefficient; There are «very» few lines; It’s time to increase penalties for companies that pollute most «isn’t it?»). In contrast, the messages with a powerful style were more succinct and included direct requests to followers (example: There are few lines; Enter the site and support our initiative; It’s time to increase penalties for companies that pollute most).

In order to check if the messages differed significantly in linguistic style, both groups of messages were subjected to a pre-test study (11 men, 14 women). Participants assessed the messages as awful-nice, informative-uninformative, personal-impersonal, and masculine-feminine (7-point scale). Significant differences were observed between both styles (t[24]=-6.53, p<.001): the messages with a powerless style were evaluated as more feminine (M=5.08, SD=1.52) than the messages with a powerful style (M=2.12, SD=1.13). Similar to Lakoff (1973), both styles were associated with male and female speech. No differences were observed in any other measurement.

2.4. Measurements

Credibility was measured with the McCroskey and Teven (1999) scale. Respondents indicated (7 points) the extent to which they perceived the NGO leader as intelligent-unintelligent, informed-uninformed or expert-inexpert (α=.82).

Five items adapted from the Cialdini and DeNicholas (1989) attraction scale were used to evaluate the social attractiveness of the source. Respondents evaluated (1=Not at all, 7=Very much) the extent to which the NGO’s leader was perceived as friendly, pleasant or likeable (α=.88).

Civic participation was measured in terms of the participants’ likelihood of engaging in the NGO’s activities. Using an adapted version of the Hughes & al. (2014) scale, the participants responded to six items such as: «I would sign a referendum supporting the NGO’s initiative», «I would attend a meeting to learn more about the initiative», and «I would post comments on online news articles or other electronic boards regarding my favorable opinion about the NGO’s initiative» (1=Not at all likely, 7=Extremely likely) (α=.92).

3. Analysis and results

As female participants outnumbered male participants, a preliminary test was performed to check for potential intra-group differences in gender distribution. It was expected that the random assignment of participants to the experimental conditions would keep the ratio of men to women constant, thus reducing asymmetry (Igartua, 2006). No significant differences were observed in terms of gender distribution or in any other variable (X2[3]=1.71, p=.634). The randomization process was effective therefore.

In order to test the hypotheses, simple one-way ANOVA tests were used to verify the effect of linguistic style x leader gender x evaluator gender on the dependent variables, namely, credibility and attraction. A significant effect of the interaction between linguistic
style and leader gender on credibility was observed ($F_{\text{style} \times \text{gender}}=2.99, p=.03, \eta^2=0.02$). The male leader using a powerful style was perceived as more credible than the male leader using a powerless language, as was the female leader using powerful style compared to the female leader with a powerless style. However, the attraction variable was not affected by any of the independent variables ($F=n.s.$). Hence, the first hypothesis was partially confirmed. Neither were any direct or interaction effects observed due to evaluator gender, that is, male and female participants evaluated the source in a similar fashion (see scores in table 1).

A post-hoc analysis (Bonferroni correction) on the credibility variable showed that the differences found were significant only between the male leader with powerful style and the female leader with a powerless style ($p=.02$). Based on the means presented in Table 1, credibility scores are higher when the leader was presented as male rather than female, with the male-powerful style condition producing the highest score and the female-powerless style the lowest.

The second hypothesis posited that participation depended on the credibility perceived from the linguistic style used. A test of simple mediation effects was performed using Hayes (2013) Process Macro (model 4). The model tested the indirect effect of the male leader’s powerful style on the likelihood of action mediated by credibility. Data analysis using 5,000 bootstrapped bias-corrected resamples revealed a significant indirect effect of the male-powerful style on participants’ likelihood of engaging in the NGO’s activities via credibility (table 2). In other words, a powerful style used by a male leader may persuade users to engage in community activities as long as he is perceived as credible. Hypothesis 2 was therefore confirmed. This likelihood was not affected by any other combination of leader identity and communication style.

### 4. Discussion and conclusions

The present study analyzed the way in which users form impressions from communication styles on Twitter, and how these impressions work in terms of persuasion. The results indicate that the impressions formed in this intervention were strongly associated with the leader’s gender. On the one hand, the impressions produced by the powerful style in this setting were partially consistent with findings in other virtual-communication studies in terms of source credibility and persuasion (Adkins & Brashers, 1995), but differed from predictions on the attraction perceived towards the source (Eriksen & al., 1978). In fact, as in Mou & al. (2015), source credibility apparently depended on the extent to which the source and the expected speech for his/her category were congruent: the NGO leader was perceived to be more credible when presented as a man rather than a woman. Moreover, the male character using a powerful style was perceived as the most credible character. Future interventions might conceal information or cues to gender (example: photo, name) in order to verify the effect of communication style separated from the source’s gender.

On the other hand, a probable reason why the male character with powerful style was not perceived as attractive by participants is that the attraction measure was understood more as physical attraction rather than social attraction. Male and female characters were depicted as people in their mid-40s whereas raters were in their early 20s, and so they would not expect the leader of an NGO to be physically or socially attractive. Because reducing pollution levels in the city is a priority issue, participants probably expected someone to explain facts in a convincing manner rather than a charismatic or pleasant leader. Although Twitter is often labeled as an “interpersonal” medium (Lee, 2013), the content of the messages used in this study comprised health and environmental issues concerning the general population and such an emphasis may have blurred any difference in the evaluations made on the characters’ attractiveness. Furthermore, although non-significant, the scores showed a tendency to assess the female leader with powerless language as the most attractive, which suggests that the respondents probably expected more flexible—or less rigid—language in a woman than in a man.

The previous explanation supports the idea that

| Table 1. Mean scores of the dependent variables in each experimental condition |
|-------------------------------------------------|--------|--------|
|                                                  | Credibility | Attraction |
| Leader gender x linguistic style on Twitter      | M  | SD  | M  | SD  |
| Male-powerful language                           | 5.38* | 1.21 | 3.95 | 1.29 |
| Male-powerless language                          | 5.17* | 1.23 | 4.00 | 1.37 |
| Female-powerful language                         | 4.99* | 1.28 | 3.29 | 1.31 |
| Female-powerless language                        | 4.85* | 1.14 | 4.20 | 1.35 |

Note: Means with similar symbols represent significant differences between both conditions. Bold numbers represent significant differences observed in the post-hoc test.
cultural context influences the expectations of men and women's roles on social media (Walther & al., 2008).

Irrespective of the evaluator's gender, men are expected to be more credible whereas women are expected to be more «pleasant». This argument should be corroborated, however, in future studies by comparing the effect of the communication style used by men and women in platforms unrelated to environmental issues. Other topics to be tested in terms of participation might be humanitarian work, security, disadvantaged minorities, and others.

The model of indirect effects introduced in the study has confirmed the persuasive effect of this type of communication on Twitter. The mechanism by which users of this platform may engage in civic participation activities, in this case promoted by an NGO, relies on the extent to which the head is perceived as credible when sharing information or making appeals to the community. However, more information is needed to verify whether credibility increased as a result of the combination of the male character and powerful style or by the match between the NGO’s topic, the size of textual information, and the style used for dissemination. It is possible that participants felt attracted to engage in the organization’s activities because of its agenda rather than its leader or his/her communication style. As mentioned above, future work in this area might compare different topics relating to civic participation or even verify if it is necessary to disclose the gender of an organization’s leaders for credibility effects.

It is important to emphasize that this was an experimental study: the sample of participants recruited did not aim to be representative of the general population. The findings of the study are not generalizable. In fact, the study was intended to test the relationships among variables. Subsequent work, such as meta-analyses will confirm or refute these findings.

By way of summary, the results of the study lead to the conclusion that gender-linked linguistic styles on a social platform such as Twitter increased credibility impressions regarding the source in a similar fashion to previous offline research. The effect of communication styles as used in this work should, however, be weighted in terms of the specific features of the website: Twitter allows only 140 characters for messages compared to the relatively longer documents analyzed in other studies. Future research might include longer messages than those allowed by Twitter and examine how communication styles work on other social media such as Facebook, Instagram, and YouTube. Such a comparison will lead researchers to understand which types of self-presentation and communication features help people to be perceived as more credible on social media, particularly in a context of mobilizing users to participate in issues of concern to the general public.

### References


