

Impacts of Authority and Unanimity on Social Conformity in Online Chats about Climate Change

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ABSTRACT

Background *The purpose of this study was to examine whether two variables of persuasive communication, authority and unanimity, induce social conformity when people communicate over digital social media without knowing each other.*

Analysis *Data collection was based on a mixed methodology. In all, 26 subjects were tested (N = 26).*

Conclusions and implications *The research showed that the tendency of conforming to groups is maintained in online communications. However, the level of such conformity is not as high as the level that prevails in face-to-face communication.*

Keywords *Psychology; Ethics; Public relations; New media; Intergroup*

RÉSUMÉ

Contexte *L'objectif de cette recherche était de déterminer si deux variables de la communication persuasive, soit l'autorité et l'unanimité, provoquent le conformisme social lorsque des personnes étrangères les unes aux autres sont en interaction sur des médias numériques.*

Analyse *La méthodologie était basée sur une approche mixte. L'échantillon était composé de 26 participants (N = 26).*

Conclusions et implications *Nos résultats démontrent que la tendance au conformisme au groupe est maintenue dans les communications en ligne. Cependant, ce degré de conformisme est plus faible que celui observé dans la communication en face à face.*

Mots clés *Psychologie; Éthique; Relations publiques; Nouveaux médias; Intergroupe*

Introduction

Digital social media have quickly become indispensable to human beings in their daily lives. According to Kemp (2017), there were 2.789 billion active social media users worldwide in 2017. Compared to January 2016, these survey results demonstrate a significant growth of 21 percent. In addition, Kemp (2017), author of the report *Digital in*

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2017, highlights the fact that 2.5 billion people were active mobile social media users in 2017 implying an increase of 30 percent in 2016. Other indicators establish the massive infiltration of such digital social tools, especially in North America. For instance, Facebook has 1.9 billion active users per month. In 2017, social media penetration stood at 66 percent for the United States and 14 percent for Africa. According to Sherpa (2018), in Canada, 64 percent of the population has a social media account.

Moreover, Dahlberg (2001) confirms the pre-eminence of the new media in which interaction, supported by technology, generates tens of thousands of virtual communities that flourish in cyberspace through email, games, and chats, among other means. Due to their capacity to democratize communication, digital social media mobilize individuals in their personal, social, and professional arenas. One domain in which this technological revolution is particularly evident is public relations. The new media have altered public relations practice, making audiences proliferate and modifying the nature of interpersonal relations (Macnamara, 2010; Tilley, 2011). In 2015, a study reported that 81 percent of public relations professionals feel they can no longer do their job without social media (Torossian, 2015). Powered by digital social media, public relations can provide their clientele with innumerable perspectives and new ways to communicate with audiences. In this context, Breakenridge (2008) argues that digital social media have certainly generated the biggest shift in the history of public relations. In a work co-authored with Brian Solis, the latter asserts that the new media have reinvented public relations: "Web 2.0 has changed everything. And the social web is empowering a new class of authoritative voices that we cannot ignore ... Monologue has changed into dialogue, bringing a new era of public relations" (Solis & Breakenridge, 2009).

With reference to Ivy Lee and Edward Bernays, the field's twentieth-century founding fathers, and obsolete traditional communication methods, Solis and Breakenridge (2009) now evoke a redefinition of this discipline in the form of "public relations 2.0." Grunig's (2009) work also supports this argument. He mentions the interactive two-way communication and relationship building capabilities of Web 2.0 that enhance the achievement of ethical and practical ideals of Dialogic and excellence theory in public relations. This means that having effective relationship with strategic publics helps the organization to achieve its goals.

Thus, digital social media are catalyzing this profession. More than a mere medium, the technological tools have real influence on public relations as they drive communication strategies for a wide array of audiences, including publics and counter-publics. Today each of these segments wields substantial power within the information society. The shift in the communications paradigm therefore allows public relations officers to influence the new "influencers" (Solis & Breakenridge, 2009). According to research by Solis and Breakenridge (2009), social networks like Facebook are positioning themselves as more modern forms of the press release, as are similar platforms such as Twitter, Instagram, and LinkedIn. For his part, Brown (2009) asserts that the "googlization" of the information world is redefining the new avenues of influence.

The unprecedented technical extension of communication confers power characterized by influence, manipulation of opinion, and "the engineering of consent" in Bernays' sense (1955). In his essay originally published in 1947, the author wrote that

“communication is the key to engineering consent for social action.” In his opinion, “when the public is convinced of the soundness of an idea, it will proceed to action. People translate an idea into action suggested by the idea itself, whether it is ideological, political, or social.” However, Bernays (1955) admits that “we must recognize the significance of modern communications ... but as a potent force for social good or possible evil” (Bernays, 1955, p. 113). These arguments arouse further questions related to the debate. To what extent can public relation officers influence their publics? How can they engineer consent among their audiences? Are the latter inevitably prone to social conformity? These questions forms the basis of our reflection. And we believe that the social media context provides a new angle from which to study the issue of influence and conformity in public communications.

Theoretical framework

From an empirical point of view, social psychology has shown that the relationship between human beings and objective facts is often skewed by the impact of group membership (Asch, 1951; Bond & Smith, 1996). For instance, the American social psychologist Solomon Elliott Asch (1951), who studied “conformity,” demonstrated that a substantial number of the participants of his study adjusted their perception of reality to that of the other respondents in the group, despite their erroneous point of view. By “conformity,” we mean a “change in belief or behavior in order to fit in with a group” (McLeod, 2007, para. 1).

Asch’s 1951 experiment included 123 adult respondents. Their task was to visually compare three lines of different lengths to a reference line that was identical to one of these lines. The experimenter then asked each participant, placed in a predetermined order, to state out loud which of the three lines was standard to the reference line. In fact, all respondents except the last participant and real subject of the study, whose behaviour was to be observed, were collaborators of the experimenter. This enabled them to form a unanimous majority and present an erroneous opinion. Only in such a context could the researcher measure the impact of peers on the subject’s answers. At this stage of the research, a lure had to be used. Therefore, the real participant gave his answer last. To measure accurately the power of conformity, Asch made sure that the answer to the line test was obvious. In 36.8 percent of cases, the subjects of Asch’s experiment conformed, reiterating therefore the error stated by the group members (Asch, 1952, 1955). According to the social psychologist, this behaviour was explained by two types of conformity, *informational* and *normative* in nature.

Informational conformity occurs when one person accepts information transmitted by somebody else as true (Deutsch & Gerard, 1955; Turner, 1991). In this classification of conformity, the cognitive conflict generated by the disagreement with others makes individuals question the validity of their own judgment. In such a context, group unanimity upon a point of view is sufficient to be interpreted as a sign of veracity. As for normative conformity, it is produced by the need of individuals to be accepted and judged positively by a group. This form of conformity prompts people to avoid behaviours or points of view that would conflict with those of other group members.

This idea of conformity implies a marginalization or even negation of the truth, because the individual gives in to the group’s influence. However, in Asch’s experiment

and in many other similar studies triggered since the 1950s (e.g., Nicholson, Cole, & Rocklin, 1985; Perrin & Spencer, 1980), the phenomenon of conformity prevailed only in situations where participants occupied the same physical space, thus evolving in a face-to-face communication context.

Given that human and public communications are increasingly taking place through computer-mediated platforms, our research aimed to find out to what extent some variables of influence and persuasive communication impacted on online social conformity. Even if Web 2.0–3.0 is drawing more and more research attention in recent years, very few studies so far have focused on how influence and conformity are transformed in virtual worlds. Among these researches, Rosander and Eriksson (2012) examined the role of task difficulty and gender differences on conformity. In the same vein, Cinnirella and Green (2007) asked whether “cyber-conformity” varied cross-culturally. Additionally, Lee and Nass (2002) looked into the notion of normative conformity in human-computer interaction. And finally, in a pioneer study directly inspired by Asch’s experiment, Smilowitz, Compton, and Flint (1988) measured the effects of computer-mediated communication on the individual’s judgment. Despite the fact that the outcomes were not conclusive in the online context compared to face-to-face communication, the authors confirmed that an effect was indeed generated online.

These findings made us interested to investigate the tendency to conform to others in such technological contexts. Our literature review showed that the question of how online social conformity is induced by certain variables of persuasion, namely unanimity and authority, remained largely unanswered. Yet these variables were at the core of many famous studies in social psychology. For instance, Berenda (1950) reproduced Asch’s experiment among children under 12 years old. When the subject was placed in a situation of authority personified by the teacher, a conformity effect was validated.

In Canada, Gorfein (1961) specifically focused on the authority variable to analyze conformity. In general terms, his research found that participants making “faulty judgments,” and thus conforming, were influenced by the group. But on the specific front, a “definite relationship” could not be established between conformity and authoritarianism. Finally, Milgram (1963) carried out a famous study on obedience to authority. The objective was to investigate the level of obedience shown by respondents when asked to administer electric shocks to another person by a figure of authority. The psychologist deduced that most people were likely to submit to the authority, even at the expense of harming another human being. These studies are still central to communication strategies in public relations. For example, Crandall, Cosley, Huttenlocher, Kleinberg, and Siddharth (2008) conducted a study on a similar question but more specifically on the interplay between similarity and social ties. As for the unanimity factor, some scientific evidence can establish its influence on conformity. Indeed, some experiments reveal that someone who punctures a group’s unanimity deflates its social power (Allen & Levine, 1969; Asch, 1955; Morris, Miller and Spangenberg, 2006; Naveed, 2013). In other findings, Naveed (2013) points out that subjects are more likely to voice their opinion if it tallies with that of others. The influence capacity of a majority over a minority is hence perceptible.

Research question

The research question this study addresses is as follows: Does the influence of unanimity and authority noted in group dynamics persist when strangers communicate with each other solely over digital social networks? In light of the very few studies on influence and conformity in virtual worlds mentioned above, our hypothesis was that the pressure to conform would prevail despite the physical absence of the other group members. Nonetheless, this degree of conformity would be weaker than found in Asch's experiment.

Methodology

To answer our research question, we chose a theoretical framework based on the fundamentals of social psychology and persuasive communication. The data collection strategy was based upon a mixed approach (quantitative and qualitative) partially inspired by Asch's experiment. Quantitatively, we sought to measure, using a Likert scale, the level of subjects' conformity when interacting with members of a group in an online forum discussion. To perform the measurement, our team initially assembled a group of about 12 "collaborators" recruited from our university's student population. The 26 subjects were recruited by means of ads in public places and in newspapers.

Among other things, to participate in the study, subjects had to be over 18 and be able to write in French on a keyboard. We then sent each of our collaborators a "character" (environmental expert, salesperson, etc.) and the script for the forum discussion. Each discussion had three phases, indicated here as T_1 , T_2 , and T_3 . The discussion, which was carried out in French, focused on a graph produced by NASA (see Figure 1) that showed the change in average temperatures on the Earth's surface since the end of the nineteenth century. In choosing the theme of climate change, our team had two objectives: first, to have an interesting and current theme that would make the lure used to recruit subjects credible;¹ and second, to base the discussion on objective data and create a relatively simple task that would make it possible to more specifically measure the group's influence on the subject's perception of reality (Baron, Vandello, & Brunzman, 1996). As for the script prepared by the team for the collaborators, it primarily relied on authority and unanimity, two variables in persuasive communication found in the Cialdini model (1987). Similarly to Asch's experiment, we also wanted to examine whether non-unanimity could influence subjects' behaviour.

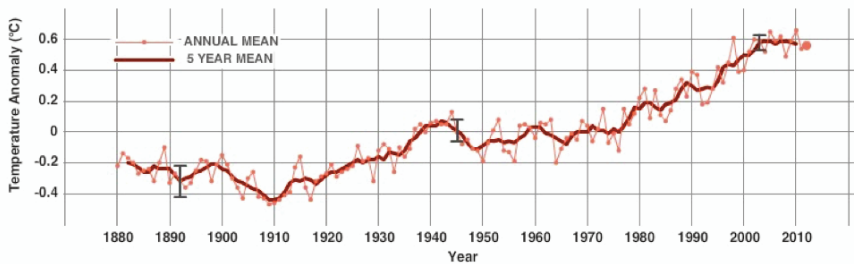
In the 26 experiments, the subject was asked to use their personal computer (or other electronic device with internet access) to connect to an online forum site at a given time. At that time, the collaborators and team members were already connected and gathered in the same room so that they could talk to each other during the online discussion session with the real participant. The subject was, of course, not aware of this stratagem, which allowed members of the research team to make necessary adjustments with the collaborators during the discussion. For example, one or more collaborators sometimes had to adjust their character's language level to make it more credible, or collaborators' replies to the subject had to be coordinated to better mark the use of a persuasion variable such as unanimity or authority.

Once in the forum, each participant was assigned an alphanumeric code (participant 1, participant 2, etc.). As the subjects always came online last, they had the highest

code number (e.g., participant 7 in a group of seven participants). Given that respondents were asked to speak in this ascending order, the subject usually spoke in the last position. The exception was during an open discussion, which, as with Asch's experiment, made it possible to test the strength of some persuasion variables. As participants joined the online forum, they were asked to introduce themselves, stating their professional occupation. The forum moderator, who was a member of the research team, then explained to the group the rules governing the discussion, including the order to follow in speaking. After this information, the moderator disclosed the theme of the discussion (climate change) and displayed the graph (Figure 1) upon which the discussion would be based. Initially (in T_1), the moderator asked participants to give their *spontaneous* opinion on the following question, in the order established: *In light of the data presented in the graph, do you think we are currently experiencing a period of climate warming?*

Figure 1: Global land-ocean temperature index

Data source: [NASA's Goddard Institute for Space Studies \(GISS\)](#) This trend [agrees with other global temperature records](#) provided by the U.S. [National Climatic Data Center](#), the Japanese Meteorological Agency and the Met Office Hadley Centre / [Climatic Research Unit](#) in the U.K. Credit: [NASA/GISS](#)



The script called for *all* of the collaborators to deny the existence of a climatic change demonstrated by the graph. At the end of the first round of discussion, two research team members were tasked with independently measuring the subject's answers (two measurements were taken to increase the measurement's objectivity). Here, the degrees of conformity were assessed independently by each researcher through consensus and observations during the discussion. Both of them used a 1 to 5 graduated Likert scale to assess the conformity level of the subject's answers compared to those of other group members (1 meant "no" conformity, 2 meant "weak" conformity, 3 meant "moderate" conformity, 4 meant "high" conformity, and 5 meant "total" conformity).

At the second phase of discussion (thus in T_2), all participants were asked to freely discuss their arguments in support of the spontaneous opinion expressed in T_1 . In this stage, the script asked collaborators to "isolate" the subject by making it clear to them that they were the only one asserting that climate change was really occurring. We need to mention here that in T_1 , most subjects expressed little or no conformity. Because at this point respondents had not interacted much with the other participants, it may seem that their spontaneous opinion was more influenced by their personal preferences and the graph's objective data than by the group's impact. The script's purpose was to bring the effect of the authority variable on the subject by amplifying the opinions of the group's "expert" (the collaborator playing the role of environmental

expert), followed by the effect of the unanimity variable (all collaborators arguing against the subject).

At the end of this interaction, another measurement of the subject's conformity was taken using the Likert scale. The T_2 measurement showed whether the group's influence and persuasion were inducing a *change* in the subject's conformity. Following an open discussion, the online discussion wrapped up. During this phase (T_3), the script called for one collaborator to change their mind and dissociate from the group's unanimous opinion. In other words, this collaborator had to assert that climate change was real. The research team's objective here was to investigate whether non-unanimity had an impact on the subject's behaviour. The forum discussions averaged a total of approximately 45 minutes per subject.

Once the online discussion concluded, a member of the research team was tasked with contacting the real participant by phone and carrying out a semi-structured interview to establish more clearly the subject's perception of the group's influence and the persuasive communication variables. Before starting the interview, the research team member revealed to the subject the real objective of the research as well as the lure. After that, with the subject's permission, the interview was recorded, and the team then created a word-for-word transcript from it. Subsequently, the transcript facilitated qualitative analysis of the interviews and was translated in English.

Results

Quantitative analysis

Overall, the research team tested a sample of 26 subjects, of which 16 were women and 10 were men. Their ages ranged from 20 to 64 years. Education also varied widely, ranging from high school diplomas to graduate studies. The tests yielded three results for each subject, namely in T_1 , T_2 , and T_3 . To analyze the variation in the dependent variable (conformity) at three different times with a single group of subjects, we carried out two paired *t* tests. The first one aimed at measuring the variance between T_1 and T_2 , and the second one analyzed the variance between T_2 and T_3 . Table 1 shows the set of results obtained by consensus among the team members handling the measurements.

In the data set, with the *t* test comparing T_1 and T_2 , there was a notable difference in scores at T_1 ($M = 1.65$; $SD = 1.02$) and at T_2 ($M = 2.69$; $SD = 1.23$); $t(25) = -6.85$, $p \leq 0.001$. These results suggest that the spontaneous opinion expressed by the subjects in T_1

Table 1: Subjects' conformity results ranging from 1 (none) to 5 (total)

Participant	T_1	T_2	T_3	Participant	T_1	T_2	T_3
1	2	3	2	14	2	3	3
2	1	3	3	15	2	3	3
3	1	2	1	16	1	1	1
4	1	2	1	17	1	2	2
5	1	1	1	18	2	4	4
6	1	3	3	19	1	1	1
7	2	4	3	20	2	4	2
8	1	1	1	21	1	1	1
9	3	4	3	22	2	3	3
10	2	3	2	23	1	3	2
11	5	5	5	24	4	5	3
12	1	1	1	25	1	3	3
13	2	3	3	26	1	2	2

varied significantly when they were confronted with persuasion techniques (unanimity and authority) during their discussions (in T_2) with the other members of the on-line forum (our collaborators).

In the second t test there was also a statistically significant difference between the scores at T_2 ($M = 2.69$; $SD = 1.23$) and T_3 ($M = 2.27$; $SD = 1.08$); $t(25) = 3.35$, $p \leq 0.01$. However, the effect of non-unanimity on subjects' opinions was smaller than the effect of unanimity and authority (variance between T_2 and T_3). As we did not formulate any hypotheses on the effect on conformity of either gender or education level, we did not consider these variables in our analysis. However, the brief analysis performed after the fact does not, at the outset, indicate that these variables could have a meaningful causal effect.

Qualitative analysis

The quantitative results make it possible to establish a clear correlation between certain variables of persuasion and social conformity in the framework of a discussion over digital social networks. Nonetheless, the quantitative approach does not provide a complete understanding of the scope of the phenomenon or of the perception of the group pressure by the subjects. Here, the semi-directed interviews carried out with subjects following the experiment helped to better pinpoint conformity "from the inside." Four themes were addressed in the interviews: 1) the general perception of the experiment; 2) the description of the group's influence; 3) reactions to that influence; and 4) factors that exerted more pressure on the subjects. This article focuses primarily on points 3 and 4, as the latter are highly complementary to the quantitative analysis.

About half of the participants mentioned that they experienced substantial influence during the experiment, while the other half estimated that this influence was moderate although not inexistent. Very few subjects asserted that they had not experienced any influence. Overall, subjects described the group's influence as ranging from "weak" to "extremely strong." One participant who had been heavily influenced by the group used a strong image to describe her experience: "Someone started talking and everybody talks. It's better to agree than not to go in the same direction." She added that the (dominant) point of view became a "group condition" in which the "lambs rallied around a shepherd who is then the leading person." For other respondents, the group pressure was even more intense. "I let myself get carried along with the crowd, affected by the influence. ..." stated a participant who changed his position to take on the group's point of view. For another participant, the influence was very heavy insofar as he felt the others wanted him to change his mind. In one specific case, the subject opted for total conformity in his stance. "I allied with the others," he affirmed during the interview.

In other situations, the group's influence challenged individuals' information and knowledge. "The participants made a lot of arguments about CO_2 . Yes, that influenced my opinion. After that, I was questioning myself. The influence was about 50 percent effective," said one participant. The arguments put forward by an expert source also generated doubt, as another participant pointed out: "I was questioning my point of view. The group influenced my opinion a little because it looked like official information." These statements are consistent with those of another subject who experienced

heavy influence: “When you’re not with the majority, it can have an effect. There were things that I didn’t know that influenced my perception.” For an additional respondent, the influence resulted in pushing his own thinking on climate change further.

Faced with the pressure from the group, some subjects decided to be a little more discreet. This allowed them to avoid direct confrontation with the rest of the group: “I talked less. I learned and tried to see what they were saying,” one participant confessed. Lastly, a few participants stated that the group pressure had little impact on them. These subjects, who categorically asserted that they did not perceive any influence, maintained their stances throughout the experiment. “At one point, some people were talking about plots. I said to myself that they going off on a somewhat extreme tangent. I stuck to what I thought,” one respondent said. Like her, another participant stated that she maintained her position even though she thought everyone was against her. A third respondent confided that he had a different idea from the group, which he maintained: “I did not understand how the others could fail to see that climate change was happening. I maintained my idea.” A fourth subject dealt with the group pressure similarly, putting his own viewpoint forward: “I’ve got my opinions. I believe in them. I didn’t feel any pressure.”

Besides group influence, the interviews also addressed the persuasion variables that had the most influence on subjects’ behaviour. Our analysis shows that it is *authority* that had the biggest impact on subjects’ behaviour. The vast majority of the subjects affirmed that they were more sensitive to this variable. Note that in our experiment, authority was represented by a collaborator whose role was to argue as the expert source on environmental science. “The person was an expert. At least, that’s what his title said. We assumed he knew more than the others,” one participant remarked. For another respondent, this variable triggered some doubt: “That person comes from somewhere, she is educated. It made me question myself.” According to another participant, the expert provided precise and informed data: “I was more inclined to believe him. He could have had a bigger influence on me. His profession, the text he wrote seemed more credible. I could have allied myself with him more than anyone else. He seemed to know what he was talking about.”

It is interesting to notice that the group of subjects who affirmed being resistant to influence emphasized that authority was the most effective variable with regards to conformity. “When someone has 10 years of experience in the field, we expect them to know more. It’s normal to feel inferior in terms of knowledge. In terms of professional experience, we feel like we’re in an inferior position,” one participant explained. For another participant, the years of experience associated with the expert’s role was a critical factor: “I told myself she knew what she was talking about. On the other hand, she did not convince me of her position.” Subsequently, he would rely on the expert most. The technical language the expert used in the forum also influenced this participant: “It surprised me. I said, ‘Good God, that person is really in the field.’ I was dealing with an expert. It was a fairly technical discussion.”

Additionally, the *unanimity* variable had substantial influence on many subjects. “Everybody was saying the same thing. I said to myself, ‘Okay, I’m going to go with the majority.’ It was to be part of the group. That’s what it was.” Some participants said

they felt the need to “speak like everyone else is.” As one said, “People tend to want to impose a certain opinion. It was unanimity to always be included in the group.” Another respondent stated that it felt good to see people who shared his opinion: “We felt the same intensity.” This perspective was shared by another participant: “Well, the fact that everybody was against me, it had to do with unanimity. The pressure was quite strong.”

Lastly, although its effect was less significant, the *non-unanimity* variable was evoked as “reassuring,” as reported by one respondent: “It reassured me. I told myself that they saw what I was seeing.” Another subject affirmed that a collaborator’s change in opinion was “pleasant.” “I told myself that maybe I deployed quite convincing arguments,” she noted.

Discussion

Interpretation of the results

In light of the results presented above, social conformity induced by peer pressure, a significant fact demonstrated in previous experiments, also prevails in online communication. Nevertheless, the study’s results show that the conformity is not as strong as that felt by the subjects in Asch’s experiment who occupied the same physical space. In that case, over one-third of the subjects allowed themselves to be driven by total conformity and rejected an obvious answer. In our analysis of conformity between T_1 and T_2 , we found that the variation was statistically frequent though weak or moderate in the vast majority of cases in our sample. The behavioural change was sometimes subtle and yet still perceptible and measurable. For example, a number of subjects who were isolated from the rest of the group in T_2 opted to nuance the opinion they had expressed in T_1 to avoid direct confrontation with the rest of the group. In such situations, behaviour did vary, but it was considered to be a moderate variation (3 on the Likert scale).

Another noteworthy aspect of the results relates to the fact that the subjects had no special connection or bond with the other participants. Indeed, all respondents were anonymous (only identified with an alphanumeric code) and the online discussion only lasted for 45 minutes. As a result, it was not really possible for the subjects to create a strong group identity or shared values (as occurs in online gaming, for example). Some studies have shown that this creation of a strong group identity could foster conformity in online communications (Rogers & Lea, 2005; Spears & Lea, 1992). It is therefore interesting to observe a considerable change in conformity in the absence of such proximity and identification factors.

In addition to the scientific validation of social conformity online, the qualitative data shed more light on the origins of such attitudes. It even points out connections with other well-documented phenomena in social psychology. For instance, among the most heavily influenced subjects, the *need to belong* emerged as an explanation for the pressure toward conformity. This could be illustrated by a form of rallying behind a dominant position in order to avoid confrontation with others. This situation is not very different from the notion of “group set” developed by Thibaut and Strickland (1956). Moreover, the data reveals some similarity to the notions of *informational con-*

formity and *normative conformity* (Deutsch & Gerard, 1955; Insko, Drenan, Solomon, Smith, & Wade, 1983). Normatively, a number of subjects felt the need to align their view of climate change with those of other forum participants. They conformed to the group while knowing that these opinions were clearly and obviously wrong. In terms of information, the group was sometimes seen as a benchmark based on which personal knowledge was validated (Kiesler & Kiesler, 1969). The influence the subjects perceived in the authority variable, expressed in the script by the “environmental science expert,” can be linked to what Kelman (1958) defined as *internalization*. In this situation, the subject sees the expert as a “credible, expert and sincere” source.

With regard to authority (Berenda, 1950; Gorfain, 1961; Milgram, 1963) and unanimity (Allen & Levine, 1969; Asch, 1955; Morris, Miller and Spangenberg, 2006; Naveed, 2013), our research shows that these variables convey a certain degree of influence on conformity. This observation aligns with the perceptions of the above authors depicted in their empirical work. Furthermore, the support of a partner allying the subject in the last phase of the online discussion was conclusive, just as in Asch’s experiment (1951, 1955). Finally, as reflected by the Deutsch and Gerard (1955) theory, both informational and normative conformity emerged on our online discussion platform. Turning now to the public relations perspective, our results draw attention to the risk of persuasion and manipulation of opinions.

The extent to which such pressure can make individuals change their mind is quite equivocal. In addition, the submission to conformity in a context where anonymity prevailed all along the online discussions triggers further interest. As mentioned by Solis and Breakenridge (2009), new media are positioning themselves as press releases in the hands of public relations (PR) practitioners. The use of such media instruments by PR professionals and their power to influence opinions through persuasive or pervasive messages should trigger more attention from the scientific community. As emphasized by Breton (2011), human beings are constantly exposed to manipulative attempts to change their opinion in daily life. At its highest degree, conformity and social influence can create an agentic state, as warned by Breton (2011) as well as Milgram (1974). Some irrationality could be noticed in the attitudes of our respondents, since the expert source of information (who was in reality a collaborator) was perceived and assimilated as “logical.” As per our scientific interpretation of our data, there is a need to consider such factors of conformity to have more effective, ethical, and non-manipulative transmission of information to their audiences, whether they are publics or counter-publics.

Study limitations

Despite its probing results, the study described in this article had two limitations of note. One involves the discussion script and the nature of the task that experiment participants were asked to do. The other involves the diversity of the study sample. In terms of the script, clearly, the decision to have the online forum discussion focus on climate change is not as “neutral” as Asch’s decision to have his subjects compare the lengths of four lines, even though our team took care to base the discussion on data that was as objective as possible (i.e., the NASA graph). In general, people have their own opinions about climate change. They are therefore not “blank slates” when they

have to discuss the matter publicly. However, we do not believe that this restricts the scope of our results. In fact, in Montréal, where the study was carried out, the vast majority of citizens think that the Earth is heating up as a result of human activity (de Marcellis-Warin, Peignier, Hoang Bui, Angos, Gabriel, & Guerra, 2015). Consequently, if subjects' opinions shifted due to peer influence, even though their opinion was apparently the opposite, this reinforces the idea that the variables of persuasion have an effect on online conformity.

Among other things, in their 2012 study, Rosander and Eriksson stressed that the complexity of the task can also strengthen conformity. In our study, assessing the degree to which task complexity played a role is not straightforward. The NASA graph is probably harder to interpret than the lines in Asch's experiment, but the fact remains that the average trend (tangential) for higher temperatures is quite easy to read.

As for the second limitation, it relates to our sample's representativeness. In our opinion, the latter is satisfactory with respect to the number of male and female participants, as well as in terms of the subjects' ages and education levels. But to some extent, it may seem difficult to have deeper interpretation on the gender, age and education factors, given that our team did not ask participants to fill out a complete socio-demographic questionnaire. In fact, the sample's weakness lies more in the lack of ethnic diversity of the study participants. The team had difficulty in recruiting participants such as recent immigrants, despite the fact that they constitute a sizable proportion of Montréal's population. This situation may be partially due to the language barrier, as the study required a certain mastery of French. It may also be due to the fact that immigrants are often more hesitant than other citizens to publicly share their opinions on issues in the news (Brown & Gaertner, 2002). That being said, our research was not designed to establish the impact of ethnicity but to analyze online conformity. In our opinion, this objective has been fulfilled.

Conclusion

The notions of influence, persuasion, and social conformity have always been at the core of public communication. Because all forces produce effects, persuasion and influence can be helpful or harmful, depending on who or what is exerting or controlling them. The use of persuasion and influence must therefore always be allied with a sense of ethics. This concern motivated the study and is especially salient in the public relations world, where ethics has long been driving the development of good professional practices (Grunig, 2014).

In front of their screens, internet users often have the comfortable sense that they can communicate with others worry free. However, from cyberbullying and online predators to behavioural marketing, examples of online manipulation are legion. Of course, these phenomena have the biggest impact on our society's most vulnerable, such as young people and children, but they are not the only ones affected. Our study, with its capable, discerning adult participants, bears this out. Placed in group dynamics that are unknowingly intercut with powerful relations of authority and belonging, a single individual's will and awareness can fairly easily be sidetracked, taking the person toward behaviours that are contrary to the truth and contradictory to their own best interests. Researchers in the twentieth century, especially its second half, gave social

psychology and other disciplines a much better understanding of these issues in the context of face-to-face communication and interaction, today, scholars urgently need to continue with these efforts, when people's dealings with others have in large part shifted to digital worlds.

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Note

1. The recruitment ads indicated that the study focused on how effective online forums were as a method of public consultation. This approach was approved by the university's Research Ethics Board.

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