

Perception and Decision Making: A Multi-Technique Analysis of Campaign Posters in the 2019 Bogotá Mayoral Election

LAURA NADAL¹

Universidad EAN, Colombia

IRIA BELLO VIRUEGA

Universitat de les Illes Balears, Spain

NEYLA PARDO

Universidad Nacional de Colombia, Colombia

Campaign posters are semiotic-discursive resources that form multimodal units of meaning. In political communication, voters' decision making is affected not only by the verbal message, but also by nonverbal indications or physical features (visual attributes) of the candidates. This study analyzed the relationship between visual communication and citizens' voting decisions in a political campaign in Colombia. An analysis of campaign posters in the 2019 Bogotá mayoral elections was designed using a multi-technique methodology. First, two eye-tracking experiments were conducted to assess attention patterns. Then, a series of surveys measured emotions in slogans. It was concluded that, in the Colombian scene, visual elements related to candidates' physical attributes have a small influence over voters' decision making. This finding contradicts the results of studies carried out in different contexts, namely in Europe and the United States.

Keywords: decision making, voting, multimodal and multimedia critical discourse analysis, semiotics, politics, ideology, eye-tracking

Visual communication affects voters' opinions on candidates. Digital communication channels (Web, Twitter, and Instagram, among others) imply greater exposure to images and short texts as main stimuli

Laura Nadal: lnadalsa@universidadean.edu.co

Iria Bello Viruega: iria.bello@uib.eu

Neyla Pardo: ngpardo@unal.edu.co

Date submitted: 2020-07-20

¹ The data presented here were taken in the Eye-tracking Laboratory at the IECO Institute for Communication Studies, National University of Colombia (UNAL). We are grateful for the technical support provided by Wilson Arturo Rodríguez and Leandro Sánchez (UNAL) and the preparation of graphic materials carried out by Juan Camilo Chávez (EAN University). We would also like to thank Professor Marta Velasco (Department of Political Science, UNAL) for her assistance.

Copyright © 2021 (Laura Nadal, Iria Bello Viruega, and Neyla Pardo). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <http://ijoc.org>.

for the transmission of ideas. Professionals in the field of political advertising have increasingly focused on images and digital slogans used as campaign material (Esser, 2008; Grabe & Bucy, 2009; Schill, 2012), given that voters' judgments are greatly conditioned by digital visual cues (Antonakis & Dalgas, 2009; Todorov, Mandisodza, Goren, & Hall, 2005). In this sense, mass communication in the political field, including that emanating from state institutions, is moving progressively closer to the replacement of the concept of citizen with that of consumer. In the posters used in this study, language, fixed image, and color are analyzed as one single unit of significance. This type of discourse distributes ideas and beliefs and proposes different ways of exercising power. The multimodal and multimedia features of the type of political communication enable its circulation on different media, particularly on the Internet.

The aim of this study was to analyze Colombian citizens' perception of political propaganda distributed in the media, using, specifically for this purpose, campaign posters published on social networks. In the U.S. and European contexts, empirical research is helping to show that visual attributes such as facial expressions have an influence on the image of candidates that voters form in their minds, which may determine their political preference. Despite the existing theoretical and descriptive research on the use and effect of advertising material in political campaigns in Colombia (Brito, 2018), no experimental studies based on experimental techniques have been conducted.

A selection of three media polls featuring voting intention in the 2019 Bogotá mayoral election was analyzed with two techniques. Initially, an eye-tracking analysis was used to determine which visual factors (i.e., smiling face and direct look toward the voter versus a serious expression without a direct look) attracted more attention. Second, a series of offline measurement techniques were applied to ascertain the emotions and preferences triggered by images and slogans contained in campaign posters to learn (a) whether, in line with previous research (Kilgo, Boutler, & Coleman, 2018; Peng, 2018), smiling candidates looking directly at the audience were perceived by Colombian voters more positively than those with serious faces looking away, who are normally negatively perceived (Moriarty & Popovich, 1991; Waldman & Devitt, 1998); (b) whether voters were likely to associate a smiling expression and a direct look with reliability (Knutson, 1996; Oosterhof & Todorov, 2008; Sutherland et al., 2013); and (c) whether any of the slogans in the posters generated a preference and whether a correlation between preferred image and message could be established.

Visual Attributes and the Inference of Character Traits

The so-called face effect in political communication is defined as a cognitive process in which the voter spontaneously and unconsciously transfers the physical features of candidates seen in campaign portraits to components of their personality (competence, attractiveness, and confidence, among others; Marcinkowski, Lünich, & Starke, 2018). Compared with any other part of the body, faces receive the greatest attention in television and digital contexts (Beattie, Webster, & Ross, 2010; Holland, Wolf, Looser, & Cuddy, 2017; Kret, Stekelenburg, Roelofs, & de Gelder, 2013). More than 90% of the time, the audience concentrates on faces even when the attention competes with dynamic movements of arms and hands.

Candidates' facial expressions may also condition the audience. More specifically, the mouth and the eyes are usually taken as reference to infer mood or emotions (Buchan, Paré, & Munhall, 2007). The viewers of television debates draw conclusions about candidates' emotions from the nonverbal behavior

they perceive in facial expressions and the movement and position of limbs (Sülflow & Maurer, 2019). The emotions detected are then generalized to justify political judgments. For example, a smiling expression would suggest happiness (Masters, Sullivan, Lanzetta, McHugo, & Englis, 1986). As Sülflow and Maurer (2019) noted, "Compared to other facial expressions, smiling seems to be especially influential in the political context as well" (p. 208; Knutson, 1996; Stewart & Dowe, 2013; Stewart, Waller, & Schubert, 2009). Not only does the smile translate into a feeling of happiness, but the candidate is judged as sympathetic, reliable, and persuasive (Reis et al., 1990). The expression of happiness is often associated with trustworthiness and attractiveness (Knutson, 1996; Oosterhof & Todorov, 2008; Sutherland et al., 2013): "Looking happy or confident is usually coded as a positive representation of politicians, while frowning or looking sad, worried, or tired is seen as negative" (Peng, 2018, p. 922).

On the contrary, showing sadness, anger, disgust, or fear is usually connected to negative emotions (Peng, 2018); however, anger or disgust may also give an impression of dominance and powerfulness. Faces conveying anger or discontent will receive more attention compared with those reflecting positive or neutral emotions (Hillmann, Kempkensteffen, & Lincoln, 2015; Kret et al., 2013; Sullivan, Ruffman, & Hutton, 2007), because viewers need to understand the reason for, or the trigger of, that negative emotion.

Another visual attribute with a positive impact is the candidate's direct look at the camera. Conversely, closed eyes seem to have the opposite effect (Moriarty & Popovich, 1991; Verser & Wicks, 2006). As Kilgo and colleagues (2018) indicated, "Eye contact may be the primary nonverbal cue that promotes positive character assessments of politicians" (p. 4222). In fact, the combination of a direct look and a negative expression leads viewers to assume that the candidate has good leadership abilities (Kilgo et al., 2018). In this sense, candidates may use this information to shape the audience's opinions by staring directly at the camera and guiding spectators' gaze toward their eyes (Prinsen et al., 2017; Vö, Smith, Mital, & Henderson, 2012).

However, character traits inferred by nonverbal cues are not always universals that apply to all cultures or to all audiences (Marcinkowski, Lünich, & Starke, 2018), and different political tendencies may show a preference for different facial features. Hence, in the United States, conservative voters tend to prefer serious faces conveying dominance, whereas liberal voters perceive these negatively and favor smiling expressions (Laustsen & Bang Petersen, 2015). This is probably due to the different way that both political tendencies perceive and face conflicts: "Research on followership psychology suggests that winning faces could vary by ideology because (a) ideology influences perceptions of the problems confronting society and (b) humans are predisposed to follow different leaders in the face of different problems" (Laustsen & Bang Petersen, 2015, p. 205).

Political arguments are usually not enough, and voters look for nonverbal cues to meet their expectations for their prospective leaders (Laustsen & Bang Petersen, 2015). The smile and the direct look are highly valued visual attributes from which positive character traits such as leadership, trustworthiness, and competence are normally inferred. Considering the differences that may take place in different cultural settings, the experiments proposed in this study aim at verifying the effect of these factors in a group of Colombian voters.

In light of these previous investigations, our eye-tracking experiments assessed the effect of portraying a candidate smiling and looking directly at the audience, as compared with other portrayals of serious candidates who do not look directly at the viewer. Both experiments were based on the following hypotheses:

- H1: The attention (dwell time) received by the candidate's face will differ depending on his or her facial expression (smiling versus serious).*
- H2: In visual stimuli containing the image of a political candidate, visual attention (dwell time) will be concentrated on the candidate's face.*
- H3: Candidates with a smiling facial expression and a direct look toward the voter will generate more positive emotions compared with those candidates with a serious or neutral expression, that is, a nonsmiling face and a nondirect gaze toward the voter.*
- H4: Candidates with a smiling facial expression and a direct look toward the voter will be associated with the values of credibility and trust, compared with those candidates with a serious or neutral expression, that is, a nonsmiling face and a nondirect gaze toward the voter.*

Slogans and Perception of the Message

Slogans convey a very specific idea and help shape the image of the candidate they accompany (Amălăncei, Cîrțiță-Buzoianu, & Buzoianu, 2017). The slogan leads the voter to create an association with a "brand" or political tendency, and so it becomes an inseparable part of the candidate's image. Short, catchy, familiar slogans are usually very successful (Jaubert, 1985; Lee, 2014). They should attract attention and encourage action and commitment through a message justified for rational or emotional reasons (Garric, 1996; Reboul, 1975). Its purpose is to create a positive image and to tell a story in a few words (Kohli, Leuthesser, & Suri, 2007). Some slogans are ephemeral, but others end up settling in the collective memory.² In these cases, their formal features (alliterations, puns, catchy and striking formulas) are often intertwined with intertextual effects with historical resonance. In any case, slogans seek coherence between the text and the candidate's central message (Hodges, 2014).

Empirical studies on the cognitive effect of slogans on voters and the properties that influence their voting decision are scarce. However, there is evidence that the political background of the voter has an influence on the voter's perception of the message (Vaes et al., 2011). This influence relies on a process known as *infrahumanization* (Paladino, Castelli, Leyens, & Giovanazzi, 2004), according to which judgments directed at the members of an out-group are always conditioned by feelings of discrimination and prejudices.

² A paradigmatic example of the historical recidivism of a slogan is Obama's "Yes, we can," which was borrowed from César Chávez and Dolores Huerta's 1970 United Farm Workers campaign's "Sí, se puede." The slogan has been used multiple times since then, and it continues to echo today, as shown by Kamala Harris in "Hey Joe, instead of saying, 'no we can't,' let's say, 'yes, we can,'" as well as by many other political and social personalities. Harris's retake combines the poetic function of language with a clear content bias, which makes it a memorable phrase (Hodges, 2014).

Conversely, judgments made toward an in-group are deemed positive. Experimental techniques allowing evaluations of human emotions, the conformity paradigm, the perceived similarity, or the approach-avoidance procedure provide evidence that the same situation, fact, condition, or opinion is evaluated more positively when the informant knows that it comes from a member of the in-group. On the other hand, if the message is associated with the out-group, it will be deprived of a positive assessment and could be rejected (Dasgupta, Desteno, Williams, & Hunsinger, 2009; Rohmann, Niedenthal, Brauer, Castano, & Leyens, 2009; Vaes, Paladino, & Maganotti, 2003). Infrahumanization also applies to the assessment of slogans contained in campaign posters (Vaes et al., 2011). When confronted with slogans conveying a human emotion, voters show greater compliance and a more positive perception when the slogan comes from a candidate who shares their political tendency (in-group). If the same emotion is found in the slogan of a candidate with a different political tendency (out-group), conformity levels decrease. To avoid the bias of infrahumanization, the offline experiment here presented was designed in a way in which participants could assess slogans regardless of the candidate's political orientation.

Data Analysis

This study combines two techniques to measure the effect of the visual features and concepts on voters' judgements. The eye-tracker offers real-time data obtained during the realization of the cognitive processes that accompany a certain activity, which implies that activity under analysis can be carried out naturally, without interruption or conscious modification (Richardson, Dale, & Spivey, 2007). However, this technique should be complemented with offline techniques, such as judgment tasks based on free recall, yes/no answers, and multiple-choice questionnaires that provide evidence of reaction times (Mertins, 2016). Whereas online methods allow for separation of processing stages, offline methods are useful to see the results of the comprehension process. In the next section, the results of two eye-tracking experiments that assessed the effect of campaign posters are presented. This is followed by an account of the data obtained in the survey that measure voters' judgement of campaign slogans.

Eye-Tracking Study

The eye-tracking experiments³ in this study aimed at analyzing visual attention and emotion measurement patterns received by the digital posters presented in the political campaigns of the candidates running for mayor of Bogotá in the 2019 elections. Two eye-tracking experiments were designed and combined with a series of questions that assessed voters' impression of the candidates' facial expressions.

³ Eye-tracking is an online technique that provides indirect evidence of brain activity. Eye movements constitute a type of reaction to cognitive processing that is taking place in some area of the brain (Eckstein, Guerra-Carrilloa, Miller Singleya, & Bunge, 2017). Eye movements are guided by information from (a) reality or virtual input, which is subjected to internal processes influenced by the expectations and objectives of the observer, and (b) assumptions from memory or internal input (Richardson et al., 2007). This connection between perception and cognition makes this technique especially valid for the study of cognitive processes carried out in disciplines such as psychology, linguistics, marketing, and discourse studies, as well as material analysis designed for political campaigns (Poole & Ball, 2005).

Experiment 1: Smiling Versus Serious Expressions

This experiment analyzed voters' impression of facial expressions and assessed the expression of affability in politicians. Several official pictures of candidates running for mayor of different cities in Spanish-speaking countries were used.⁴

Procedure

This was a self-sequenced experiment: First, participants saw an image of a political candidate and then were asked to answer two questions separately. In the first, participants had to choose an emoticon (smiling, neutral, or angry) to describe the sensation triggered by the picture. After they provided an answer, they were asked to rank the candidate's credibility on a scale from 1 (*lack of credibility*) to 5 (*absolute credibility*).

Participants

Samples were taken from 40 volunteers (20 for each experimental condition). They were all students enrolled at the National University of Colombia (Universidad Nacional de Colombia).

Independent Variables

To analyze the candidates' facial expression, two conditions were set: Condition A portrayed affability by means of a smiling expression and direct gaze toward the viewer, and Condition B emphasized distance through a serious expression and a blank stare. Two counterbalanced experimental lists were created following Holmquist and colleagues' (2011) recommendations, and participants could only see each candidate with one facial expression (either smiling or serious). In addition, critical stimuli were interspersed with fillers and distractors.

⁴ In the set of images were three female and five male candidates from different mayoral elections that took place in 2018. They all belonged to national parties, and their ideologies ranged from far right (1) and conservative (3) to social democratic (2) and socialist (2).



Figure 1. Example of critical item.

Note. The left image was taken from https://oraculus.mx/wp-content/uploads/2019/05/mayores-retos-continuar-politicas-progresistas_0_68_1000_623-740x560.jpg. The right image was taken from https://cdn2.excelsior.com.mx/media/styles/imagen_portada_grande/public/pictures/2019/03/08/2111470.jpg.

Areas of Interest

Considering that the face is the area that receives the most attention, candidates' faces were defined as an area of interest for the analysis of fixation times.

Control of Hidden Variables

Candidates' clothing was homogenized: All men wore suits and ties, and female candidates were shown wearing formal clothes in neutral colors (black, white, beige, or gray tones). Variability in the candidates' features was enhanced: They had different hair colors (black, brown, reddish, and blond), two were bald, and two had gray hair. Similarly, the shapes of their faces and their eyes varied considerably, but only candidates with brown eyes were included. Anonymity was favored to prevent bias, so images of candidates in different Latin American cities outside Colombia were used.

Dependent Variables

For the verification of Hypotheses 1 and 2, five dependent variables were analyzed:

1. Dwell time (DT), or total fixation, is the summation of all fixations in an area of interest (henceforth AOI)—in this case, the candidate's face. This measure constitutes the main indicator of cognitive effort during stimulus processing (Rayner, 1998).
2. Fixation count (FC) indicates the total number of fixations in an AOI. A high number of fixations in an AOI, when correlated with long duration, may serve as an indicator of attention and processing.
3. Reaction time (RT) is the total amount of time required, on average, to visualize the stimulus—in this case, the image of the candidate—and move on to decision making.

4. Dwell time% (DT%) is a percentage that indicates the proportion of time required, on average, to look at the AOI analyzed—in this case, the candidate’s face—compared with the rest of the stimulus (candidate's body or hair). The degree of attention required by the face is measured proportionally.
5. Fixation count% (FC%) is a percentage that indicates the proportion of fixations recorded, on average, within the AOI analyzed—in this case, the candidate’s face—compared with the rest of the stimulus. The degree of attention required by the face is measured proportionally.

Analysis of Results

The first part of the experiment measured participants’ eye-movement behavior during the visualization of the images of the candidates.

As can be seen in Table 1, the average dwell time recorded for smiling faces was 4,352.94 ms., whereas it amounted to 3,700 ms. in serious faces. The difference (1.39%) is small and not statistically significant ($p = 0.95$). Concerning fixation count, an average of 13.66 fixations was registered in smiling faces. In Condition B, a similar result was found (14.02 fixations on average), and the difference (2.57%) was not significant either ($p = .85$). On average, informants required a reaction time of just over 6 seconds to decide after viewing the candidates with a smiling expression, while the average RT for Condition B was 5.8 seconds. The difference calculated between both conditions was 4.57%. This is a small effect that did not lead to a statistically significant difference ($p = 0.64$).

Table 1. Fixation and Reaction Times.

	DT	FC	RT
Condition A (smiling)	4,352.94	13.66	6,087.31
Condition B (serious)	4,414.13	14.02	5,821.21
Difference* (%)	1.39	2.57	4.57
p value	0.95	0.85	0.64
95% confidence interval	[-436.00, 404.00]	[-1.00, 1.00]	[-440.00, 662.00]

Note. DT = dwell time; FC = fixation count; RT = reaction time.

*Because the values did not initially present a standard distribution, which is common in fixation analysis obtained from eye-trackers, a Mann-Whitney test was performed. Likewise, data transformation was carried out to fit a normal distribution and to replicate the significance test based on analyses of variance. However, no significant differences were obtained in any of the tests (Pagano, 2011).

Based on this, Hypothesis 1 can be refuted: It is not possible to ascertain that images of political candidates in the Colombian context featuring a smiling face and a direct gaze do not require more attention than a serious face and a blank stare. The reaction time required to view the picture and the dwell time did not differ between the two conditions. This outcome differs from data obtained in other cultures (Hillmann et al., 2015; Kret et al., 2013; Sullivan et al., 2007). Following the approaches of facial semiotics, faces involve degrees of uncertainty and epistemic ambiguity, that is, the face does not generate reliability per se. As a result, the voter cannot establish a direct route between what candidates are—that is, what is recovered from their faces—and what they represent as social commitment (Leone, 2019). Candidates aim

at generating spontaneity and, ultimately, credibility (Porto López, 2017) by establishing a relationship of similarity between what is proposed by their body language and their promise of potential action.

The parameters of relative dwell time and fixation count revealed in Table 2 show that almost all the attention is directed to the candidates' faces. In Condition A, the face accounted for 90% of the time required for the visualization of the stimulus, and in Condition B, the percentage was 92%. Respectively, 89% of the total fixations made on the image were framed in the area of the smiling face. The proportion was 90% in the case of a serious expression. Differences between the two conditions were not significant. However, Hypothesis 2 can be confirmed: Judgment and decision making are based on the candidate's face. This confirms the results of other studies carried out in other contexts (Beattie et al., 2010; Holland et al., 2017; Kret et al., 2013).

Table 2. Relative Time of Fixation.

	DT (%)	FC (%)
Condition A (smiling)	90	89
Condition B (serious)	92	90
Difference	2.09	1.69
<i>p</i> value	0.63	0.61
95% confidence interval	[-0.00006, 0.00002]	[-0.00003, 0.00001]

Note. DT = dwell time; FC = fixation count.

The second part of the experiment analyzed the sensations triggered by the pictures of the candidates. After seeing the picture of a candidate, participants were asked about the impression it triggered. Results are shown in Table 3.

Table 3. Type of Impression.

	Positive		Neutral		Negative	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Condition A (smiling)	41	25.00	59	35.98	64	39.02
Condition B (serious)	32	19.51	58	35.37	74	45.12
<i>p</i> value	0.87					

There is a slight tendency to associate a smile and a direct look with a more positive feeling; 25% of the responses admitted a positive impression in Condition A, compared with 19.51% in Condition B. In the case of candidates with a serious look, 45.12% of the responses acknowledged a general negative feeling, and this percentage dropped to 39% in the case of smiling faces. This trend is in line with the results obtained in other political contexts (Knutson, 1996; Stewart & Dowe, 2013; Stewart et al., 2009; Sülflow & Maurer, 2019). Following Kress and van Leeuwen (1996), the smile and direct look generated a more positive perception because they activated the interpersonal function and reduced the social distance between the represented actor and the potential reader-voter. Furthermore, positive character traits, such as good leadership or trust, may be inferred from a smiling face (Kilgo et al., 2018; Peng, 2018). However, the difference obtained in the chi-square test was not significant. Hypothesis 3 is therefore timidly confirmed. However, the most interesting piece of evidence remains participants' difficulty in evaluating the candidates positively considering only facial attributes; the highest concentration of responses in both conditions occurs at the pole of negative or neutral impression.

In the second question, participants were asked to rank candidates' credibility on a scale from 1 to 5. Table 4 shows the results of the answers grouped in three categories: low credibility (ratings of 1 and 2), neutrality, and high credibility (ratings of 4 and 5).

Table 4. Degree of Credibility.

	- Credibility		Neutrality		+ Credibility	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Condition A (smiling)	77	46.95	62	37.80	25	15.24
Condition B (serious)	96	58.54	43	26.22	25	15.24
<i>p</i> value			0.36			

Data in Table 4 are consistent with the trend observed in Table 3. More than 50% (58.54%) of responses indicate that a serious candidate transmits low credibility, and this percentage dropped to 46.95% in smiling candidates. On the other hand, no facial expression seemed to grant higher credibility, and the same percentage (15.24%) was found for both smiling and serious expressions. Even if a serious face is associated with lack of credibility, smiling did not seem to equate with confidence. The differences are not significant ($p = 0.36$), and Hypothesis 4 cannot be refuted. Contrary to the conclusions obtained in previous studies (Kilgo et al., 2018; Knutson, 1996; Oosterhof & Todorov, 2008; Peng, 2018; Sutherland et al., 2013), the smiling expression or the direct look does not seem to lower the value of a positive character trait such as credibility.

In general, the analysis seems to indicate that visual information and candidates' appearance do not have a decisive impact on voters in the Colombian context. A plausible explanation may be offered by Liuzza and associates (2011), who concluded that the citizens' link to candidates' faces and gaze is related to political affinity rather than facial expression (Laustsen & Bang Petersen, 2015). The semiotic importance of the candidate's image should not be ignored. There is a separation between the candidate and the ideas. As a result, the image of the face signals the human being behind it. However, the community may have constructed a different reality on that political subject that triggers a different interpretation. Thus, it is important to include the traces of cultural knowledge in the analysis and adapt it to the context that serves as a frame. In this light, the perception of distrust in politicians and, by extension, political institutions, revolves around promise. A friendly face does not constitute enough evidence to support a political work program. Within the framework of the lack of political formation entrenched in Colombian culture, this means that the message conveyed in the face does not necessarily lead to greater credibility and commitment in the candidates.

Experiment 2: Smiling Versus Serious Expressions in Original Posters

Experiment 2 was designed and developed in a way that was completely parallel to Experiment 1. This experiment also analyzed voters' impression of the candidates' facial expressions, but in this case, visual stimuli showed three digital political posters of the first three real candidates running for mayor of Bogotá in the 2019 elections: Carlos Galán, Claudia López, and Miguel Uribe. This experiment had the same objective as the first one, that is, to determine whether the candidates' expression (smile and direct look, or seriousness and blank stare) generated a positive or negative reaction and whether it translated

into greater credibility. For this experiment, real images of the three candidates were inserted in a campaign poster containing a slogan. The hypotheses and independent variables, as well as the dependent variables, were the same as in Experiment 1.

Procedure

The same two-stage process in which participants were presented with a picture and then asked to answer two questions was used. Two versions of each poster were created and then presented to participants in two experimental lists so that they would only see one of the versions. This was a self-timed activity in which participants decided when they were ready to answer the questions.

Participants

As in Experiment 1, the level of education worked as a homogenization criterion. To ensure lack of political bias (Marquart, Matthes, & Rapp, 2016), 40 foreign exchange students from the National University of Colombia participated in this study.⁵

Independent Variables

The same parameters used in Experiment 1 were used to set the two independent variables and the AOIs analyzed. Two versions of each poster were made: a smiling picture of the candidate looking at the viewer (Condition A), and another image of a serious candidate looking in the distance (Condition B). These are shown in Figure 2.

Condition A (smiling)



a. Modified poster of Carlos Fernando Galán (2019).

Condition B (serious)



b. Carlos Fernando Galán (2019).

⁵ National University of Colombia students are very committed to social causes and to political life in their country. However, it is not possible to pigeonhole them into a single predominant political trend.



c. Modified poster of Miguel Uribe Turbay (2019).



d. Modified poster of Miguel Uribe Turbay (2019).



e. Modified poster of Claudia López (2019).



f. Modified poster of Claudia López (2019).

Figure 2. Examples of critical items.

Note. Images a and b were taken from <https://www.facebook.com/carlosfgalan/photos/a.10152154644739173/10157196700224173>. The original poster from which images c and d were created was taken from <https://www.facebook.com/MiguelUribeTurbay/photos/2606487326057858>. The original image from which e and f were created was taken from <https://assets.documentcloud.org/documents/6402331/Programa-de-Gobierno-Claudia-L%C3%B3pez.pdf>.

Analysis of Results

In general, data analysis reflects the same trends observed in Experiment 1. Table 5 offers the results for dwell time, fixation count, and reaction time.

Table 5. Times of Fixation and Response.

	DT	FC	RT
Condition A (smiling)	2,399.95	9.46	7,422.56
Condition B (serious)	2,755.80	9.38	8,307.85
Difference (%)	12.91	0.82	10.66
<i>p</i> value	0.08	0.49	0.32
95% confidence interval	[-76, 1156]	[-1, 3]	[-676, 1884]

Note. DT = dwell time; FC = fixation count; RT = reaction time.

Concerning reaction times, the difference between Condition A and Condition B amounted to 10.66%, as shown in Table 5. In smiling candidates, the average RT between informants was 7.4 seconds; in serious candidates, it totaled 8.3 seconds. The difference is not statistically significant, although it shows a clearer trend than the results obtained in Experiment 1. This trend is corroborated in the dwell time in the AOI of the face: Smiling expressions received a total fixation time of approximately 2.4 seconds, whereas serious expressions amounted to 2.75 seconds. The difference (12.91%) is still not statistically significant ($p = 0.08$), but it clearly supports the conclusions obtained in Hillmann and colleagues (2015), Kret and associates (2013), and Sullivan and cohorts (2007); according to these studies, faces portraying seriousness or anger are often given greater attention because voters are curious about the reasons for these emotions. Likewise, fixation count does not provide new information, because the distribution of the number of fixations on smiling or serious faces is very similar and has no estimated effects. In short, a tendency is perceived in non-Colombian informants to focus more on expressions of seriousness in real campaign posters that combine different semiotic elements.

It is interesting to note the data provided by the proportional parameters in Table 6, which indicate the proportion of attention that the candidate's face received when compared with the rest of the poster.

Table 6. Relative Time of Fixation.

	DT (%)	FC (%)
Condition A (smiling)	0.43	0.40
Condition B (serious)	0.46	0.40
Difference	6.18	0.34
<i>p</i> value	0.55	0.93
95% confidence interval	[-0.1232, 0.0660]	[-0.0904, 0.0834]

Note. DT = dwell time; FC = fixation count.

In this case, when the image of the candidate is added to the campaign poster accompanied by the slogan, the face receives only approximately 40% attention, as evidenced by both parameters in both conditions. The difference between conditions is not significant, but it is relevant to note that when the image of the candidate competes with the slogan, the image becomes the second priority. This indicates that the photo-slogan combination is consistent because it compels with the discursive complementarity function. It shows a pragmatic semantic relationship in which two or more sign systems are perceived independently, but they form a conceptually and formally integrated unit (Martinec & Salway, 2005). Thus, political communication constitutes a functional communicative act designed and produced with the specific purpose of guiding

decision making. It is understood, therefore, that the images carry senses that are updated in multimodal discourse, which determines the general balance of what is expressed. The modes contribute specifically to grant meaning because of their nature. In this sense, it is "mutual elaboration" of modes (Bezemer & O'Halloran, 2016) that create "dialogue" between the signs (Jewitt, Bezemer, & O'Halloran, 2016), "co-determine meanings" (Bateman, 2014), manage complementarity, and amplify the meaning (Barthes, 1964/1977; Bateman, 2014). Eventually, it becomes evident that the modes have different intensity or modal "weight" (Norris, 2014).

These data point to the relevance of the message transmitted through slogans, rather than the visual image of the candidate. The conjunction of the verbal and graphic message implies the ideals through which the sense of the groups is recovered. It also focuses on individuality, making it possible for the reader to decide between types of leadership: a candidate who represents the popular mandate, and a candidate more focused on individualities. One could infer a relationship between the image of the candidate and the ideology that is embodied in the slogan, the latter being a marker of evidence of a possible collectivized purpose or an individual purpose.

As for the general finding that voters prefer smiling candidates, the data in Table 7 confirmed the tendency observed in Experiment 1, with even greater force; 48.72% of the answers indicated a correlation between a smile and a positive impression, whereas only 30.77% of the participants declared having a positive impression after seeing a serious face.

Table 7. Type of Impression.

	Positive		Neutral		Negative	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Condition A (smiling)	19	48.72	14	35.08	6	15.38
Condition B (serious)	12	30.77	14	35.90	13	33.33
<i>p</i> value			0.53			

The analysis of negative impressions is complementary: A total of 15.38% of informants declared having a negative impression after seeing a candidate with a smiling face. The percentage doubled (33.33%) in the case of negative impressions. Although chi2 tests did not show significant differences, the size of the effects showed a clear trend. The perception of the smile marks, in this case, the manifestation of well-being and pleasure (Peng, 2018), a cultural condition that is linked with proximity in the West. In this test, the foreign informant lacked all the information that a national informant would possess, so the face was transformed into a cultural code. These results support the conclusions obtained in previous research carried out in political contexts, such as the United States and Europe, according to which the smiling expression is indeed a nonverbal cue from which positive character traits are inferred (Kilgo et al., 2018; Peng, 2018).

Finally, Table 8 displays the results of the second survey. It shows the same tendency found in Experiment 1.

Table 8. Degree of Credibility.

	– Credibility		Neutrality		+ Credibility	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Condition A (smiling)	13	33.33	9	23.08	17	43.59
Condition B (serious)	17	43.59	13	33.33	9	23.08
<i>p</i> value			0.59			

The trend observed indicates that the smile conveys greater credibility. In Condition A, 43.59% of the responses indicate that the candidate transmitted a high degree of credibility. After seeing a serious face (Condition B), the percentage was reduced to almost half (23.08%). Similarly, the highest percentage of low credibility judgments was recorded in the category of serious faces (43.59%). Even if differences were not statistically significant, the trends shown in the analysis are clear. Compared with Colombian voters, foreign participants appear to be guided by the facial effect.

Survey About Slogans

In the 2019 Bogotá mayoral election, candidates used slogans that focused on different concepts that epitomized the central message of their campaign and their ideology. Claudia López chose to concentrate on the idea of security and protection in her slogan, “Vivir sin miedo” (“To live without fear”). Carlos Galán’s slogan, “Bogotá para la gente” (“Bogotá for the people”), emphasized the value of citizenship. Finally, a message of progress was chosen by Miguel Uribe in “Avancemos” (“Let’s advance”). This experiment aimed at assessing the judgment of the concepts expressed in these three concept categories (citizenship, security, and progress). Our intention was to obtain the opinion of the informants without having an image of the candidate that could activate the reasoning based on inhumanization. In this experiment, we started from a single nondirectional hypothesis: the different acceptance of each slogan according to the concept to which it is associated.

Procedure and Participants

Participants were presented with three possible slogans, one per category under study, for example: (1) “For the defense,” (2) “For the people,” and (3) “For the progress.” A total of five campaign slogans were created for each group. Participants indicated which slogan was most convincing for them. Critical stimuli were accompanied by distractors in a 1:2 ratio. The test was completed by the same 40 Colombian informants who participated in Experiment 1.

Independent Variables and Stimuli

According to the main idea transmitted in the three slogans, three lists of concepts were created. Slogans in the first list revolved around the idea of “defense” and “protection.” The second list contained five slogans related to the concept of “people” and “citizens.” Finally, the last list replicated the idea of “progress” and “development” in five of the slogans.

Analysis of Results

Table 9 shows the results of this survey, where significant differences can be observed.

Table 9. Conceptual Preferences in Slogans.

Progress		Citizenship		Security	
<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
58	28.29	109	53.17	38	18.54

A clear majority (53.17%) indicated their preference for the slogans that presented the concept of "citizenship." The second most voted concept was that of "progress" (28.29%). Finally, the slogans containing an idea of "security" were deemed less attractive (18.54%). All differences were statistically very significant ($p < .01$). Although Colombian voters did not favor any physical feature when determining their voting option, they did show a clear tendency regarding the written message transmitted in slogans.

The slogans used in this study allowed us to show that the rhetorical operations involved in political communication generate two types of political attitude: on the one hand, the necessity to convince, that is, to manage political action, and on the other hand, the need to mobilize receivers avoiding a rationalized understanding of what is expressed. The use of the expressions related to citizenship as a resource of persuasion is explained by the likelihood of awakening a sense of belongingness that is derived when the voter is inserted into a social group. This conviction leads to managing forms of adhesion that no longer depend on the factuality or the likelihood, but on the emotional commitment to a potentially distributive and beneficial action for the community. Hypothetically, citizenship and progress can be related to the extent that they are concepts articulated in the commitment to collectivized action, so that the identification function exceeds the recipient, and the political commitment is assumed from a collective goal. The perception regarding the words associated with security tends to be devalued for potential voters if they activate discursive formations that are associated with policies that have had negative social consequences.

Conclusions: Political Communication in Colombia

This study is a first empirical approach to the conditioning of visual factors on the voting decision making process in a context in which quantitative studies are still rare. Experiment results show differences with other political contexts that have been more extensively analyzed, such as Europe and the United States.

The data obtained showed that Colombian participants are less influenced in their voting decisions by superficial features in political campaign materials. A subtle tendency to equate smiling expressions with more positive emotions and to conceive of seriousness as a trait of negativity could be confirmed. However, the data only showed moderate effects that did not reach statistical significance. At the same time, this trend was more clearly accentuated in the control group made up of foreign students. The results obtained in the Colombian group contradict those obtained in other similar studies of the same nature in different geographical contexts (Central Europe or the United States; cf. Hillmann et al., 2015; Kret et al., 2013; Peng, 2018; Sullivan et al., 2007). Thus, the effect of the smiling expression (Knutson, 1996; Stewart & Dowe, 2013; Stewart et al., 2009; Sülflow & Maurer, 2019) seems to be mitigated in the Colombian context.

Given these results, it is not possible to verify a correlation between political preference and visual traits (cf. Laustsen & Bang Petersen, 2015), as, for instance, an inclination toward smiling faces in the socialist constituency that forms the bulk of the student body in public universities.

Second, for Colombian students who participated in this study, the message transmitted in the slogan was more important as a decision factor, as their clear positioning showed in Experiment 3. The slogans associated with the concept of citizenship were the most positively appreciated, while the messages associated with security did not enjoy such approval. The results obtained could be a sign of a long historical trajectory of disappointment on the part of the political system in Colombia, which translates into an absence of trust at first sight and a preference for decision making based on clear messages transmitted in a written form. This is reflected in the high percentages in the criterion of "low credibility" raised by all the images in Experiment 1 (Table 5).

The results reflect a series of trends that result from the coexistence of social and discursive factors that affect the perception and decision making in political campaigns and guide citizen action. The most relevant cultural factor is the construction of visuality in Colombian society, which correlates with literacy rates and the appropriation of the forms of reading of the signatures that privilege language as the main semiotic system.

Another sociocultural factor is the production and construction of political advertising discourse. It works under the premise of promise and future reality, but it does not acknowledge the social problems of different communities and consequently does not meet citizens' needs and demands. In their study of the main candidates running for mayor of Bogotá in the 2007 elections, García León and García León (2014) focused on campaign posters in an idealized projection, whose seal of commitment was the face or name of the candidate, functioning as guarantee seals. Slogans focused on the notions of "future" and "progress." A controlled discourse was constructed with a set of semiotic resources that served populist expressions. Emotion was favored over reason, the false promise was privileged, and the responsibility falling on the citizen participating in the democratic pact was hidden when voting. In short, according to the data here presented, the visual effects of the photos of the candidates on political campaign posters are not as clear in the Colombian context as in other cultures, and the voters do not seem to make straightforward inferences from facial expressions. It would be very important, however, to confirm this finding with experimental data coming from larger samples and different age groups and population sectors to reach more forceful conclusions.

References

- Amălăncei, B. M., Cîrțiță-Buzoianu, C., & Buzoianu, C. (2017). Looking for the best slogan: An analysis of the slogans of the 2016 Romanian parliamentary campaign. *Studies and Scientific Researches. Economics Edition*, 26(1), 1–9. <https://doi.org/10.29358/sceco.v0i26.394>
- Antonakis, J., & Dalgas, O. (2009). Predicting elections: Child's play! *Science*, 323(5918), 1183. <https://doi.org/10.1126/science.1167748>

- Barthes, R. (1977). The rhetoric of the image. In R. Barthes (Ed.), *Image—Music—Text* (pp. 32–51). London, UK: Fontana. (Original work published 1964)
- Bateman, J. (2014). *Text and image: A critical introduction to the visual-verbal divide*. New York, NY: Routledge.
- Beattie, G., Webster, K., & Ross, J. (2010). The fixation and processing of the iconic gestures that accompany talk. *Journal of Language and Social Psychology, 29*(2), 194–213. <https://doi.org/10.1177/0261927X09359589>
- Bezemer, C. J., & O'Halloran, K. (2016). *Introducing multimodality*. London, UK: Routledge.
- Brito, G. (2018). *Esperanza vs. miedo. La campaña electoral en Colombia* [Hope vs. fear. The electoral campaign in Colombia]. Retrieved from <https://www.celag.org/esperanza-vs-miedo-la-campana-electoral-en-colombia/>
- Buchan, J. N., Paré, M., & Munhall, K. G. (2007). Spatial statistics of gaze fixations during dynamic face processing. *Social Neuroscience, 2*(1), 1–13. <https://doi.org/10.1080/17470910601043644>
- Dasgupta, N., Desteno, D., Williams, L. A., & Hunsinger, M. (2009). Fanning the flames of prejudice: The influence of specific incidental emotions on implicit prejudice. *Emotion, 9*(4), 585–591. <https://doi.org/10.1037/a0015961>
- Eckstein, M. K., Guerra-Carrilloa, B., Miller Singley, A., & Bunge, S. A. (2017). Beyond eye gaze: What else can eyetracking reveal about cognition and cognitive development? *Developmental Cognitive Neuroscience, 25*(1), 69–91. <https://doi.org/10.1016/j.dcn.2016.11.001>
- Esser, F. (2008). Dimensions of political news cultures: Sound bite and image bite news in France, Germany, Great Britain, and the United States. *The International Journal of Press/Politics, 13*(4), 401–428. <https://doi.org/10.1177/1940161208323691>
- García León, J. E., & García León, D. L. (2014). Análisis crítico de las campañas publicitarias de Samuel Moreno y Enrique Peñalosa. Hacia una aproximación de sus estrategias discursivas [Critical analysis of the advertising campaigns of Samuel Moreno and Enrique Peñalosa. Toward an approximation of their discursive strategies]. *Lingüística y Literatura, 35*(65), 113–137.
- Garric, N. (1996). *Étude des structures linguistico-discursives du slogan publicitaire: Activité et modes de quantification* [Study of the linguistic-discursive structures of the advertising slogan: Activity and modes of quantification] (Doctoral dissertation). Université Paris 3, France. Retrieved from <http://www.theses.fr/1997PA030035>
- Grabe, M. E., & Bucy, E. P. (2009). *Image bite politics: News and the visual framing of elections*. Oxford, UK: Oxford University Press.

- Hillmann, T. E., Kempkensteffen, J., & Lincoln, T. M. (2015). Visual attention to threat-related faces and delusion-proneness: An eye tracking study using dynamic stimuli. *Cognitive Therapy and Research, 39*(6), 808–815. <https://doi.org/10.1007/s10608-015-9699-z>
- Hodges, A. (2014). "Yes, we can": The social life of a political slogan. In C. Hart & P. Cap (Eds.), *Contemporary critical discourse studies* (pp. 347–364). London, UK: Bloomsbury Academic.
- Holland, E., Wolf, E. B., Looser, C., & Cuddy, A. (2017). Visual attention to powerful postures: People avert their gaze from nonverbal dominance displays. *Journal of Experimental Social Psychology, 68*, 60–67. <https://doi.org/10.1016/j.jesp.2016.05.001>
- Holmquist, K., Nyström, M., Andersson, R., Dewhurst, R., Jarodzka, H., & van de Weijer, J. (2011). *Eye tracking: A comprehensive guide to methods and measures*. Oxford, UK: Oxford University Press.
- Jaubert, M. J. (1985). *Slogan, mon amour* [Slogan, my love]. Paris, France: Bernard Barrault.
- Jewitt, C., Bezemer, J., & O'Halloran, K. (2016). *Introducing multimodality*. London, UK: Routledge.
- Kilgo, D., Boutler, T. R., & Coleman, R. (2018). Face value: Linking nonverbal cues to character traits in impression formation of politicians. *International Journal of Communication, 12*, 4205–4228.
- Knutson, B. (1996). Facial expressions of emotion influence interpersonal trait inferences. *Journal of Nonverbal Behavior, 20*(3), 165–182. <https://doi.org/10.1007/BF02281954>
- Kohli, C., Leuthesser, L., & Suri, R. (2007). Got slogan? Guidelines for creating effective slogans. *Business Horizons, 50*(5), 415–422.
- Kress, G. R., & Van Leeuwen, T. (1996). *Reading images: The grammar of visual design*. London, UK: Routledge.
- Kret, M. E., Stekelenburg, J. J., Roelofs, K., & de Gelder, B. (2013). Perception of face and body expressions using electromyography, pupillometry and gaze measures. *Frontiers in Psychology, 4*, 1–12. <https://doi.org/10.3389/fpsyg.2013.00028>
- Laustsen, L., & Bang Petersen, M. (2015). Winning faces vary by ideology: How nonverbal source cues influence election and communication success in politics. *Political Communication, 33*(2), 188–211. <https://doi.org/10.1080/10584609.2015.1050565>
- Lee, M. C. H. (2014). *Le slogan publicitaire, dynamique linguistique et vitalité sociale: La construction d'une esthétique sociale à travers la communication publicitaire* [The advertising slogan, linguistic dynamics and social vitality: The construction of a social aesthetic through advertising communication] (Doctoral dissertation). Université Paul Valéry-Montpellier III, France. Retrieved from <http://www.theses.fr/2014MON30002>

- Leone, M. (2019). The semiotics of the face in digital dating: A research direction. *Digital Age in Semiotics & Communication*, 2, 18–40. <https://doi.org/10.33919/dasc.19.2.2>
- Liuzza, M., Cazzato, V., Vecchione, M., Crostella, F., Caprara, G., & Aglioli, S. (2011). Follow my eyes: The gaze of politicians reflexively captures the gaze of ingroup voters. *PLoS ONE*, 6(9), e25117.
- Marcinkowski, F., Lünich, M., & Starke, C. (2018). Spontaneous trait inferences from candidates' faces: The impact of the face effect on election outcomes in Germany. *Acta Politica*, 53, 231–247. <https://doi.org/10.1057/s41269-017-0048-y>
- Marquart, F., Matthes, J., & Rapp, E. (2016). Selective exposure in the context of political advertising: A behavioral approach using eye-tracking methodology. *International Journal of Communication*, 10, 2576–2595. Retrieved from <https://ijoc.org/index.php/ijoc/article/view/4415>
- Martinec, R., & Salway, A. (2005). A system for image-text relations in new (and old) media. *Visual Communication*, 4(3), 337–371.
- Masters, R. D., Sullivan, D. G., Lanzetta, J. T., McHugo, G. J., & Englis, B. G. (1986). The facial displays of leaders: Toward an ethology of human politics. *Journal of Social and Biological Systems*, 9, 319–343. [https://doi.org/10.1016/S0140-1750\(86\)90190-9](https://doi.org/10.1016/S0140-1750(86)90190-9)
- Mertins, B. (2016). The use of experimental methods in linguistic research: Advantages, problems and possible pitfalls. In C. Clasmeier, T. Anstatt, & A. Gattnar (Eds.), *Slavic languages in psycholinguistics. Chances and challenges for empirical and experimental research* (pp. 15–33). Frankfurt, Germany: Narr Francke Attempto.
- Moriarty, S. E., & Popovich, M. N. (1991). Newsmagazine visuals and the 1988 Presidential Election. *Journalism Quarterly*, 68(3), 371–380. <https://doi.org/10.1177/107769909106800307>
- Norris, S. (2014). Modal density and modal configurations. In C. Jewitt (Ed.), *The Routledge handbook of multimodal analysis* (pp. 86–99). London, UK: Routledge.
- Oosterhof, N., & Todorov, A. (2008, August). The functional basis of face evaluation. *Proceedings of the National Academy of Sciences*, 105(32), 11087–11092. <https://doi.org/10.1073/pnas.0805664105>
- Pagano, R. (2011). *Estadística para las ciencias del comportamiento* [Statistics for the behavioral sciences]. Mexico City, Mexico: Cengage.
- Paladino, M. P., Castelli, L., Leyens, J. P., & Giovanazzi, A. (2004). On the behavioral consequences of infrahumanization: The implicit role of uniquely human emotions in intergroup relations. *Journal of Personality and Social Psychology*, 85(6), 1016–1034. <https://doi.org/10.1037/0022-3514.85.6.1016>

- Peng, Y. (2018). Same candidates, different faces: Uncovering media bias in visual portrayals of presidential candidates with computer vision. *Journal of Communication, 68*(5), 920–941. <https://doi.org/10.1093/joc/jqy041>
- Poole, A., & Ball, L. J. (2005). Eye tracking in human-computer interaction and usability research: Current status and future prospects. In C. Ghaoui (Ed.), *Encyclopedia of human computer interaction* (pp. 211–219). Hershey, PA: Idea Group.
- Porto López, P. (2017). Transpiración semiótica: La atracción de lo indicial. Entrevista a Fernando Andacht. Letra. Imagen. Sonido [Semiotic perspiration: The attraction of the indexical. Interview with Fernando Andacht. Lyrics. Image. Sound]. *Ciudad Mediatizada, 17*, 172–191.
- Prinsen, J., Bernaerts, S., Wang, Y., de Beukelaar, T. T., Cuypers, K., Swinnen, S. P., & Alaerts, K. (2017). Direct eye contact enhances mirroring of others' movements: A transcranial magnetic stimulation study. *Neuropsychologia, 95*, 111–118. <https://doi.org/10.1016/j.neuropsychologia.2016.12.011>
- Rayner, S. (1998). Educating pupils with emotional and behaviour difficulties: Pedagogy is the key! *Emotional and Behavioural Difficulties, 3*(2), 39–47. <https://doi.org/10.1080/1363275980030206>
- Reboul, O. (1975). *Le slogan* [The slogan]. Paris, France: PUF.
- Reis, H. T., Wilson, I. M., Monestere, C., Bernstein, S., Clark, K., Seidl, E., & Radoane, K. (1990). What is smiling is beautiful and good. *European Journal of Social Psychology, 20*(3), 259–267. <https://doi.org/10.1002/ejsp.2420200307>
- Richardson, D., Dale, R., & Spivey, M. (2007). Eye movements in language and cognition: A brief introduction. In M. González-Márquez, I. Mittelberg, S. Coulson, & M. Spivey (Eds.), *Methods in cognitive linguistics* (pp. 323–344). Amsterdam, The Netherlands: John Benjamins.
- Rohmann, A., Niedenthal, P. M., Brauer, M., Castano, E., & Leyens, J. P. (2009). The attribution of primary and secondary emotions to the in-group and to the out-group: The case of equal status countries. *Journal of Personality and Social Psychology, 149*(6), 709–730. <https://doi:10.1080/00224540903348253>
- Schill, D. (2012). The visual image and the political image: A review of visual communication research in the field of political communication. *Review of Communication, 12*, 118–142. <https://doi.org/10.1080/15358593.2011.653504>
- Stewart, P. A., & Dowe, P. K. F. (2013). Interpreting president Barack Obama's facial displays of emotion: Revisiting the Dartmouth Group. *Political Psychology, 34*(3), 369–385. <https://doi.org/10.1111/pops.12004>

- Stewart, P. A., Waller, B. M., & Schubert, J. N. (2009). Presidential speechmaking style: Emotional response to micro-expressions of facial affect. *Motivation and Emotion, 33*, 125–135. <https://doi.org/10.1007/s11031-009-9129-1>
- Sülflow, M., & Maurer, M. (2019). The power of smiling. How politicians' displays of happiness affect viewers' gaze behavior and political judgments. In A. Veneti, D. Jackson, & D. Lilleker (Eds.), *Visual political communication* (pp. 207–224). New York, NY: Springer.
- Sullivan, S., Ruffman, T., & Hutton, S. B. (2007). Age differences in emotion recognition skills and the visual scanning of emotion faces. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 62*(1), 53–60. <https://doi.org/10.1093/geronb/62.1.P53>
- Sutherland, W. J., Goulden, C., Bell, K., Bennett, F., Burall, S., Bush, M., . . . & Wollner, P. K. A. (2013). 100 questions: Identifying research priorities for poverty prevention and reduction. *Journal of Poverty and Social Justice, 21*(3), 189–205. <https://doi.org/10.1332/175982713X671210>
- Todorov, A., Mandisodza, A. N., Goren, A., & Hall, C. C. (2005). Inferences of competence from faces predict election outcomes. *Science, 308*(5728), 1623–1626. <https://doi.org/10.1126/science.1110589>
- Vaes, J., Paladino, M. P., & Maganotti, C. (2003). The human message in politics: The impact of emotional slogans on subtle conformity. *Journal of Personality and Social Psychology, 151*(2), 162–179. <https://doi.org/10.1080/00224540903510829>
- Vaes, J., Paladino, M. P., & Puvia, E. (2011). Are sexualized women complete human beings? Why men and women dehumanize sexually objectified women. *European Journal of Social Psychology, 41*(6), 774–785. <https://doi.org/10.1002/ejsp.824>
- Verser, R., & Wicks, R. H. (2006). Managing voter impressions: The use of images on presidential candidate web sites during the 2000 campaign. *Journal of Communication, 56*(1), 178–197. <https://doi.org/10.1111/j.1460-2466.2006.00009.x>
- Vö, M. L. H., Smith, T. J., Mital, P. K., & Henderson, J. M. (2012). Do the eyes really have it? Dynamic allocation of attention when viewing moving faces. *Journal of Vision, 12*(3), 1–14. <https://doi.org/10.1167/12.13.3>
- Waldman, P., & Devitt, J. (1998). Newspaper photographs and the 1996 Presidential Election: The question of bias. *Journalism & Mass Communication Quarterly, 75*(2), 302–311. <https://doi.org/10.1177/107769909807500206>