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Pause and pitch: the influence on political candidates' perceived integrity

Abstract

This study evaluates speech pause as a stimulus that influences voters' perception of a political candidate. Previous research has explored how speech attributes like pitch influence voters' perception of integrity. However, the existing studies overlook interphase pauses as a key component in communication. In a between-groups experiment, we manipulated the interphase pauses in a speech given by four mock political candidates and evaluated the effect on voters' perception of the candidates' integrity. The results suggest that interphase pauses influence the perception of a leader's integrity, but the candidates' pitch moderates the effect. Specifically, candidates with a low-pitched voice are perceived as more integral if they use short interphase pauses, whereas candidates with a high-pitched voice may benefit from making natural pauses (0.5 seconds). This is the first study to evaluate how speech pause may influence the perception of integrity. The findings are relevant for designing strategic political campaigns and overall communications through a spokesperson.

Keywords

Integrity, speech pause, interphase pause, low-pitched voice, high-pitched voice, spokesperson.

1. Introduction

When voting, citizens decide how they will be governed. Nevertheless, despite the importance of voting, people's low cognitive involvement in politics may guide them to select political candidates based on nonpolitical cues rather than a political party or the candidate's government plan (Schaffner & Streb, 2002). Thus, beyond proposals and political arguments, the electorate identifies and chooses attributes from the political persona they perceive. Like a brand, a political persona is the identity that politicians (and celebrities) build to create an image that fosters an emotional connection with the voter (Marshall & Henderson, 2016). Because of this "human" brand dimension, a political leader's image is closely related to the personality, emotions, and authenticity the audience implicitly captures from his or her messages (Marshall & Henderson, 2016). Communication research has demonstrated that politicians' personal attributes and emotional expressions have a stronger influence when they resemble and recognize the electorate's needs. For example, facial expressions that inspire a trustworthy image from a political candidate increase voters' perceptions of the candidate's governing capabilities (Manfredi *et al.*, 2021). Further, politicians' voice pitch influences how voters see their personality traits, such as integrity (Tigue *et al.*, 2012).

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The purpose of this research is to evaluate the influence of a political candidate's speech attributes on voters' perception of them as integral leaders. Thus, the theoretical background focuses on voice communication characteristics that influence listeners' attitudes and perceptions (Mehrabian & Wiener, 1967; Smith & Shaffer, 1995; Klofstad *et al.*, 2015; Tigue *et al.*, 2012; Zoghaid, 2019). Communication research has elaborated on speech attributes that leaders can manage in aiming for a more competent image: speed (Mehrabian & Wiener, 1967; Miller *et al.*, 1976; Smith & Shaffer, 1995) and pitch (Cheng *et al.*, 2016; Feinberg *et al.*, 2008; Schirmer *et al.*, 2019; Zuckerman & Miyake, 1993). Speed is easier to manage because it depends on the flow of words and sentences (Bruneau, 1973), whereas pitch is more difficult as it depends on the individual's vocal cords (Dah, 2011). Despite this difference, there is less reach on the former voice characteristic, particularly concerning the pauses. Pauses can change the tone of a discourse; they can weaken or strengthen an idea and create suspense or certainty (Esposito & Marinaro, 2007). This research expects to contribute to a gap in the communication literature by extending the knowledge on the speed attribute through the "interphase pause" variable. Both, speed and pitch, should interact to shape the communication style of a political persona.

Thus, the remainder of this section defines leader integrity as an attribute expected from a political leader, conceptually framed in moral values and consistency (Dunn, 2009; Mayer *et al.*, 1995; Moorman *et al.*, 2013). Given that the perceived integrity of a candidate influences voters' endorsement and engagement (Hassell, 2020), this research uses two speech attributes to influence perceived leadership integrity: pauses and pitch. Next, these speech attributes are differentiated. Pauses are relatively easy to manage by controlling the speed of speech (Mehrabian & Wiener, 1967; Smith & Shaffer, 1995), whereas pitch is an intrinsic voice characteristic that is difficult to control (i.e., low or rise) (Dietrich *et al.*, 2019).

The remainder of the paper is structured as follows. Section 2 explains how the speech is manipulated. The pause is manipulated through the recorded audio of the candidates, and the pitch is moderated by having different candidates speak. Then, the results, presented in Section 3, show that to evaluate the effect of a leader's speech on voters' perception of their integrity, intrinsic (pitch) and managed attributes (pause) must be considered. Finally, the discussion in Section 4 strengthens the idea that controlling, using, and training verbal communication techniques is possible. However, the effect of interphase pauses has not been consistently evaluated.

The literature on speech has emphasized pitch, and there is a gap in exploring other voice characteristics (Dahl, 2011), particularly those that can be trained or managed. The value of this research is that it strengthens the knowledge of interphase pauses, a useful and manageable tool, and how this interacts with voice characteristics (pitch) to deliver meaningful communication from leaders. The question of this research is how a spokesperson's voice influences the construction of the political persona –more precisely, how a political candidate's speech pauses influence voters' perception of their integrity, accounting for natural voice pitch.

1.1. *Perceived leader integrity*

Behavioral integrity is expected and desired from humans, especially those in leadership positions who hold power and influence others (Avolio, Bass & Jung, 1999; Becker, 1998). Although integrity is recognized as an influential attribute in leaders, the concept has a scarce theory and empirical testing (Moorman *et al.*, 2013; Palanski & Yammarino, 2007).

Integrity means consistency, keeping promises, and aligning words and deeds (Palanski & Yammarino, 2007; Simons, 1999). A leader's integrity is preserved, even after unethical behaviors, if there is consistency between their words and actions. In addition, integrity consists of considering moral values in decision making as well as being honest, authentic, fair, respectful, compassionate, forthright, and open to communicating with others (Brown, Treviño & Harrison, 2005; Craig & Gustafson, 1998; Palanski & Yammarino, 2007; Treviño,

Brown & Hartman, 2003). Thus, leadership integrity refers to whether someone with power or influence holds a set of moral values and the degree to which they consistently apply those values (Dunn, 2009; Mayer *et al.*, 1995; Moorman *et al.*, 2013).

The trustor-trustee relationship relies on integrity, and perceived integrity is a trait that signals if a leader is worth following (Moorman & Grover, 2009; Simons, 2002). Assuming or granting leadership to someone who lacks integrity may lead to risks for the followers or trustees, as resources can be misused with significant impacts on the group's future (Morgan & Hunt, 1994). Perceived integrity is used as a heuristic that reduces the uncertainty involved in following a leader who is expected to lead honestly and consistently in alignment with their professed vision (Moorman & Grover, 2009).

In politics, integrity triggers voters' endorsement and engagement in a campaign (Hassell, 2020). People penalize unintegral behaviors that interfere with electoral dynamics (Frank & Martínez Coma, 2017). Moreover, the perception of integrity is positively correlated with approval ratings (Newman, 2003). Even so, research on integrity in political contexts remains limited, even when society claims it is a necessary trait for politicians (Lasthuizen *et al.*, 2019).

This research proposes that speech attributes can predict the perceived integrity of a political candidate. Human voices are full of acoustic attributes that provide information about the speaker (Mileva *et al.*, 2018; Rezlescu *et al.*, 2015). Some speech attributes are feasible to control, like speech rate, pause, volume, and intonation. In contrast, others are intrinsic to the individual, like pitch or timbre.

1.2. *Speech rate and pauses: Focus on interphase pause*

Communication research shows that the speed of speech influences the audience's capacity to elaborate on the message, involvement, and persuasion (Smith & Shaffer, 1995). Thus, fast-spoken people are perceived as more credible, competent, and persuasive (Mehrabian & Wiener, 1967; Miller *et al.*, 1976). When people speak fast, they are also perceived as more of an expert, making it difficult for listeners to process arguments carefully (Moore *et al.*, 1986). The effect of speech rate on persuasion depends on the speaker's ability to impact the listener's cognitive involvement and information processing. Thus, speaking fast is only persuasive for highly cognitively involved participants (Smith & Shaffer, 1995). Pauses between words or sentences contribute to the speed attribute of speech.

Speech rate is composed of syllable speed and interphase pauses. Syllable speed is the syllables' articulation rate, and an interphase pause is the gap between successive words that signal a forthcoming idea or phrase. Both speech rate and pauses influence listeners' responses (Grosjean & Lane, 1976). This research focuses on pauses, which are moments of silence in speech. They enable clear communication by ending the emissary's thoughts, emotions, and feelings, allowing the receptor to process the message. Communication is based on sequences of silence-sound-silence (Bruneau, 1973). Even when a conversation appears continuous, on average, it contains between 250 and 1500 milliseconds of silence (Goldman-Eisler, 1961). Pauses may be experienced as full silences or vocalization sounds, which are fundamental for speech flow (Esposito & Marinaro, 2007).

Pauses have a linguistic rationale; long pauses indicate the end of an utterance, whereas short pauses signal a coming related sentence (Esposito & Marinaro, 2007; Oliveira, 2002). Additionally, pauses express the process of deciding and articulating subsequent ideas (Esposito & Marinaro, 2007). Some pauses are meditated (Goldman-Eisler, 1961), whereas others happen naturally as ideas flow (Levelt, 1983). Besides this linguistic rationale, pauses are interpreted within a social and psychological context (Esposito *et al.*, 2008). For example, they denote people's socioeconomic status or education level (Abrams & Bever, 1969). Longer pauses may show doubt or poor knowledge about a topic. Consistently, longer pauses may denote anxiety, interruption in the flow of ideas (Oliveira, 2002), tension, or suspense (Esposito & Marinaro, 2007). Numerous long pauses can express dishonesty or stress (Dimmock &

Fisher, 2017). Conversely, minimizing the number and length of pauses leads to a higher speech rate, which is related to honesty, expertise (Miller *et al.*, 1976), and integrity-related attributes (Esposito *et al.*, 2008). Thus, an interphase pause is an alternative to increasing speed or compressing speech (Chattopadhyay *et al.*, 2003; Megehee *et al.*, 2003). Therefore, Hypothesis 1 (H1) is presented as follows.

H1. A short (long) interphase pause increases (decreases) perceived leader integrity compared to a normal interphase pause.

1.3. Fundamental frequency is about who you are

The pitch or fundamental frequency is a physical anatomical phenomenon caused by the vibration rate of vocal cords in the larynx (Dahl, 2011). Pitch is the most studied voice attribute (Mileva *et al.*, 2019) because it is the most salient (Baumann & Belin, 2010). Through pitch, people infer social dominance, size, and strength (Cheng *et al.*, 2016; Feinberg *et al.*, 2008). Moreover, because pitch is difficult to control, it is a trustworthy variable that provides information on a speaker's emotional state (Dietrich *et al.*, 2019). Hence, pitch may be more persuasive than words (Mehrabian & Wiener, 1967).

Research shows that a lower-pitched voice is better evaluated (Schirmer *et al.*, 2019; Zuckerman & Miyake, 1993). Men with lower-pitched voices are found to be more attractive, persuasive (Feinberg *et al.*, 2008; Jones *et al.*, 2010; Zuckerman & Miyake, 1993), trustworthy, and empathic (Apple *et al.*, 1979), and they tend to assume more dominant positions in society (Cheng *et al.*, 2016). When pitch increases, people are perceived as less competent and benevolent (Brown *et al.*, 1973). Hence, contrary to low-pitched voices, high-pitched voices are related to untrustworthiness and weakness (Apple *et al.*, 1979; Klofstad *et al.*, 2015; Mallory & Miller, 1958).

There is evidence of the role of pitch in the political context. Klofstad *et al.* (2012) found that people voted for men and women with lower-pitched voices and rated them with higher competency and trustworthiness than their counterparts with higher-pitched voices. In addition, political candidates with low-pitched voices are described with more positive attributes and are considered to have a greater sense of integrity and physical prowess (Tigue *et al.*, 2012). Reliably, low-pitched voices are perceived as more trustworthy in leadership roles (Cheng *et al.*, 2016).

Moreover, research suggests that the effects of speech rate and pitch interact. A person who talks fast with a falling intonation is perceived to have greater confidence when their voice is low-pitched. Conversely, a person who speaks with an increasing intonation slowly and with a high-pitched voice is perceived as more insecure (Guyer *et al.*, 2018). Also, fast speeches with a low fundamental frequency and nasal noise are perceived as more trustworthy (Schirmer *et al.*, 2019).

The elaboration likelihood model (ELM) supports this interaction. When a speaker talks too fast, listeners' cognitive involvement focuses on more peripheral cues such as pitch because it is difficult to understand the message. In the case of low involvement because of fast speech, a pitch that signals desired characteristics may be more effective because the listener focuses on the attributes (i.e., attractiveness, integrity, and capability) inferred from the speech rather than its content (Priester & Petty, 1995). As the listener focuses on the pitch rather than the content, a high-pitched voice strengthens perceptions of anxiety and weakness compared to a low-pitched voice (Klofstad *et al.*, 2015). The central route to elaborate a message (from ELM) requires high cognitive involvement, which is more likely to occur as the speech rate decreases and individuals can think about the content of the message and rational arguments (Priester & Petty, 1995, 2003; Smith & Shaffer, 1995). Hence, we expect the perceptual effects of the interphase pause on integrity to depend on pitch. Therefore, Hypothesis 2 (H2) is as follows.

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- H2. Pitch moderates the relationship between interphase pauses and perceived leader integrity.
- H2a. A high pitch negatively affects the relationship between pause and perceived leader integrity. Short (long) interphase pauses decrease (increase) the perceived leader integrity compared to normal interphase pauses.
- H2b. A low pitch positively affects the relationship between pause and perceived leader integrity. Short (long) interphase pauses increase (decrease) the perceived leader integrity compared to normal interphase pauses.

2. Method

A between-groups experiment was designed to evaluate the effect of interphase pauses and pitch on perceived integrity. Interphase pauses were manipulated through three-pause conditions: control (natural recorded level), longer pause (control +0.5 seconds), and shorter pause (all pauses were deleted considering complete articulation). Pitch was a moderating variable because it is an intrinsic characteristic of one's voice, and the experiment included two pitch conditions. Four mock candidates' voices were recorded: one female and one male with a low-pitched voice, and one female and one male with a high-pitched voice. The study was approved by the ethics committee of the university (Act 133).

2.1. Speech

The interphase pause was manipulated through a discourse written for this experiment. The discourse was framed in a simulated interview with a political candidate discussing plastic straws as a sustainability issue. This topic has been highly covered in media in recent years (Vegter *et al.*, 2014). Sustainability is central to public policy discussions (McNicholas & Cotton, 2019). Plastic straw production and consumption should be controlled to secure sustainability (McNicholas & Cotton, 2019). People demand a free-plastic world (Westbrook & Angus, 2021) and expect governments to solve or pay attention to this problem (McNicholas & Cotton, 2019). We asked the participants to imagine that the candidate was responding to the question *"If you are elected, would you be willing to ban the use of plastic straws?"*

Arguments in the discourse on the health and environmental consequences of plastic straw use were taken from Wright and Kelly (2017) and Schnurr *et al.* (2018). The final discourse included 20 interphase pauses (20 separated phrases). The discourse reads as follows (Interphase pauses are signaled by [*]):

A few years ago, the environment was not a central topic, but today it is a structural axis for any government [*]. Hence, the production and consumption of plastic is an issue that requires attention [*]. Some plastics are needed, but others are not; they are used once and discarded [*]. That is the case with plastic straws, which take 500 years to degrade [*]. A person uses a mean of 3.800 million plastic straws in life and discards them after a single use. That is a lot of waste and pollution [*].

Since plastic straws are too small to recycle, they end up in the ecosystem [*]: Near 4% of the plastic waste in the sea are straws. Besides the environmental effects, many species die because plastic straws cause them lesions and hinder their respiratory tract or digestive system [*]. Conversely, plastic straws do not biodegrade. They break into small parts called microplastics left in the air, water, and soil, so we breathe and consume them [*]. When small animals consume these straws, they enter our food chain and end up in our bodies [*]. Microplastic toxins can affect our nervous, reproductive, digestive, and respiratory systems [*]. Hence, there are also risks to human health [*].

This still recognizes that the plastic industry contributes significantly to the economy [*]. In 2019, the plastic industry represented more than 12000 million COP to the country, and nearly 0.02% came from plastic straw production [*]. Moreover, plastic straws contribute to nearly 100,000 jobs [*]. In addition, plastic straws prices are friendly such that they are preferred by small enterprises and consumers who cannot afford to buy straws made

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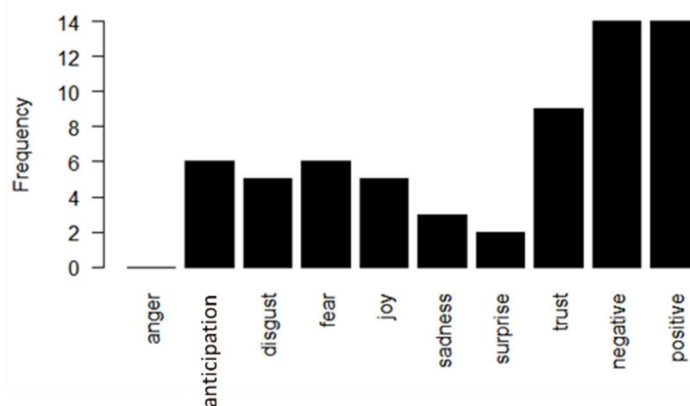
from sustainable materials [*]. Finally, it must be recalled that some people with special capabilities must use straws to consume liquids [*]. We must practice environmental policy with a clear vision as the environment is an important patrimony of the country, and we are worried about it, but we also want to protect our competitiveness and economy, bearing in mind the value of the plastic industry for our development [*]. The first straw you used in your life has not yet degraded [*]. We have to take care of the consumption and production of plastics [*]; this is a subject on which we must focus [*].

We conducted two preliminary studies to support our intention of a perceived partisan/position ambiguity, credibility, and emotional balance of our discourse. The first pre-study consisted of an expert-evaluation of the discourse ($n = 16$). The expert-participants were academics or practitioners in communication or political studies, and they reported having done research in politics or work on political campaigns. Their areas of interest were psychology, communication, and sustainable development (50%). Among them, 81.3% held a master's or doctoral degree; 56.3% were male and 43.8% female (mean age = 39.812 ± 12.068).

The experts were asked their opinions on the "response of a political candidate." None of them knew the purpose of the main experiment. After reading the candidate's response, the experts described the candidate's position on banning plastic straws. In their answers, 37.5% considered the candidate was in favor of banning plastic straws, 6.3% considered the candidate was against it, and 56.3% stated the candidate's response was ambiguous. Hence, we supported the discourse's idea of a partisan/position ambiguity. Next, the experts completed the message credibility scale, which validates the credibility of speech created for experimental purposes (Appelman & Sundar, 2016). On a 6-point Likert scale (1 = totally disagree; 6 = totally agree), the experts evaluated the extent to which the discourse seemed complete, concise, well-presented, objective, representative from an expert, impactful, and professional (Cronbach's $\alpha = 0.937$). The mean message credibility score was 3.44 ± 1.23 , which shows that the message was, on average, credible.

The second pre-study was an emotion analysis to test whether the discourse was charged with positive or negative emotions. When political speeches are charged with emotional content, people use them to understand the message rather than the arguments (Lamprianou & Ellinas, 2019). The analysis was conducted using the *Syuzhet* package (Jockers, 2015) for R v.3.6.1. The results indicated that the discourse contained an equal number of positive and negative emotions (14 each, Figure 1). Hence, we supported the idea that the speech was equally balanced with positive and negative emotions.

Figure 1. The speech's emotional content.



Source: Own elaboration.

2.2. Recordings

Two male and two female persons, approximately 40 years old, participated voluntarily as voice models for the experiment. Models of this age were selected because previous research suggested that people between 40 and 50 are easier to relate with political candidates based on their voice characteristics (Klofstad *et al.*, 2015). Moreover, the models were native Spanish speakers from the city where the study was conducted; they were considered to have good diction and a local accent. We selected one woman and one man with a higher-pitched voice and likewise for the lower-pitched voice. For the pitch classification, we used pitch categories from previous research based on the upper and lower bounds of adults' voice pitch between 40 and 50 years old. In men, a pitch below 100 Hz was considered low, while a pitch greater than 120 Hz was deemed high (Chattopadhyay *et al.*, 2003; Zoghaib, 2019). For women, a pitch below 200 Hz was considered low, while a pitch greater than 220 Hz was considered high (Bezooijen, 1995; Feinberg *et al.*, 2008). We used PRATT v.6.11.6 software (Table 1) to assess the voices' descriptive characteristics and validate our classification of voices as low-pitched or high-pitched. The software analysis confirmed one male and one female for each pitch condition. A musicologist validated our pitch classification.

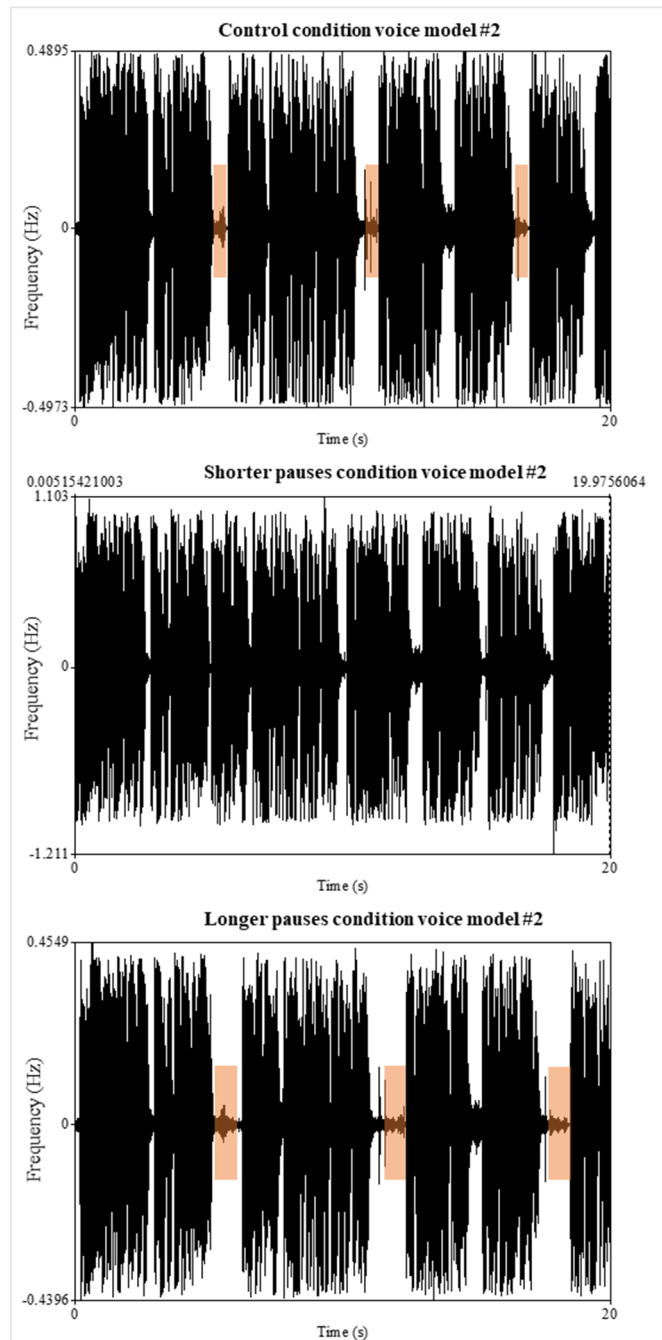
Table 1. Voice attributes.

| Attribute | Voice model 1 | Voice model 2 | Voice model 3 | Voice model 4 |
|--------------------------------------|---------------|---------------|---------------|---------------|
| Sex | Female | Male | Female | Male |
| Pitch (mean) (Hz) | 181.23 | 96.67 | 240.52 | 125.32 |
| Intensity (mean) (dB) | 69.22 | 77.00 | 82.32 | 78.83 |
| Length (control condition) (seconds) | 148.57 | 153.09 | 175.55 | 156.23 |

Source: Own elaboration.

The voice models received the discourse in writing. They were encouraged to speak naturally, without time constraints, and to use clear pronunciation. After the recordings, a digital print of the background noise was captured and isolated from the rest, eliminating any noise that was not part of the speech. The voices were manipulated in Adobe Audition 2020 software. Figure 2 shows an example of the control condition and the two voice manipulations. Interphase pauses for the control condition corresponded to the original recording. For the short interphase pause condition, interphase pauses from the control condition were deleted to a minimum level, securing intelligibility. The short condition cut an average of 12 seconds from the control recordings.

Figure 2. Manipulation sample: Spectrogram for voice model 2 (first 20 seconds).



Source: Own elaboration.

Finally, to create the long pause condition, we cut a filled pause from the original recording of each candidate and pasted it onto the same recording to elongate the pause. A filled pause was when the air was in the mouth, and the speaker was about to pronounce the following idea. Filling the long pause with this natural moment guarantees a sense of continuity in speech. The pause captured lasted 0.5 seconds, the average interphase pause in a regular conversation (Grosjean & Lane, 1976). These captures were inserted where voice models made the original interphase pauses, resulting in double-time pauses. By adding 0.5 seconds to the 20 pauses of the speech, the long pause condition resulted in having 10 seconds more than the control condition. After the manipulations, a musicologist evaluated whether the altered conditions seemed natural, validating the stimuli.

2.3. Participants

The participants were graduate and undergraduate students ($n = 468$) at a University in Cali (Colombia). Because of this context, the participants were all Hispanics and native Spanish speakers. They received partial course credit as an incentive for their voluntary participation. They ranged in age from 18 to 38 years old, with a mean age of 21.40 ($SD = 3.97$). Of the total sample, 41.5% were male, 58.3% female, and 0.2% identified themselves as other. All of them reported having normal hearing. A majority said they had voted in previous elections (73%). The participants rated their interest in politics on a 6-point Likert scale (1 = Nothing, 6 = A lot), and the mean response was 4.34. The experiment was done in the participants' native language, Spanish.

2.4. Procedure

The participants were asked to join a study that evaluated a political candidate. If they decided to participate, they followed the link provided in an email invitation and received the instructions. First, they were asked to adjust their device's sound to a level they could hear well. Research shows that in experiments that use sound stimuli and are conducted by computer, listeners' performance is better if they can adjust the device to a level of comfortable speech intelligibility (Hochberg, 1975).

The participants were randomly assigned to an interphase pause condition and one of the four mock political candidates, 39 participants per cell. The following framing message appeared on the screen: "You are about to listen to the response a candidate in the local elections gave to this question: Would you be willing to ban plastic straws?" The participants were instructed to listen to the political candidate's speech. They could play the recording as many times as they wanted. Then, they rated their expectations of the candidate's ethical leadership. Each participant was exposed to one candidate in one interphase pause condition. As a manipulation check, they rated the following statement on a 6-point Likert scale (1 = Totally disagree; 6 = Totally agree): "When finishing a phrase, the candidate took long to pronounce the following phrase." The results revealed a significant difference in the responses to this item ($F(2, 465) = 2.913$; $p = 0.055$; $M_{Long} = 3.12$; $M_{Control} = 3.03$; $M_{Short} = 2.74$), indicating that the participants could discern the variation in interphase pauses.

2.5. Measures

Integrity was measured using the perceived leader integrity scale proposed by Moorman *et al.* (2013). To adapt the scale to a political context, we included some items that measure expectations for politicians' ethical behavior (McAllister, 2000). Perceived leader integrity was addressed with the following prompt: "After hearing the candidate's response, please rate to what extent you agree to the following sentences regarding the candidate." The answer choices were "Acts to benefit the greater good," "Protects the rights of others," "Treats people fairly," "Treats people with care and respect," "Serves to improve society," "Is honest," "Is not afraid to stand up for beliefs," "Does right even when unpopular," "Delivers on promises" (Moorman *et al.*, 2013), and "Has a high personal moral code" (McAllister, 2000). The participants rated these 10 items on a 6-point Likert scale (1 = Totally disagree, 6 = Totally agree) (Cronbach's $\alpha = 0.91$).

3. Results

We conducted a two-way ANOVA using IBM SPSS 26. The variables were interphase pause (independent variable) (short, control, and long), candidates' voice pitch (moderator) (1 = High, 0 = Low), and perceived leader integrity (dependent variable). Before testing the effect of interphase pauses on perceived leader integrity, we controlled the participants' demographic variables and the candidates' sex. The descriptive statistics in Table 2 show no relationship between the perceived leader integrity and the candidates' sex or pitch or with

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participants' interest in politics or sex age ($p > 0.1$). However, there is a significant correlation with the participants' age ($p < 0.01$); therefore, this variable is included in the model as a covariate.

Table 2. Descriptive Statistics.

| Variable | Mean | SD | 1 | 2 | 3 | 4 | 5 |
|---------------|-------|------|----------|--------|-------|---------|-------|
| 1. PLI | 4.48 | 0.80 | | | | | |
| 2. Pitch | 0.50 | 0.50 | 0.04 | | | | |
| 3. C. Sex | 1.50 | 0.50 | 0.08 | 0.00 | | | |
| 4. Polit_Int. | 4.34 | 1.22 | -0.01 | 0.15** | -0.05 | | |
| 5. Age | 21.42 | 3.95 | -0.123** | -0.01 | -0.03 | 0.05 | |
| 6. P. Sex | 1.59 | 0.50 | -0.04 | -0.05 | 0.07 | -0.110* | -0.03 |

** 0.01; * 0.05. PLI: Perceived Leader Integrity. Pitch: High = 1, Low = 0. Candidate's/Participant's sex: Male = 1, Female = 2. Polit_Int = Interest in politics.

Source: Own elaboration.

The assumptions for the two-way ANOVA (3 interphase pauses \times 2 pitch) are met; data within the subgroups follow a normal distribution, and Levene's test shows that the variances of the groups are equal ($F(5, 462) = 0.63$; $p = 0.68$). The model confirms that the participants' age is a significant control variable ($F(2, 461) = 7.24$; $p = 0.000$; $\eta^2 = 0.015$); namely, the perception of a candidate's integrity decreases as the participant's age increases. The participant's age explains almost 2% of the variance in perceived leader integrity.

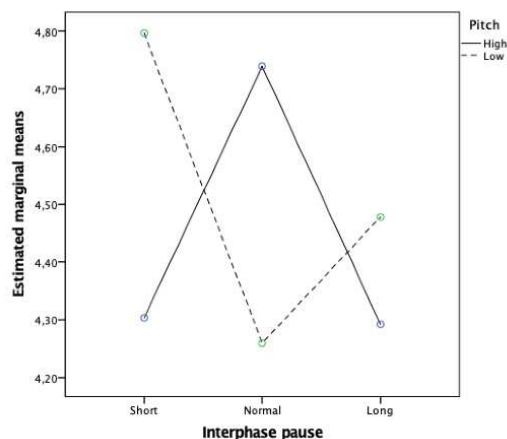
The results of the two-way ANOVA show that the main effects are not significant. Thus, perceived leader integrity does not differ between the three interphase pause conditions, failing to support H1 ($F(2, 461) = 1.88$; $p = 0.15$). Likewise, it does not differ between candidates with a low- or high-pitched voice ($F(1, 461) = 0.88$; $p = 0.35$). However, the interaction effect is significant ($F(2, 461) = 16.27$; $p = 0.000$; $\eta^2 = 0.07$), and there is a combined effect for interphase pause and pitch that explains 7% of the variance on perceived leader integrity. Figure 3 shows the moderating effect of pitch and how H2a and H2b are partially supported.

When the candidate's voice is high-pitched, the three interphase pause conditions differ ($F(2, 461) = 8.46$; $p = 0.000$; $\eta^2 = 0.035$). A pairwise comparison reveals specific differences among the conditions. For the discourse given by a candidate with a high-pitched voice, the short interphase pause ($M = 4.30$) yields a significantly ($p < 0.001$) lower perceived leader integrity compared to a normal interphase pause ($M = 4.74$). Likewise, although unexpected, the long interphase pause ($M = 4.29$) yields a significantly ($p < 0.001$) lower perceived leader integrity compared to a normal interphase pause. Moreover, when the candidate's voice has a high pitch, there is no significant difference ($p > 0.1$) between the short and long interphase pauses on the perceived leader integrity. Thus, a normal pause in speech yields relatively better integrity results when the candidate has a high pitch.

Within the low-pitch condition, perceived leader integrity differs by the interphase pause ($F(2, 461) = 9.52$; $p = 0.000$; $\eta^2 = 0.04$). With short interphase pauses ($M = 4.80$), perceived leader integrity increases ($p < 0.001$) in comparison to the normal interphase pauses condition ($M = 4.26$). Listening to the short interphase pause discourse also improves ($p < 0.01$) perceived leader integrity compared to the long interphase pause ($M = 4.48$). However, the perceived leader integrity within a long interphase pause condition does not differ ($p > 0.05$) from the normal interphase pause condition.

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Figure 3. Interphases pause moderated by pitch.



Source: Own elaboration.

4. Discussion

The findings show that, to some extent, speech attributes can influence the perception of a leader's integrity. We evaluated one speech attribute that is relatively easy to manage (pause) and one that is more challenging to manage because it is an intrinsic characteristic given by the speaker's anatomy (pitch). Although pitch is more challenging to control, communication research has examined its effect (Mileva *et al.*, 2019), whereas the effect of pauses remains a gap in the communication literature. Therefore, by examining the interaction between interphase pause and pitch, this study opens new variables to the literature on communication (Dahl, 2011). Moreover, results contribute to the gap in the literature related to the speech rate, particularly the interphase pauses, which should be managed according to the spokesperson pitch to improve the listeners' perceptions.

Although linguistics acknowledges that pauses are a fundamental speech element (Esposito & Marinaro, 2007; Grosjean & Lane, 1976), we did not find a direct effect of interphase pause, failing to support hypothesis one. Instead, pitch shifts the relationship between pauses and perceived integrity. This is a valuable finding because although pitch is the most salient component of voice, and people instinctively use it to make inferences about the spokesperson (Baumann & Belin, 2010), previous literature showed that the perceived effect of pitch is not consistent (Dahl, 2011). Along with pitch, perception is influenced by the extent to which the listener can elaborate on the message (Priester & Petty, 1995).

Therefore, this research suggests that candidates' pitch moderates the relationship between interphase pauses and perceived integrity (H2). Regarding high-pitched voices, the results partially support H2a: a short interphase pause decreases the perceived leader integrity compared to a normal pause. However, perceived leader integrity is similar across the short and long-interphase conditions. Therefore, the best alternative for candidates with a high-pitched voice is to keep a natural interphase pause (0.5 seconds per phrase). This is probably because a high-pitched voice is related to untrustworthiness, weakness (Apple *et al.*, 1979; Klostad *et al.*, 2015; Mallory & Miller, 1958), anxiety, and less competence (Brown *et al.*, 1973), attributes that would be strengthened under a short interphase condition that requires a low cognitive effort compared to a normal condition. Given a short interphase pause, the interpretation of fast speech is guided by the emotional information gathered from the voice rather than the content of the message. Likewise, a message delivered with a high-pitched voice and extended interphase pauses negatively impacts perceived leader integrity. Even though the long interphase structure enables more cognitive elaboration, it appears that the low-pitch voice attributes remain. Therefore, consistent long pauses do not improve communication effectiveness for a high-pitch voice.

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These results partially support hypothesis H2b: candidates with a low-pitched voice give a higher sense of integrity when making short interphase pauses. A low-pitched voice is perceived as attractive, and people prefer low-pitched processing voices as peripheral cues and feel they have enough resources to make evaluations based on that pitch (Priester & Petty, 1995). At the same time, interphase pauses enable listeners to do content analysis. Thus, given a neutral context like the one we presented, the participants did not seem concerned about comprehending ideas and preferred the low-pitch message delivered quickly with short interphase pauses. When these candidates have a long or natural pause, their perceived integrity decreases.

In a threatening context like war or economic crisis, lower-pitched voices are associated with dominant autocratic behaviors (Connor & Barclay, 2017) and physical prowess rather than integrity (Tigue *et al.*, 2012). However, in a neutral or calm context, the dominant behaviors inspired by low-pitch voices are associated with self-confidence and strength. For example, Barack Obama's low-pitch voice was managed with a fluent pace that created engagement and allowed some pauses for the audience to reflect on the message while getting the humor of what he was saying (Navarretta, 2017).

Several contributions are observed from our research. We show that interphase pauses are a relevant speech component that triggers perception, contributing to the scarce research that recognizes the psychological value of pauses (Chattopadhyay *et al.*, 2003; Megehee *et al.*, 2003). The evaluation of the interphase pause variable responds to a gap in the communication literature; this evaluation extends the understating of the effect of speed and attributes that a spokesperson can manage. However, we find no unique pausing cue in a discourse; pauses should be used thoughtfully to strengthen the communicator's intrinsic voice characteristics and communication purposes. This study expects to highlight interphase pauses as a manageable speech variable that influences intrinsic voice characteristics. The empirical evidence of this study shows that interphase pauses do not directly affect a leader's perception. Interphase pauses interact with pitch to influence the communication style and the audience's perception of a political persona.

Moreover, this is the first study to evaluate the effect of interphase pause in a political context to evaluate the perception of leaders' integrity, thus contributing to the discipline of political communication. We evaluated integrity using a multidimensional scale that includes the elements of morality and consistency. Previous research addressing the effect of speech attributes on integrity used single items to measure this perception (Amira *et al.*, 2018; Klofstad *et al.*, 2012, 2015; Mileva *et al.*, 2019; Tigue *et al.*, 2012). Hence, we support that speech cues affect integrity as a construct. Although the literature recognizes integrity as a prerequisite for a good leader (Palanski & Yammarino, 2009), empirical research on the mechanisms that shape perceived integrity remains limited (Moorman *et al.*, 2018).

This work links ideas from political science (nonrational evaluation of political candidates), psychology (voice perception), linguistics (pauses), and leadership sciences (perceived leader integrity), using a practical approach that helps to expand the existing communication research. Communicators and marketing advisors are becoming more strategic in using sensory cues (Strach *et al.*, 2015) to manage the construction of political personas (Marshall & Henderson, 2016). A political candidate's message extends its objective proposals and views of the party to include emotional information that inspires trust and governability (Manfredi *et al.*, 2021) while reflecting the contextual needs of the electorate.

Regarding the practical implications of this study, we expect professionals who create communication campaigns to benefit from the findings. That is, as a strategic communication tool, pauses should be used in consideration of the speaker's natural voice pitch. Further, although our study is specific to a political context, the results may be extrapolated to other situations. Because strategic communication and integrity are key elements for building a public image (Marshall & Henderson, 2016), we believe our results can be applied to different

settings, such as private or public organizations. For example, a common advertising practice is to create a shorter version of the original ad when the message reaches recall and saturation. Modifying interphase pauses may be an alternative to shortening versions of communications that reduce advertising costs (Chattopadhyay *et al.*, 2003; Miller *et al.*, 1976; Zoghaib, 2019). However, as the empirical evidence of our research shows, the shorter version (i.e., minimizing interphase pauses) must consider the pitch of the spokesperson used in the ad.

In conclusion, this research shed light on interphase pauses as an overlooked phenomenon that may have psychological effects on communication. The focus was on leadership integrity, an expected attribute for people in leadership positions. The results support that silences can be used strategically in communication, but they should be managed according to the characteristics of the speaker's voice, namely, pitch.

5. Limitations and future studies

Some limitations of this study should be mentioned and explained as an opportunity for future research. First, we conducted a laboratory experiment that may reduce the ecological validity of the findings. Future research should evaluate the effect with an uncontrolled population – for instance, the effect of interphase pauses on social networks or different virtual environments. Moreover, voice, speech rate, and pitch are easier to manage in virtual environments that have daily interaction with individuals.

Second, regarding context and sample characteristics, our study was conducted with a Spanish-speaking population: candidates (i.e., voices in the study) and participants/audience. It would gain reliability by addressing an international population because voice characteristics (i.e., speed, pause, and pitch) may vary across languages or contexts. There are normalized speech rates within cultures or contexts, which is how fast-slow speech occurs and is expected (Bosker, 2017). Individuals influence each other through their speech; the speech rate of a person influences the perception of another, who then assumes a similar speech rate. Therefore, the speech rate in one context is normalized but may differ from another. Future research should expand on language attributes as a context characteristic that may influence the speech rate and perception of the spokesperson. Age is another sample characteristic that could be improved in future studies. The average age of the sample was 21 years. However, expectations about a political persona change according to voters' age. Future research should explore speech perception within older populations.

Third, the speech content in this study evaluates the use of plastic straws; future research should expand on different social matters. Although we confirm that the content of the speech was emotionally ambiguous, there is an overall social concern about the use, production, and consumption of plastic (McNicholas & Cotton, 2019). However, there are other social and economic issues that require strategic communication, such as fracking, abortion, or migration. Moreover, communication in electoral campaigns could become complex and damaging among parties (Fridkin & Kenney, 2011; Geer, 2012). Thus, moments or issues of social concern engender polarization and require a strategic focus on communication attributes. Communication within a problematic context or situation differs from the communication that governments usually conduct (Riorda, 2011).

Instead, a problematic or polarized context requires direct messages, minimizing the tone of uncertainty, issues that have several interpretations, or difficulties in understanding (Riorda, 2011). Our research would suggest considering the pauses in speech and the spokesperson's pitch when analyzing the potential effect of a polarized issue. Moreover, addressing controversial issues inadequately during electoral campaigns can even cost a candidate the election. Finally, speech is a complex variable, given the nature of the human voice. Research that evaluates the effect of voice should consider other attributes like timbre and a more extensive pool of voices.

References

- Abrams, K. & Bever, T. (1969). Syntactic Structure Modifies Attention during Speech Perception and Recognition. *The Quarterly Journal of Experimental Psychology*, 21, 280–290.
<https://www.doi.org/10.1080/14640746908400223>
- Amira, K., Cooper, C. A., Knotts, H. G. & Wofford, C. (2018). The Southern Accent as a Heuristic in American Campaigns and Elections. *American Politics Research*, 46(6), 1065–1093.
<https://www.doi.org/10.1177/1532673X18755655>
- Appelman, A. & Sundar, S. S. (2016). Measuring message credibility: Construction and validation of an exclusive scale. *Journalism and Mass Communication Quarterly*, 93(1), 59–79. <https://www.doi.org/10.1177/1077699015606057>
- Apple, W., Streeter, L. A. & Krauss, R. M. (1979). Effects of pitch and speech rate on personal attributions. *Journal of Personality and Social Psychology*, 37(5), 715–727.
<https://www.doi.org/10.1037/0022-3514.37.5.715>
- Avolio, B. J., Bass, B. M. & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership. *Journal of Occupational and Organizational Psychology*, 72(4), 441–462.
<https://www.doi.org/10.1348/096317999166789>
- Baumann, O. & Belin, P. (2010). Perceptual scaling of voice identity: common dimensions for different vowels and speakers. *Psychological Research*, 74(1), 110–120.
<https://www.doi.org/10.1007/s00426-008-0185-z>
- Becker, T. E. (1998). Integrity in organizations: Beyond honesty and conscientiousness. *Academy of Management Review*, 23(1), 154–161.
<https://www.doi.org/10.5465/AMR.1998.192969>
- Bezooijen, R. Van. (1995). Sociocultural aspects of Pitch Differences between Japanese and Dutch Women. *Language and Speech*, 38(3), 253–265.
<https://www.doi.org/10.1177/00238309950380030>
- Bosker, H. R. (2017). How our own speech rate influences our perception of others. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 43(8), 1225–1238.
<https://www.doi.org/10.1037/xlm0000381>
- Brown, B. L., Strong, W. J. & Rencher, A. C. (1973). Perceptions of personality from speech: Effects of manipulations of acoustical parameters. *Journal of the Acoustical Society of America*, 54(1), 29–35. <https://www.doi.org/10.1121/1.1913571>
- Brown, M. E., Treviño, L. K. & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes*, 97, 117–134. <https://www.doi.org/10.1016/j.obhdp.2005.03.002>
- Bruneau, J. (1973). Communicative Silences: Forms and Functions. *The Journal of Communication*, 23(1), 17–46. <https://www.doi.org/10.1111/j.1460-2466.1973.tb00929.x>
- Chattopadhyay, A., Dahl, D. W., Ritchie, R. J. B. & Kimary, N. (2003). Hearing Voices: The Impact of Announcer on Consumer Response Speech Characteristics to Broadcast Advertising. *Journal of Consumer Psychology*, 13(3), 198–204.
https://www.doi.org/10.1207/S15327663JCP1303_02
- Cheng, J. T., Tracy, J. L., Ho, S. & Henrich, J. (2016). Listen, Follow Me: Dynamic Vocal Signals of Dominance Predict Emergent Social Rank in Humans. *Journal of Experimental Psychology: General*, 145(5), 536–547. <https://www.doi.org/10.1037/xge0000166>
- Connor, J. J. M. O. & Barclay, P. (2017). The influence of voice pitch on perceptions of trustworthiness across social contexts. *Evolution and Human Behavior*, 38(4), 506–512.
<https://www.doi.org/10.1016/j.evolhumbehav.2017.03.001>
- Craig, S. B. & Gustafson, S. B. (1998). Perceived leader integrity scale: An instrument for assessing employee perceptions of leader integrity. *Leadership Quarterly*, 9(2), 127–145.
[https://www.doi.org/10.1016/S1048-9843\(98\)90001-7](https://www.doi.org/10.1016/S1048-9843(98)90001-7)

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- Dahl, D. W. (2011). Understanding the role of spokesperson voice in broadcast advertising. In A. Krishna (Ed.), *Sensory Marketing* (pp. 169–182). New York: Routledge.
- Dietrich, B., Hayes, M. & O'Brien, D. (2019). Pitch Perfect: Vocal Pitch and the Emotional Intensity of Congressional Speech. *American Political Science Review*, 113(4), 941–962. <https://www.doi.org/10.1017/S0003055419000467>
- Dimmock, M. & Fisher, A. (2017). Telling Lies. In *Ethics for A-Level* (pp. 208–217). Open Book Publishers. <https://www.doi.org/10.11647/obp.0125.13>
- Dunn, C. (2009). Integrity matters. *International Journal of Leadership Studies*, 5(2), 102–125. Retrieved from https://www.regent.edu/acad/global/publications/ijls/new/vol5iss2/IJLS_vol5_iss2_dunn_integrity_matters.pdf
- Esposito, A., Ech, V. & Ek, Z. (2008). Cognitive Role of Speech Pauses and Algorithmic considerations for their processing. *International Journal of Pattern Recognition and Artificial Intelligence*, 22(5), 1073–1088. <https://www.doi.org/10.1142/S0218001408006508>
- Esposito, A. & Marinaro, M. (2007). What Pauses Can Tell Us about Speech and Gesture Partnership. In *Fundamentals of Verbal and Nonverbal Communication and the Biometric Issue* (Issue January 2007, pp. 45–57). IOS press.
- Feinberg, D. R., DeBruine, L. M., Jones, B. C. & Little, A. C. (2008). Correlated preferences for men's facial and vocal masculinity. *Evolution and Human Behavior*, 29(4), 233–241. <https://www.doi.org/10.1016/j.evolhumbehav.2007.12.008>
- Feinberg, D. R., DeBruine, L. M., Jones, B. C. & Perrett, D. I. (2008). The role of femininity and averageness of voice pitch in aesthetic judgments of women's voices. *Perception*, 37(4), 615–623. <https://www.doi.org/10.1068/p5514>
- Frank, R. W. & Martínez i Coma, F. (2017). How election dynamics shape perceptions of electoral integrity. *Electoral Studies*, 48, 153–165. <https://www.doi.org/10.1016/j.electstud.2017.05.007>
- Fridkin, K. L. & Kenney, P. J. (2011). Variability in Citizens' Reactions to Different Types of Negative Campaigns. *American Journal of Political Science*, 55(2), 307–325. <https://www.doi.org/10.1111/j.1540-5907.2010.00494.x>
- Geer, J. G. (2012). The News Media and the Rise of Negativity in Presidential Campaigns. *PS: Political Science & Politics*, 45(3), 422–427. <https://www.doi.org/10.1017/S1049096512000492>
- Goldman-Eisler, F. (1961). The Distribution of Pause Durations in Speech. *Language and Speech*, 4(4), 232–237. <https://www.doi.org/10.1177/002383096100400405>
- Grosjean, F. & Lane, H. (1976). How the Listener Integrates the Components of Speaking Rate. *Journal of Experimental Psychology: Human Perception and Performance*, 2(4), 538–543.
- Guyer, J. J., Fabrigar, L. R. & Vaughan-Johnston, T. I. (2018). Speech Rate, Intonation, and Pitch: Investigating the Bias and Cue Effects of Vocal Confidence on Persuasion. *Personality and Social Psychology Bulletin*, 45(3), 389–405. <https://www.doi.org/10.1177/0146167218787805>
- Hassell, H. J. G. (2020). It's Who's on the Inside that Counts: Campaign Practitioner Personality and Campaign Electoral Integrity. *Political Behavior*, 42(4), 1119–1142. <https://www.doi.org/10.1007/s11109-019-09535-y>
- Hochberg, I. (1975). Most Comfortable Listening for the Loudness and Intelligibility of Speech. *Audiology*, 14(1), 27–33. <https://www.doi.org/10.3109/00206097509071720>
- Jockers, M. (2015). *Syuzhet: Extract Sentiment and Plot Arcs from Text*. Retrieved from <http://www.matthewjockers.net/2015/02/02/syuzhet/>
- Jones, B. C., Feinberg, D. R., DeBruine, L. M., Little, A. C. & Vukovic, J. (2010). A domain-specific opposite-sex bias in human preferences for manipulated voice pitch. *Animal Behaviour*, 79(1), 57–62. <https://www.doi.org/10.1016/j.anbehav.2009.10.003>

**Pause and pitch:
the influence on political candidates' perceived integrity**

- Klofstad, C. A., Anderson, R. C. & Nowicki, S. (2015). Perceptions of Competence, Strength, and Age Influence Voters to Select Leaders with Lower-Pitched Voices. *PLoS ONE*, *10*(8), e0133779. <https://www.doi.org/10.1371/journal.pone.0133779>
- Klofstad, C. A., Anderson, R. C., Peters, S., Klofstad, C. A. & Anderson, R. C. (2012). Sounds like a winner: voice pitch influences perception of leadership capacity in both men and women. *Proceedings of the Royal Society B*, *279*(1738), 2698–2704. <https://www.doi.org/10.1098/rspb.2012.0311>
- Lamprianou, I. & Ellinas, A. A. (2019). Emotion, Sophistication and Political Behavior: Evidence from a Laboratory Experiment. *Political Psychology*, *40*(4), 859–876. <https://www.doi.org/10.1111/pops.12536>
- Lasthuizen, K., Heres, L. & Webb, W. (2019). Ethical Leadership within the Public and Political Realm : A Dance with Wolves ? *Public Integrity*, *21*(6), 549–552. <https://www.doi.org/10.1080/10999922.2019.1667663>
- Levelt, W. J. M. (1983). Monitoring and self-repair in speech. *Cognition*, *14*(1), 41–104. [https://www.doi.org/10.1016/0010-0277\(83\)90026-4](https://www.doi.org/10.1016/0010-0277(83)90026-4)
- Mallory, E. B. & Miller, V. B. (1958). A possible basis for the association of voice characteristics and personality traits. *Speech Monographs*, *25*(4), 255–260. <https://www.doi.org/10.1080/03637755809375240>
- Manfredi, L., Arboleda, A. M. & Arroyo, C. (2021). Put on Your Best Face! Facial Displays Influence on Perceived Trust and the Governing Capability. *Ciencia Política*, *16*(32), 105–128. <https://www.doi.org/10.15446/cp.v16n32.98350>
- Marshall, P. D. & Henderson, N. (2016). *Political persona. An introduction*. Persona Studies. Retrieved from <https://search.informit.org/doi/pdf/10.3316/informit.968814098139910>
- Mayer, R. C., Davis, J. H. & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *The Academy of Management Review*, *20*(3), 709–734. <https://www.doi.org/10.2307/258792>
- McAllister, I. (2000). Keeping them honest: Public and elite perceptions of ethical conduct among Australian legislators. *Political Studies*, *48*(1), 22–37. <https://www.doi.org/10.1111/1467-9248.00248>
- McNicholas, G. & Cotton, M. (2019). Stakeholder perceptions of marine plastic waste management in the United Kingdom. *Ecological Economics*, *163*(Sept.), 77–87. <https://www.doi.org/10.1016/j.ecolecon.2019.04.022>
- Megehee, C., Dobie, K. & Grant, J. (2003). Time versus Pause Manipulation in Communications Directed to the Young Adult Population: Does It Matter? *Journal of Advertising Research*, *43*(3), 281–292. <https://www.doi.org/10.1017/S0021849903030277>
- Mehrabian, A. & Wiener, M. (1967). Decoding of inconsistent communications. *Journal of Personality and Social Psychology*, *6*(1), 109–114. <https://www.doi.org/10.1037/h0024532>
- Mileva, M., Tompkinson, J., Watt, D. & Burton, A. M. (2018). Audiovisual integration in social evaluation. *Journal of Experimental Psychology: Human Perception and Performance*, *44*(1), 128–138. <https://www.doi.org/10.1037/xhp0000439>
- Mileva, M., Tompkinson, J., Watt, D. & Burton, A. M. (2019). The Role of Face and Voice Cues in Predicting the Outcome of Student Representative Elections. *Personality and Social Psychology Bulletin*, *46*(4), 617–625. <https://www.doi.org/10.1177/0146167219867965>
- Miller, N., Maruyama, G., Beaber, R. J. & Valone, K. (1976). Speed of speech and persuasion. *Journal of Personality and Social Psychology*, *34*(4), 615–624. <https://www.doi.org/10.1037/0022-3514.34.4.615>
- Moore, D. L., Hausknecht, D. & Thamodaran, K. (1986). Time compression, response opportunity, and persuasion. *Journal of Consumer Research*, *13*(1), 85–99. <https://www.doi.org/10.1086/209049>
- Moorman, R. H., Blakely, G. L. & Darnold, T. C. (2018). Understanding How Perceived Leader Integrity Affects Follower Trust: Lessons from the Use of Multidimensional Measures of

- Integrity and Trust. *Journal of Leadership and Organizational Studies*, 25(3), 277-289. <https://www.doi.org/10.1177/1548051817750544>
- Moorman, R. H., Darnold, T. C. & Priesemuth, M. (2013). Perceived leader integrity: Supporting the construct validity and utility of a multi-dimensional measure in two samples. *Leadership Quarterly*, 24(3), 427-444. <https://www.doi.org/10.1016/j.leaqua.2013.02.003>
- Moorman, R. H. & Grover, S. (2009). Why Does Leader Integrity Matter to Followers? An Uncertainty Management-based Explanation. *International Journal of Leadership Studies*, 5(2), 102-114. Retrieved from <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=287104621849ff502507b64431f7a63c1b3b1deo>
- Morgan, R. M. & Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58(3), 20-38. <https://www.doi.org/10.1177/002224299405800302>
- Navarretta, C. (2017). Prediction of Audience Response from Spoken Sequences , Speech Pauses and Co-speech Gestures in Humorous Discourse by Barack Obama. 8th IEEE International Conference on Cognitive Infocommunications, CogInfoCom, 327-332. <https://www.doi.org/10.1109/CogInfoCom.2017.8268265>
- Newman, B. (2003). Integrity and Presidential Approval, 1980-2000. *The Public Opinion Quarterly*, 67(3), 335-367. <https://www.doi.org/10.1086/377242>
- Oliveira, M. (2002). The Role of Pause Occurrence and Pause Duration in the Signaling of Narrative Structure. *Advances in Natural Language Processing: Third International Conference*, 43-51. Retrieved from <https://link.springer.com/book/10.1007/3-540-45433-0#page=53>
- Palanski, M. E. & Yammarino, F. J. (2007). Integrity and Leadership: Clearing the Conceptual Confusion. *European Management Journal*, 25(3), 171-184. <https://www.doi.org/10.1016/j.emj.2007.04.006>
- Palanski, M. E. & Yammarino, F. J. (2009). Integrity and leadership: A multi-level conceptual framework. *Leadership Quarterly*, 20(3), 405-420. <https://www.doi.org/10.1016/j.leaqua.2009.03.008>
- Priester, J. R. & Petty, R. E. (1995). Source Attributions and Persuasion: Perceived Honesty as a Determinant of Message Scrutiny. *Personality and Social Psychology Bulletin*, 21(6), 637-654. <https://www.doi.org/10.1177/0146167295216010>
- Priester, J. R. & Petty, R. E. (2003). The Influence of Spokesperson Trustworthiness on Message Elaboration, Attitude Strength, and Advertising Effectiveness. *Journal of Consumer Ps*, 13(4), 408-421.
- Rezlescu, C., Penton, T., Walsh, V., Tsujimura, H., Scott, S. K. & Banissy, M. J. (2015). Dominant voices and attractive faces: The contribution of visual and auditory information to integrated person impressions. *Journal of Nonverbal Behavior*, 39(4), 355-370. <https://www.doi.org/10.1007/s10919-015-0214-8>
- Riorda, M. (2011). La comunicación gubernamental como comunicación gubernamental. *Politai: Revista de Ciencia Política*, 2(3), 96-111. Retrieved from <https://revistas.pucp.edu.pe/index.php/politai/article/view/13956>
- Schaffner, B. & Streb, M. (2002). The Partisan Heuristic in Low-Information Elections. *Public Opinion Quarterly*, 66(4), 559-581. <https://www.doi.org/10.1086/343755>
- Schirmer, A., Feng, Y., Sen, A. & Penney, T. B. (2019). Angry, old, male – and trustworthy? How expressive and person voice characteristics shape listener trust. *Plos ONE*, 14(1), e0210555. <https://www.doi.org/10.1371/journal.pone.0210555>
- Schnurr, R. E. J., Alboiu, V., Chaudhary, M., Corbett, R. A., Quanz, M. E., Sankar, K., Srain, H. S., Thavarajah, V., Xanthos, D. & Walker, T. R. (2018). Reducing marine pollution from single-use plastics (SUPs): A review. *Marine Pollution Bulletin*, 137(December), 157-171. <https://www.doi.org/10.1016/j.marpolbul.2018.10.001>

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- Simons, T. (1999). Behavioral integrity as a critical ingredient for transformational leadership. *Journal of Organizational Change Management*, 12(2), 89-104. <https://www.doi.org/10.1108/09534819910263640>
- Simons, T. (2002). Behavioral Integrity: The perceived alignment between managers' words and deeds as a research focus. *Organization Science*, 13(1), 18-35. <https://www.doi.org/10.1287/orsc.13.1.18.543>
- Smith, S. & Shaffer, D. (1995). Speed of Speech and Persuasion: Evidence for Multiple Effects. *Personality and Individual Differences*, 21(10), 1051-1060. <https://www.doi.org/10.1177/01461672952110006>
- Strach, P., Zuber, K., Franklin, E., Ridout, T. N. & Searles, K. (2015). In a Different Voice? Explaining the Use of Men and Women as Voice-Over Announcers in Political Advertising. *Political Communication*, 32(2), 183-205. <https://www.doi.org/10.1080/10584609.2014.914614>
- Tigue, C. C., Borak, D. J., Connor, J. J. M. O., Schandl, C. & Feinberg, D. R. (2012). Voice pitch influences voting behavior. *Evolution and Human Behavior*, 33(3), 210-216. <https://www.doi.org/10.1016/j.evolhumbehav.2011.09.004>
- Treviño, L. K., Brown, M. & Hartman, L. P. (2003). A qualitative investigation of perceived executive ethical leadership: Perceptions from inside and outside the executive suite. *Human Relations*, 56(1), 5-37. <https://www.doi.org/10.1177/0018726703056001448>
- Vegter, A. C., Barletta, M., Beck, C., Borrero, J., Burton, H., Campbell, M. L., Costa, M. F., Eriksen, M., Eriksson, C., Estrades, A., Gilardi, K. V. K., Hardesty, B. D., Ivar do Sul, J. A., Lavers, J. L., Lazar, B., Lebreton, L., Nichols, W. J., Ribic, C. A., Ryan, P. G., ... Hamann, M. (2014). Global research priorities to mitigate plastic pollution impacts on marine wildlife. *Endangered Species Research*, 25(3), 225-247. <https://www.doi.org/10.3354/esr00623>
- Wright, S. & Kelly, F. J. (2017). Threat to human health from environmental plastics. *BMJ*, 358, j4334. <https://www.doi.org/10.1136/bmj.j4334>
- Zoghhaib, A. (2019). Persuasion of voices: The effects of a speaker's voice characteristics and gender on consumers' responses. *Recherche et Applications En Marketing (English Edition)*, 34(3), 83-110. <https://www.doi.org/10.1177/2051570719828687>
- Zuckerman, M. & Miyake, K. (1993). The attractive voice: What makes it so? *Journal of Nonverbal Behavior*, 17(2), 119-135. <https://www.doi.org/10.1007/BF01001960>