Speakers' expressions before and in a public presentation. Pleasantness, emotional valence, credibility, and comprehension effects

Emma Rodero; Olatz Larrea; Lluís Mas

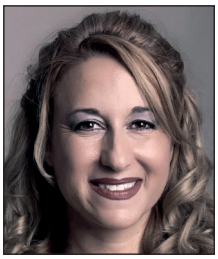
Nota: Este artículo se puede leer en español en:
https://revista.profesionaldelainformacion.com/index.php/EPI/article/view/86824

Recommended citation.

Rodero, Emma; **Larrea, Olatz**; **Mas, Lluís** (2022). "Speakers' expressions before and in a public presentation. Pleasantness, emotional valence, credibility, and comprehension effects". *Profesional de la información*, v. 31, n. 4, e310405.

https://doi.org/10.3145/epi.2022.jul.05

Article received on January 07th 2022
Approved on June 22nd 2022



Emma Rodero ✉
https://orcid.org/0000-0003-0948-3400
Pompeu Fabra University
Department of Communication
Media Psychology Lab
UPF-Barcelona School of Management
Roc Boronat, 138
08018 Barcelona, Spain
emma.rodero@upf.edu

Olatz Larrea
https://orcid.org/0000-0002-6194-6401
University of Barcelona
Faculty of Philology and Communication
Gran Via de les Corts Catalanes, 585
08007 Barcelona, Spain
olatz.larrea@ub.edu

Lluís Mas
https://orcid.org/0000-0003-2239-4082
Pompeu Fabra University
Department of Communication
Roc Boronat, 138
08018 Barcelona, Spain
lluis.mas@upf.edu

Abstract

When a speaker engages in public speaking, the expression shown while delivering the speech determines the effectiveness of the communication and can be very influential in organizational settings. However, in public speaking, the audience can often see the speaker before the presentation begins. Therefore, the public could hypothetically gain an impression on the basis of the speakers' expressions even before performing the presentation. With this idea in mind, the goal of this research is to analyze the influence of speakers' expressions before delivering a speech and during the presentation. The study included two brown-haired/dark-eyed male and female and two blonde-haired/blue-eyed male and female presenters to investigate the effect of appearance and gender. A total of 200 participants looked at the speakers' pictures with five different expressions before delivering the speech. They then watched videos with the same speakers and similar expressions while delivering the speech. The results showed that happiness was the most pleasant and positive expression, followed by confidence, indifference, shyness, and anger, when the participants watched the speakers before the presentation. However, confidence was considered the most pleasant, credible, and comprehensible expression, followed by happiness, anger, shyness, and indifference, while giving the speech. In both cases, female presenters were perceived as the most pleasant, and brown-haired/dark-eyed speakers were considered the most pleasant, credible, and comprehensible. The speakers' expressions were perceived as more intense before the speech than during the discourse. This line of research helps understand the influence of these two crucial moments in presentations, and the results may be transferred into practice for public speaking training.

Keywords

Expressions; Pleasantness; Credibility; Emotional valence; Comprehension; Appearance; Gender; Oral presentations; Speakers; Discourses.

Funding

This research has been funded by the *Barcelona School of Management*.

1. Introduction

The relevance of public speaking in the professional, social, and personal spheres is unquestionable (**Bailey**, 2019). The speaker's expression can affect some of the most relevant communication outcomes, namely valence, likeability, pleasantness, credibility, and speech comprehension (**Brownlow**, 1992). In particular, the speaker's expression can be relevant for leader outcomes in organizational settings (**Bakker-Pieper**; **De-Vries**, 2013; **Sagie**, 2009). Besides, research on how gender and physical appearance are perceived in a public speaking context can be very informative about prejudices and stereotypes theory while providing evidence upon which to develop mechanisms to counter and address these discriminatory outcomes in many different situations (**Cassidy** *et al.*, 2019; **Ritchie**; **Palermo**; **Rhodes**, 2017). The expression communicated in public speaking –informed by a wide range of gestures, body language and oral skills along with the speaker's physical appearance and gender– is crucially intertwined with important communication, management, and leadership outcomes (**Men**; **Yue**; **Liu**, 2020).

> "Public speaking anxiety is largely caused by a prior representation of the act of public speaking and how the speaker will be perceived"

Studies on public speaking have usually focused on verbal traits and facial expressions during the delivery phase (**Brownlow**, 1992; **Rodero**, 2022; **Tcherkassof** *et al.*, 2007). However, the physical behavior before delivering the speech, i.e., while waiting to be settled and ready, while being introduced, and particularly the few seconds before the verbal onset, can be relevant, too. **Bodie** (2010) found that public speaking anxiety is to a great extent caused by a prior representation of the act of public speaking and how it will be perceived, which can lead to the expression of emotions such as anger, related to fear and threat or the expression of personality trait shyness as a degree of extraversion. The anticipation of public speaking is the driver to have an angry expression, which enhances the processing of anger and inhibits the processing of happy and neutral faces (**Wieser** *et al.*, 2010).

Nonverbal behavior before delivering the speech can be a fertile field of study, mainly since most research on public speaking expressions has focused on verbal traits and facial expressions during the delivery phase (**Brownlow**, 1992; **Rodero** *et al.*, 2022; **Tcherkassof** *et al.*, 2007). In addition, little research has focused on how hand gestures and body movement enhance confidence and counter shyness and anger before and during speech delivery (**Hancock** *et al.*, 2010; **Pereira-dos-Santos** *et al.*, 2020). Previous research has usually focused on the experimental perception of specific elements of the public speaking training programs –eye contact, smiling, and specific hand gestures synchronized with vocal stress (**Bull**; **Connelly**, 1985; **Hancock** *et al.*, 2010), among others, from disciplines such as education, or business. However, **Bakker-Pieper** and **De-Vries** (2013) have shown how expressive communication styles influence leadership perception over personality traits. Expressions in public speaking can thus be considered overall emotional categories crucial for social interaction that comprises a wide range of spontaneous nonverbal behaviors (**Bailey**, 2019; **Calvo**; **Lundqvist**, 2008; **Eisenbarth**; **Alpers**, 2011).

This study focuses on the speakers' expressions before the onset of the delivery phase and during the delivery phase in public speaking (**Hoemann** *et al.*, 2019; **Strangert**; **Gustafson**, 2008; **Wichmann**, 2000). Our main research question is: How does the speaker's expression, physical appearance, and gender before and during public speaking influence pleasantness, emotional valence, credibility, and comprehension? To answer this question, we examined five expressions of high relevance for communication effectiveness in a public speaking context –happiness, confidence, indifference, shyness, and anger– as performed by brown-haired/dark-eyed male and female speakers, and blonde-haired/blue-eyed male and female speakers.

The findings can contribute to understanding how these two moments of presentations: static (previous) or dynamic (during the speech), impact the first impression of the speaker before the speech, or a more conscious comprehension-driven interpretation of the speaker during the speech delivery. This line of research may foster further studies on these two mechanisms, and the results may be easily transferred into practice for public speaking training and leadership communication in organizational settings.

1.1. Speaker's expressions

An expression is the physical appearance of emotional states experienced by individuals in social situations at different levels: cognitive, physiological, affective, and behavioral. More specifically, speakers' expressions can be comprehensively defined as unambiguous consistent emotional states determined by body action, postures, and gestures (**Dael**; **Mortillaro**; **Scherer**, 2012), static facial expressions (**Barrett** *et al.*, 2019; **Ekman** *et al.*, 2002), dynamic facial expressions (**Ambadar** *et al.*, 2005), gaze (**Sander** *et al.*, 2007), vocal expression (**Juslin**; **Laukka**, 2003; **Scherer**, 1986) and prosody

(**Cordaro** *et al.*, 2016), all of which listeners perceive differently. A manifold of contextual, professional, and personal factors can make the speaker show different expressions while waiting to start the speech or during speaking. Public speaking anxiety and its converse, public speaking confidence, have been intensively studied in many different contexts. As it will be seen next, no research has focused on how this phenomenon can make the speaker show different expressions that reflect the sum of situational factors, emotions, and even personality traits, which can be used to build leadership through relevant communication effects.

> "Confidence in public speaking is often associated with a professional performance in terms of voice use, hand gestures, and body movement"

Situational expressions are thus used for social and communication purposes and are generally perceived as positive or negative with different degrees of intensity. For instance, there are facial and body prototypes determined by the expressions of the speaker: happy (smile, cheek raise, perceived eye size and narrowing of the eye-opening), angry (lips tightened, brows furrowed, widened eyes), surprised (eyebrows raised, upper eyelid raised, lips parted, jaw dropped), or scared (eyebrows raised and pulled together, upper eyelid raised, lower eyelid tense, lips parted and stretched) (**Barrett** *et al.*, 2019; **Glazer**, 2017).

In an experiment on how some emotional expressions were perceived, **Keltner** *et al.* (2019) associated trustworthiness with the authenticity of expression, mainly referring to smiles, anger with dominance perception, embarrassment with upstanding character perception, distress with sympathy, and fear with a threat. **Keltner** *et al.* (2019) also showed that emotional expressions could be recognized with a few vocal sounds. And **Juslin** and **Laukka** (2003) found that participants could consistently categorize (70% rate) five primary expressions by just hearing the voice (happiness, anger, sadness, tenderness, fear). On the one hand, **Guyer** *et al.* (2021) have demonstrated that vocal pitch can influence attitudes and persuasion especially as an indicator of confidence. Confidence and the expressions of happiness would raise credibility and pleasantness (**Kröger** *et al.*, 2010; **Glazer**, 2017; **MacIntyre**; **Thivierge**, 1995). Conversely, a solid stream of research has focused on how personality and social and cultural factors may lead to public speaking anxiety and hinder communication (**Horwitz**, 2001). Importantly, introversion can lead to public speaking fear and anxiety associated with the listeners' negative feelings, low pleasantness, and low credibility, which in turn feeds back into the speakers' fear, anxiousness, and anger in a spiral form. Shyness can be a personality but also a situational trait; thus, it can be associated with situations requiring a social performance, leading to anxiety, or speaking fear or phobia (**Hancock** *et al.*, 2010). Furthermore, research shows that shy people score higher in the negative elements of public speaking, such as stiffness, tension in hands and arms, or inadequate body posture (keeping head and shoulders low or lacking expressiveness) (**Pereira-dos-Santos** *et al.*, 2020).

On the other end of the spectrum, the expression of confidence can render positive outcomes (such as a well-organized interesting engaging presentation) in public speaking (**McNatt**, 2019) and is closely related to the expression of happiness –the typical gaze and smile of interaction (**Beukeboom**, 2009). Confidence is usually associated with quality performance concerning the use of voice, hand gestures, and body movement (**McNatt**, 2019) and strongly opposes anxiety, which could lead to the expression of anger or shyness. The study by **Dimberg** and **Thunberg** (2007) rated happy faces as pleasant and angry faces as unpleasant, especially for those participants that scored high in speech anxiety. Therefore, the expressions of confidence and happiness are expected to be assessed positively, as opposed to anger and shyness (**Barrett** *et al.*, 2019; **Wichmann**, 2000; **Wieser** *et al.*, 2010).

We can thus presume that a better evaluation of confidence and happiness can be applied to both phases of the public speaking performance, before and during the speech. Consequently, our first hypotheses are the following:

H1.1. Happiness and confidence will be the expressions with a more pleasant perception, positive valence, and less negative valence than other expressions before speech delivery.

H1.2. Happiness and confidence will be the expressions with a more pleasant perception, positive valence, less negative valence, higher speaker credibility, and more speaker discourse comprehension than other expressions during speech delivery.

Regarding the differences in the perception of the speakers' expressions before and during speech delivery, the scarcity of research and insights prevents us from posing a well-grounded hypothesis. Yet the perception of exclusively physical behavior before the speech (expecting it) by the listeners is reasonably expected to bear differences with the more dynamic physical and vocal behavior while delivering the speech. The speakers' expressions will be inferred before speech delivery with more static elements than during speech delivery since the speaker is just waiting to start talking (**Ekman** *et al.*, 2002; **Tcherkassof** *et al.*, 2007). As in a static image, individuals have fewer nonverbal features to infer an expression when staring at the waiting figure of the speaker; hence we can deduce that perception could be more straightforward and less ambiguous, with no interplay from other variables –especially the speech onset and content. In other words, message redundancy and consistency are more easily achieved with a static image and no vocal behavior involved than with a dynamic message with physical and vocal behavior. Yet, again, we are comparing two substantially different outcomes here: a timeless, simple sensory outcome versus an encapsulated dynamic message. As there is no previous research that points to how these expressions will be more intensely perceived, we pose this research question:

Q1. What will be the differences in perception before and during speech delivery?

1.2. Speaker's gender

Gender differences in communication are sometimes due to the social roles historically assigned to men and women (**Lakoff**, 1973). These roles are strongly determined by a social hierarchy in which men dominate. Social role theories have thoroughly described and theorized the normative qualities and behaviors of men and women and act as reinforcers of the social hierarchy that places men in a dominant position (**Glick** *et al.*, 2004; **Sidanius**; **Pratto**, 1999). According to the "Role congruity theory of prejudice toward female leaders" (**Eagly**; **Karau**, 2002), gender roles are perpetuated by the stereotyped social perception of women being less capable of performing leadership roles (such as being the leader or the main speaker in a public speaking context) and by being assessed less positively than men when doing so. This discriminatory mechanism defines women as attention-givers and men as attention-getters, thus men can be perceived as more trustworthy, intelligent, and credible than women (**Kenton**, 1989). In general, research has found eventual gender bias to like women more than men and to regard women as less powerful than men, to some extent, regardless of gestures and body postures (**Bailey** *et al.*, 2020).

Gender studies have elaborated on the complexity of gender discrimination, as the patriarchy is also supported by the so-called benevolent sexism or the women-are-wonderful effect (**Eagly**; **Mladinic**, 1994), which predisposes listeners to like the stereotyped woman over the stereotyped man (**Bailey** *et al.*, 2020; **Glick** *et al.*, 2004). Following this rationale, audiences may show more condescension when a man rather than a woman shows anger and when a woman rather than a man shows shyness. However, the compensation/ceiling effect entails that anger in men would be considered too much and assessed negatively and that shyness would not be acceptable for men. Further, **Hack** (2014) found bias in the case of smiling women being rated as warm and more competent speakers, whereas there were no differences between smiling and non-smiling men.

> "Gender roles are perpetuated by the stereotyped social perception of women being less capable of performing leadership and by being assessed less positively than men"

In sum, there is evidence of a gender bias applied to public speaking (**Bailey** *et al.*, 2020; **Hack**, 2014; **Jokisch** *et al.*, 2018). We therefore can expect moderate differences favoring men over women in both situations, before and during delivering the presentation (**Leaper**; **Robnett**, 2011).

H2.1. Male speakers in different expressions will be perceived as more pleasant and positive than their female counterparts before speech delivery.

H2.2. Male speakers in different expressions will be perceived as more pleasant, positive, credible, and comprehensible than their female counterparts during speech delivery.

1.3. Speaker's physical appearance

The perception of the speakers' expressions may also be moderated by their physical appearance. Personal appearance is perceived and elaborated through impression formation, such as the maturity and credibility of faces (**Brownlow**, 1992) or long-lasting personality traits (**Petrican** *et al.*, 2014) and leadership associated with facial appearance (**Antonakis**; **Eubanks**, 2017). Physical appearance first impression is a type of judgment made rapidly, non-consciously, spontaneously, with minimal information, and with no training based on general face patterns (**Ritchie** *et al.*, 2017; **Zebrowitz**, 2017). Appearance has traditionally been a discriminatory mechanism mainly determined by sex, class, and racial appearance. In this regard, the patriarchy is associated with the dominant position of the WASHP male pattern (White, Anglo-Saxon, Heterosexual, and Protestant). The traditional work by **Berne** (1959) established how different folklores in the world had associated pureness, loveliness, duty, and beauty with blonde hair and blue eyes as opposed to dark complexion. The rationale is the following: the first impression mechanism is based on a rapid inference with little attention and cognitive resources, which is used by communication practitioners, particularly in advertising, to communicate efficiently with little message's structural resources and little audience's mental resources. The use of stereotypes and prejudicial behaviors based on general traditional standards, patterns and routines follows this rationale. The blonde-haired/blue-eyed male and female pattern would thus be a universal beauty and cultural standard coincident with the Western, White, and Anglo-Saxon most common features. From an evolutionary approach to leadership theory, this pattern has been stablished historically based on associating the cultural concept of attractiveness with leadership (**Van-Vugt**; **Grabo**, 2015). However, as there is no conclusive research analyzing the perception of hair and eyes appearance differences in public speaking, we pose our second research question:

Q2. What will be the influence of physical appearance (blonde-haired/blue-eyed male and female presenters and brown-haired/dark-eyed speakers) before and during speech delivery?

2. Method

2.1. Design

The design was a five (expressions) by two (physical appearance) by two (gender) within-subjects experiment. Participants answered an online survey in which they rated 20 images (before presentation) and 20 videos (during the speech). The order of presentation was randomized and combined to represent all expressions by all the speakers.

2.2. Stimuli

Professional actors and actresses were hired and selected to represent the gender and physical appearance of the population. To choose the speakers, we conducted a pre-test to measure the acceptance of twelve presenters based on their appearance: three blonde-haired and blue-eyed females and males (six total), and three dark-haired and brown-eyed female and male speaker's pictures (six total) were tested. We looked for average pleasant looking people, neither extraordinary good looking, nor very bad rated. All twelve pictures were designed with the same position in a medium close-up shot. A sample of 60 students was asked to rank on a 7-point scale how pleasant they found each person. Only one picture in each category passed the medium score, so the best-rated pictures of each category were selected for the final experiment. These selected speakers were asked to pose for the pictures and perform five different expressions in short video presentations.

> "Four professional actors and actresses were selected to represent the gender and physical appearance of the population"

We took twenty pictures of the four speakers with five different expressions for the first part of the study. The chosen place was a professional television and photography set to guarantee maximum quality. The conditions were stable with equal lighting conditions and plain blue chroma. The order of the different expressions and speakers was randomized. Figure 1 is an example that shows all the expressions and speakers.

Figure 1. Speakers' expressions

Gestures, body, and facial expressions were applied to represent every expression. As shown in Figure 1, the speaker (A) expresses confidence. Her arms are open and her palms up. She makes eye contact and is smiling. Speaker (B) shows indifference posing with her arms on the back and her gaze lost up in the air. Speaker (C) poses with anger. His arms are crossed, his body looks tense and straight, and he has an angry face with a threatening look. Speaker (D) expresses shyness. He holds his hands in the front, his body posture is shrunk, and his head and gaze point to the floor. Speaker (E) shows happiness. His arms are in a relaxed position along his body. His body also looks relaxed; he is smiling and establishing eye contact. The way of expressing each emotion through body language stayed constant through speakers. To do so, we showed them a model they had to follow.

For the second part of the study, a total of twenty videos were recorded by the same five speakers delivering the same short neutral message about the Amazonas (5 seconds). Each video had the same duration and was recorded by each speaker representing the same five expressions (happiness, confidence, indifference, shyness, and anger). Speakers were asked to perform them by following a model. The shooting set was the same for pictures, with equal lighting conditions and plain dark blue chroma. All the speakers used the same professional lavalier microphone. In both cases, images and videos, all the speakers were dressed in shirts and trousers in similar colors (white and grey). There were no significant differences by clothes, F (3,107) = .924, p = .339.

Vocal cues were controlled and measured by Praat software (**Boersma**; **Weenink**, 2021) to stay constant in-between speakers. We performed an acoustic analysis for every expression and speaker analyzing the tone and intensity averages and range variations. An ANOVA was conducted to analyze differences on vocal performance for each expression among speakers. There were no significant differences in vocal tone variation among speakers in any of the expressions: happiness, F (4,16) = .919, p < .439; confidence, F (4,16) = .698, p < .491; indifference, F (4,16) = .357, p < .611; shyness, F (4,16) = .083, p < .801, and anger, F (4,16) = .618, p < .514. Moreover, there were no significant differences in intensity variation

in any of the expressions: happiness, F (4, 16) = 1.385, $p < .360$; confidence, F (4, 16) = .036, $p < .866$; indifference, F (4, 16) = 6.40, $p < .127$; shyness, F (4, 16) = 2.00, $p < .293$ and anger, F (4, 16) = 2.390, $p < .262$. Table 1 presents the tone and intensity values.

Table 1. Acoustic analysis of voices

Speakers' expressions	Speaker	Average tone	Tone variation	Average intensity	Intensity variation
Happiness	Female dark eyes and hair	192 Hz	172 Hz	73 dB	42 dB
	Female blue eyes and blonde	178 Hz	172 Hz	65 dB	37 dB
	Male dark eyes and hair	186 Hz	168 Hz	71 dB	37 dB
	Male blue eyes and blonde	167 Hz	151 Hz	73 dB	36 dB
	Mean	180 Hz	165 Hz	70 dB	38 dB
Confidence	Female dark eyes and hair	166 Hz	115 Hz	65 dB	41 dB
	Female blue eyes and blonde	149 Hz	144 Hz	59 dB	29 dB
	Male dark eyes and hair	134 Hz	106 Hz	59 dB	38 dB
	Male blue eyes and blonde	127 Hz	108 Hz	65 dB	55 dB
	Mean	144 Hz	118 Hz	62 dB	40 dB
Indifference	Female dark eyes and hair	142 Hz	99 Hz	142 dB	24 dB
	Female blue eyes and blonde	153 Hz	106 Hz	153 dB	36 dB
	Male dark eyes and hair	99 Hz	50 Hz	99 dB	30 dB
	Male blue eyes and blonde	111 Hz	77 Hz	111 dB	34 dB
	Mean	126 Hz	83 Hz	126 dB	31 dB
Shyness	Female dark eyes and hair	144 Hz	85 Hz	62 dB	37 dB
	Female blue eyes and blonde	157 Hz	111 Hz	60 dB	33 dB
	Male dark eyes and hair	122 Hz	73 Hz	60 dB	35 dB
	Male blue eyes and blonde	163 Hz	110 Hz	68 dB	35 dB
	Mean	146 Hz	94 Hz	62 dB	35 dB
Anger	Female dark eyes and hair	142 Hz	99 Hz	63 dB	27 dB
	Female blue eyes and blonde	169 Hz	125 Hz	66 dB	33 dB
	Male dark eyes and hair	160 Hz	82 Hz	66 dB	29 dB
	Male blue eyes and blonde	123 Hz	88 Hz	66 dB	51 dB
	Mean	148 Hz	98 Hz	65 dB	35 dB

With the actors' pictures and videos, we tested that the represented expressions were the same as a group of informants could recognize. A sample of 25 people assessed each picture and video with semantic scales in which they had to choose the specific expression that they perceived. In each evaluation, there was at least 90% agreed with the proposed expression. Therefore, we can conclude that the pictures and videos used for the experiment correctly showed the five expressions and that there were no significant differences among the actors/actresses performing the same expression.

2.3. Participants

Once the stimulus was created, a sample formed of 200 participants (N = 200, 119 were female and 81 males, aged between 19 and 43 years) answered to an online survey. The survey was randomly sent to participants using social media. All the participants signed the informed consent.

2.4. Dependent variables

2.4.1. Pleasantness

Pleasantness was composed of five items: pleasant, persuasive, attractive, natural, and friendly, and measured on a 5-point scale. A factor analysis was conducted for the initial scale items (attractive, clear, pleasant, persuasive, credibility, dynamic, natural). All the items were assessed on the appropriate factor (.6 or higher). The Kaiser-Meyer-Olkin value was .96, exceeding the recommended value of .6, and Bartlett's Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix. Factor analysis produced the factor pleasantness. Five items (pleasantness, persuasiveness, attractiveness, naturalness, and friendliness) had loadings on the first factor that exceeded .85. Thus, the first factor was labeled as the pleasantness scale and was formed by the level of the

> "Before speech delivery, happiness and confidence were the expressions perceived as more pleasant, positive, and less negative"

speaker's pleasantness, persuasiveness, attractiveness, naturalness, and friendliness, where the value 1 represented the lowest level and 5 the highest. The Cronbach Alpha coefficient for this scale was .94; thus, with a high coefficient in the reliability tests.

> "Confidence was the most pleasant, positive, and less negative expression, followed by happiness, anger, shyness, and indifference during the speech"

2.4.2. Valence

Valence referred to the positive or negative emotions elicited and was measured using the Self-Assessment Manikin (SAM). SAM is a picture-oriented questionnaire developed to measure an emotional response (**Bradley**; **Lang**, 1994). We adapted it to two 5-point scales, one for positive and the one for negative emotion, with value 1 representing a less positive/negative emotion and 5 the most positive/negative.

2.4.3. Credibility

Credibility refers to the characteristic of being trustworthy. In oral communication, achieving the audience's trust is critical to getting listeners to believe the speaker's words. We used the credibility scale by **McCroskey** and **Teven** (1999). This scale comprises three primary credibility dimensions: competence, trustworthiness, and goodwill. Competence refers to having experience, knowledge, and leadership abilities while trustworthiness means character, and goodwill refers to the intention toward the listener of the message. All three dimensions were measured on a five-point scale, with 1 representing the minimum value and 5 the maximum. The Cronbach Alpha coefficient was .91, with a high coefficient in the reliability tests.

2.4.4. Comprehension

This variable refers to understanding and being familiar with a situation, facts, etc. To test the audience's comprehension of the audience, this study introduced an explicit question about the speakers' comprehension when exposed to the stimuli, ranging from 1 to 5, with the value 1 representing poor comprehension and 5 total comprehension.

The dependent variables pleasantness and positive/negative valence were applied to the first experiment, the pictures before speech delivery. For the second experiment, the videos during speech delivery, we added credibility and comprehension, as these variables are difficult to evaluate in static pictures, especially comprehension without speaking.

3. Results

3.1. First part of the study

To test H1.1 and H2.1 and to answer Q2, a five (expression) by two (physical appearance) by two (gender: male vs. female) factorial MANOVA was performed on the two dependent variables: pleasantness and emotional valence.

About the pleasantness variable, the dependent variables resulted in significant main effects for expression, F (4, 106) = 757.74, p < .001, partial η^2 = .583. Happiness was the most pleasant expression, followed by confidence, shyness, indifference, and anger. Post-doc test showed significant differences among all the expressions except shyness and anger. There were also significant differences for gender F (1, 109) = 7.72, p = .005, partial η^2 = .004. The female speakers were rated as more pleasant than male speakers. Also, there were significant results in the interaction between gender and expression, F (4,106) = 31.21, p < .001, partial η^2 = .054. Women were perceived as more pleasant in all the expressions, except in confidence, in which men scored above women. Although the blue-eyed and blond-haired speakers were considered more pleasant, there were not significant effects on physical appearance, F (1,109) = 1.33, p = .248, partial η^2 = .001. However, there were significant effects for the interaction between physical appearance and expression, F (4,106) = 12.69, p < .001, partial η^2 = .023. In confidence, the blue-eyed and blond haired speakers were perceived as more pleasant than the dark-eyed and haired ones. The same occurred for anger by blue-eyed and blond-haired speakers compared to dark-eyed and hair ones.

Regarding the valence variable, there were significant main effects for expression, F (4,106) = 1308.17, p < .001, partial η^2 = .707. On the positive scale, happiness was the most positive expression, followed by confidence, indifference, shyness, and anger. Post-doc test showed significant differences among all the expressions, except between shyness and anger. There were significant differences for gender F (1, 109) = 19.08, p < .001, partial η^2 = .009. The female speakers were evaluated as more positive than male speakers. There were significant results in the interaction between gender and expression, F (4, 106) = 22.08, p < .001, partial η^2 = .039. Women were perceived as more positive in all the expressions, except in confidence, in which men scored higher than women. There were no significant effects for physical appearance, F (1, 109) = 1.24, p = .265, partial η^2 = .001, but there was an interaction appearance by expression, F (1, 109) = 34.80, p < .001, partial η^2 = .060. The blue-eyed and blond hair speakers were considered as more positive than the dark-eyed and hair ones about confidence and anger.

For the negative scale, there were also significant results for expression, F (4, 106) = 1094.41, p < .001, partial η^2 = .669. Anger was the most negative expression, followed by shyness, indifference, confidence, and happiness. Post-doc test showed significant differences among all the expressions. There were significant differences for gender F (1, 109) = 8.84, p = .003, partial η^2 = .004. The male speakers were evaluated as more negative than female speakers. There were significant results in the interaction between gender and expression, F (4, 106) = 14.72, p < .001, partial η^2 = .026. Men were

perceived as more negative in all the expressions, except in confidence, in which women were above men. There were no significant effects for appearance, F (1, 109) = 3.12, p = .077, partial η^2 = .001, but there was an interaction between appearance by expression, F (1, 109) = 11.82, p < .001, partial η^2 = .021. The dark-eyed and dark-haired speakers were considered more negative than blue-eyed and blond-hair speakers in confidence. The results are shown in Table 2.

Table 2. Pleasantness and valence before delivering the speech (pictures)

Speakers' expressions	**Pleasantness**		**Positive valence**		**Negative valence**	
	Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***
Happiness	4.25	.86	4.48	.76	1.39	.66
Confidence	4.07	.70	4.10	.60	1.77	.65
Indifference	2.32	.92	2.33	.81	2.91	.65
Shyness	2.54	.93	1.92	.88	3.54	1.07
Anger	2.04	.91	1.81	.82	4.19	.77
Appearance	**Pleasantness**		**Positive valence**		**Negative valence**	
	Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***
Dark eyes and hair	2.95*	1.25	2.95*	1.27	2.79*	1.27
Blue eyes and blonde hair	2.99*	1.37	2.91*	1.47	2.73*	1.34
Gender	**Pleasantness**		**Positive valence**		**Negative valence**	
	Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***
Female speaker	3.02	1.22	3	1.29	2.71	1.24
Male speaker	2.92	1.40	2.86	1.45	2.80	1.37

*No significant results

These results confirm H1.1, but not H2.1. Before speech delivery, happiness and confidence were the expressions perceived as more pleasant, positive, and less negative. Contrary to our predictions, female speakers were considered more pleasant, positive, and less negative than male presenters in all expressions, except confidence. Male speakers were considered more pleasant, positive, and less negative in this expression. Regarding Q2, physical appearance did not attain significant results, but there was an interaction with some expressions. In pleasantness and positiveness, blue-eyed and blond-haired speakers were perceived as more confident than their dark-eyed and haired counterparts, who further on were perceived as the angriest. Dark-eyed and dark-haired were considered less confident.

3.2. Second part of the study

To test H2.1, H2.2, and answer Q2, a five (expressions) by two (physical appearance) by two (gender: male vs. female) factorial MANOVA was performed on the dependent variables: pleasantness, emotional valence, credibility, and comprehension.

Regarding the pleasantness scale, there were significant main effects for expression, F (4, 106) = 832.68, p < .001, partial η^2 = .604. Confidence was the most pleasant, followed by happiness, anger, shyness, and indifference. Post-doc test showed significant differences among all the expressions. There were significant differences for physical appearance, F (1, 109) = 21.35, p < .001, partial η^2 = .010. The dark-eyed and hair speakers were better evaluated than the blue-eyed and blond speakers. There were significant results for the interaction between expression and appearance, F (1, 109) = 40.76, p < .001, partial η^2 = .070. The dark-eyed were perceived as more pleasant in all the expressions, except in confidence. There were also differences for gender, F (1, 109) = 12.84, p = .004, partial η^2 = .006. The female speakers were considered more pleasant than the male speakers. Finally, there were differences in the interaction between expression and gender, F (4, 106) = 13.50, p < .001, partial η^2 = .024. The female speakers were more pleasant than the male ones in all the expressions, except in confidence.

In the positive valence scale, there were significant main effects for expression, F (4, 106) = 832.68, p < .001, partial η^2 = .604. Happiness was the most positive expression, followed by confidence, anger, shyness, and indifference. Post-doc test showed significant differences among all the expressions, except between shyness and anger. Also, there were significant differences for physical appearance, F (1, 109) = 8.58, p = .003, partial η^2 = .004. The dark-eyed and-haired speakers were better evaluated than the blue-eyed and blond-haired actors. There were significant results for the interaction between expression and appearance, F (1, 109) = 35.94, p < .001, partial η^2 = .062. The dark-eyed and-haired speakers were perceived as more positive in all the expressions, except in confidence. There were also differences for gender, F (1, 109) = 11.06, p = .001, partial η^2 = .005. The female speakers were considered as more positive than the male speakers. Lastly, there were differences in the interaction between expression and gender, F (4, 106) = 9.21, p < .001, partial η^2 = .017. The female speakers were more positive than the male ones in all the expressions, except indifference.

> "Female speakers were evaluated as more positive than male speakers before and during the speech"

> "Women were perceived as more positive in all the expressions, except confidence, where men scored higher"

In the negative valence scale, there were significant main effects for expression, F (4, 106) = 535.85, p < .001, partial η^2 = .496. Indifference was the most negative expression, followed by anger, shyness, confidence, and happiness. Post-doc test showed significant differences among all the expressions, except shyness and anger. There were significant differences for physical appearance, F (1, 109) = 10.48, p = .001, partial η^2 = .005. The dark-eyed and blond-haired speakers were evaluated as less negative than the blue-eyed and blond hair speakers. There were significant results for the interaction between expression and appearance, F (1, 109) = 26.08, p < .001, partial η^2 = .046. As in the other variables, the dark-eyed and dark-haired speakers were perceived as less negative in all the expressions, except in confidence. There were also differences for gender F (1, 109) = 10.48, p = .001, partial η^2 = .005. The female speakers were considered less negative than the male speakers. Also, there were differences in the interaction between expression and gender, F (4, 106) = 9.92, p < .001, partial η^2 = .018. The female speakers were less negative than the male ones in all the expressions, except for indifference.

Concerning the credibility scale, the dependent variables resulted in significant main effects for expression, F (4, 106) = 635.06, p < .001, partial η^2 = .538. Confidence was the most credible expression, followed by happiness, anger, shyness, and indifference. Post-doc test showed significant differences among all the expressions, except indifference and shyness. There were significant differences for physical appearance, F (1, 109) = 32.15, p < .001, partial η^2 = .015. The dark-eyed and dark-haired speakers were considered more credible than the blue-eyed and blond-haired speakers. There were significant results for the interaction between expression and appearance, F (1, 109) = 35.35, p < .001, partial η^2 = .061. As in the other cases, the dark-eyed and dark-haired speakers were perceived as more credible in all the expressions, except in confidence. While there were no differences for gender, F (1, 109) = 2.88, p = .090, partial η^2 = .001, the interaction between expression and gender did yield significant differences, F (4, 106) = 9.68, p < .001, partial η^2 = .017. The male speakers were more credible than the female ones in all the expressions, except for shyness.

In comprehension, the results were significant for expression, F (4, 106) = 430.31, p < .001, partial η^2 = .441. Confidence was the most comprehensible, followed by happiness, anger, shyness, and indifference. Post-doc test showed significant differences among all the expressions. There were significant differences for physical appearance, F (1, 109) = 22.40, p = .001, partial η^2 = .010. The dark-eyed and -haired speakers were considered as more understandable than the blue-eyed and and blond-haired speakers. There were significant results for the interaction between expression and appearance, F (1, 109) = 20.49, p < .001, partial η^2 = .036. In the same line, the dark-eyed and-haired speakers were perceived as more comprehensible in all the expressions, except in confidence. In this variable, there were not differences for gender, F (1, 109) = .727, p = .394, partial η^2 = .000, but there were for the interaction between expression and gender, F (4, 106) = 6.36, p < .001, partial η^2 = .012. The male speakers were more comprehensible than the female ones in all expressions, except happiness. Table 3 shows the results.

Table 3. Pleasantness, credibility, valence, and comprehension delivering the speech (videos)

Speakers' expressions	**Pleasantness**		**Positive valence**		**Negative valence**		**Credibility**		**Comprehension**	
	Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***
Confidence	3.88	.84	3.89	.97	1.59	.85	3.98	.90	4.19	.93
Happiness	3.64	.91	4.25	.91	1.80	.93	3.58	1.03	3.97	.97
Anger	2.38	.84	2.04	.96	3.44	1.06	2.63	1.02	3.08	1.19
Shyness	1.85	.75	1.89	.93	3.51	1.10	1.78	.83	2.24	1.07
Indifference	1.63	.61	1.45	.71	3.92	1.08	1.67	.74	2.00	1.00
Appearance	**Pleasantness**		**Positive valence**		**Negative valence**		**Credibility**		**Comprehension**	
	Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***
Dark eyes and hair	2.75	1.20	2.76	1.39	2.78	1.32	2.83	1.29	3.20	1.32
Blue eyes and blonde hair	2.60	1.23	2.65	1.51	2.92	1.46	2.62	1.30	3.00	1.39
Gender	**Pleasantness**		**Positive valence**		**Negative valence**		**Credibility**		**Comprehension**	
	Mean	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***	***Mean***	***SD***
Female speaker	2.73	1.21	2.76	1.44	2.78	1.39	2.76*	1.30	3.11*	1.37
Male speaker	2.62	1.22	2.64	1.45	2.92	1.39	2.70*	1.29	3.07*	1.35

*No significant results

These results confirm H2.1, but not H2.2. While delivering the discourse, confidence, followed by happiness, was perceived as more pleasant, positive, less negative, more credible, and comprehensible than anger, shyness, and indifference. Contrary to our predictions, female speakers were considered more pleasant, positive, and less negative than the male presenters, although there were no significant differences in credibility and comprehension. In the interaction between expression and gender, the female speakers were more pleasant than the male ones in all expressions except confidence. They also were perceived as more positive and less negative in all the expressions, except indifference.

However, the male speakers were more credible than the female ones in all expressions except shyness and happiness, and more comprehensible than the female speakers except happiness. Therefore, H2.2 cannot be confirmed. Regarding Q2, dark-eyed and dark-haired speakers were considered as more pleasant, positive, less negative, more credible, and more comprehensible than blue-eyed and blond-haired speakers. However, in the interaction between expressions and appearance, the blue-eyed and blond-haired speakers achieved a better evaluation in confidence.

> The study shows significant differences in credibility according to physical appearance, with dark-haired and dark-eyed speakers rated as more credible and understandable

To answer Q1, we compared the means in the common variables –pleasantness, positive or negative perception of the different expressions in the pictures and videos. For the pleasantness and positive valence, participants rated higher the pictures over the videos in all the expressions except anger. The result was the same for negative valence, but shyness and anger were perceived as less negative in the video. Therefore, the expressions were perceived as clearer and more intense in the pictures than in the videos. There were significant correlations among the variables: between pleasantness in picture and video, Pearson Correlation (χ^2 = .087, Sig. (2-tailed): .000); positive, Pearson Correlation (χ^2 = .211, Sig. (2-tailed): .000), and negative, Pearson Correlation (χ^2 = .231, Sig. (2-tailed): .000).

4. Discussion

This study aimed to analyze the audience's perception of speakers' expressions, gender, and physical appearance before and during a public presentation. This study examined the effects of five fundamental expressions of high relevance in public speaking –happiness, confidence, indifference, shyness, and anger– on audience perception of pleasantness, emotional valence, credibility, and comprehension. All five expressions were tested as performed by brown-haired/dark-eyed male and female speakers, and blond-haired/blue-eyed male and female speakers posing in pictures and videos. The findings contribute to understanding how these two moments of presentations –static (previous) or dynamic (during the speech)– impact the first impression-based interpretation of the speaker before the speech, or a more conscious comprehension-driven interpretation of the speaker during speech delivery

First, our results showed that the speakers' expressions significantly affected the perception of public speaking performance. Analyzed individually, the results demonstrated that happiness and confidence were perceived as more pleasant, positive, and less negative before speech delivery than shyness, indifference, and anger. In the case of videos, confidence was the most pleasant, positive, and less negative expression followed by happiness, anger, shyness, and indifference. These results align with previous literature in which participants rated happy faces as pleasant and angry faces as unpleasant in public speaking contexts, especially those participants that scored high in speech anxiety (**Dimberg**; **Thunberg**, 2007). On the contrary, shyness or anger are associated with unpleasantness, as both are considered to inhibit or hinder public speaking performance at nonverbal levels. Shyness can be associated with anxiety or fear, especially in those situations requiring a social performance such as public presentations (**Hancock** *et al.*, 2010). The differences between pictures and videos could be explained based on the influence of nonverbal cues such as voice, hand gestures, and body movement when delivering the speech. Nonverbal cues have been proven to enhance confidence and counter shyness and anger during speech delivery (**Hancock** *et al.*, 2010; **Pereira-dos-Santos** *et al.*, 2020). Moreover, as an indicator of confidence vocal pitch can influence expressions (**Guyer** *et al.*, 2021). According to this, one plausible explanation for confidence ranking higher in videos could stem from the modality influence. The dynamic speech, with different nonverbal cues especially voice, enhanced the confidence perception and countered shyness and anger, as shown in our results.

Consistent with this logic, the credibility scale and the comprehension results during speech delivery showed that confidence resulted in the best-rated expression, followed by happiness, anger, shyness, and indifference. These findings build on confidence being one of the essential expressions to raise credibility at the onset of public speaking, and are in line with other studies in which confidence and happiness raised credibility and pleasantness evaluation (**Glazer**, 2017; **Kröger** *et al.*, 2010; **MacIntyre**; **Thivierge**, 1995). Finally, according to the valence scale, results during the speech were consistent with the first part of the experiment showing happiness as the most positive expression, followed by confidence, anger, shyness, and indifference.

Secondly, findings on gender differences can be seen as a step forward in theory and practice. Contrary to our predictions, female speakers were evaluated as more positive than male speakers before and during speech delivery. Consistent with previous pleasantness' results, women were perceived as more positive in all the expressions, except in confidence, in which men rated higher. A plausible interpretation for women scoring lower on confidence could be based on the existing gender stereotypes or gender schemas (**Bailey** *et al.*, 2020). Gender schemas allow us to process gender-related information more rapidly and with less effort (**Chang**; **Hitchon**, 2004). Based on the traditional gender norms, men have been stereotypically associated with competence (**Brann**; **Himes**, 2010; **Carli**, 2001; **Nelson**; **Signorella**; **Botti**, 2016) and agency (**Conway**;

> Speakers' expressions were perceived as clearer and more intense in the images (before delivering the speech) than in the videos (during the delivery of the speech)

Vartanian, 2000; **Johnson** *et al.*, 2008), whereas women are linked to warmth (**Carli**, 2001) and communality (**Abele**; **Wojciszke**, 2014; **Conway**; **Vartanian**, 2000; **Johnson** *et al.*, 2008). Our results prove that women were evaluated more positively in all the expressions, except in confidence, where they scored lower. These results suggest that the speaker's assessment was evaluated on inferences based on gender, in line with previous studies that have proven the impact of gender stereotypes on speakers' perception and evaluation (**Klaas**; **Boukes**, 2020). Furthermore, the credibility scale showed no differences for gender in credibility and comprehension. These results are in line with previous research that had proved no such thing as male's voices scoring higher in effectiveness or credibility (**Rodero** *et al.*, 2013).

> "Static information about the speaker can have a powerful impact on the audience's evaluations and first impressions"

Concerning the implications of the speakers' appearance before and during speech delivery, results showed several differences in between modalities and in the interaction of expressions. Before the speech, there were no significant effects on physical appearance; but during the speech, dark-eyed and haired speakers were generally better evaluated than the blue-eyed and blond-haired speakers. In terms of pleasantness and the positive valence, before the speech the blue-eyed and blond-haired speakers were perceived as more pleasant than the dark-eyed and-haired speakers in confidence and anger. In contrast, during the speech, the brown-eyed and dark-haired speakers were considered as more pleasant in all the expressions, except in confidence (blue-eyed and blonde-haired speakers scored higher).

One plausible explanation for the physical appearance differences –blue-eyed and blonde-haired speakers scoring higher in pictures and brown-eyed and dark-haired scoring higher in the videos– could be due to the moderating effect of modality and its influence on perception and impression creation. As far as we know, the perception of the speakers' expression and the associated message in public speaking may be moderated by their physical appearance. Therefore, these results can be interpreted according to the logic of physical appearance's first impression, understood as a type of judgment made rapidly, non-consciously, spontaneously, with minimal information (**Ritchie** *et al.*, 2017; **Zebrowitz**, 2017). The static images of the speakers before the presentation could have enhanced the emotional processing, which is relatively superficial, activating stereotypes and prejudicial behaviors to create this first impression. This may also be an underlying mechanism to explain the association between facial attractiveness and leadership posed by the evolutionary leadership theory (**Van-Vugt**; **Grabo**, 2015).

Following the same rationale, the appearance stereotype that has traditionally associated beauty and other positive outcomes with blonde hair and blue eyes would thus be contested in the case of videos, since the audience would assess the speakers with added elements, specifically verbal and non-verbal dynamic cues. Having more structural elements would enhance the allocation of cognitive resources and would yield a more elaborated processing. Consistent with this theory, our study shows significant credibility differences by physical appearance being dark hair/eyes speakers more credible and more comprehensible.

Further on, from an intercultural standpoint a drawing on the positive discrimination theory, these results can also be interpreted as a "what looks like me is good" effect. The audience may show a positive physical appearance bias when the other, hence attributing more positive values to those speakers that seem closer to their cultural pattern. Our findings align with this approach as the study was conducted in a country that meets the cultural standard of the brown-eyed and dark-haired pattern.

Finally, the comparison of both modalities, before and during speech delivery, demonstrated that participants considered the pictures more pleasant and positive than the videos in all expressions except anger. Therefore, the speakers' expressions were perceived as more precise and intense in pictures (before the speech) than in videos (during the speech delivery). These results show, first, that the static information about the speaker can have a powerful impact on the audience evaluation and first impressions. Secondly, that static images of the speakers before the presentation could have reinforced the emotional processing, which is more superficial, based on simple rules, and usually results in a more powerful first impression. Third, these results showed how audience evaluation starts even before the speech delivery and becomes distinctive, in line with **Juslin** and **Laukka** (2003). They found that participants could categorize consistently (70% rate) five primary expressions in a public speaking onset (happiness, anger, sadness, tenderness, fear). In conclusion, this study shows that the physical behavior before delivering the speech, i.e., while waiting to be settled and ready, while being introduced, and particularly the few seconds before the verbal onset, can be relevant too.

Overall, this study proves that nonverbal behavior can be a fertile field of study before delivering the speech, as most research on public speaking expressions has usually focused on verbal traits and facial expressions during the delivery phase (**Brownlow**, 1992; **Rodero**, 2022; **Rodero** *et al.*, 2022). This experiment helps to understand the principles of oral expression and its effects on the audience's perception of leadership before and during a short speech, representing a more comprehensive approach to the public speaking field and theory. Findings can be easily applied to practice in politics or any sort of organizational setting through training exercises before and during speech delivery.

> "Results showed that the audience evaluation starts before the speech delivery and becomes distinctive"

5. Limitations

This study has some limitations. A significant one is the achievement of accurate interpretations of expressions by actors/actresses. Although they were trained and had models to rehearse with, one can assume inevitable variability among actors/actresses in the performance of expressions. In fact, results could be influenced by actors' and actresses' personal charisma, expressivity, and personality. Moreover, this study focuses on five primary expressions stemming from the existing literature on public speaking confidence and anxiety. Further research should extend the number of expressions or nonverbal behaviors before delivering the speech and contrast the effects found in this study. Finally, more studies are necessary to explore this and other non-verbal elements individually –gaze, posture, or specific gestures.

6. References

Abele, Andrea E.; **Wojciszke, Bogdan** (2014). "Communal and agentic content in social cognition: a dual perspective model". In: Gawronski, Bertram (ed.). *Advances in experimental social psychology*, v. 50, pp. 195-255. Academic Press. ISBN: 978 0 128245781

Ambadar, Zara; **Schooler, Jonathan W.**; **Cohn, Jeffrey F.** (2005). "Deciphering the enigmatic face: the importance of facial dynamics in interpreting subtle facial expressions". *Psychological science*, v. 16, n. 5, pp. 403-410.
https://doi.org/10.1111/j.0956-7976.2005.01548.x

Antonakis, John; **Eubanks, Dawn L.** (2017). "Looking leadership in the face". *Current directions in psychological science*, v. 26, n. 3, pp. 270-275.
https://doi.org/10.1177/0963721417705888

Bailey, April H.; **Lambert, Robert**; **LaFrance, Marianne** (2020). "Implicit reactions to women in high power body postures: Less wonderful but still weaker". *Journal of nonverbal behavior*, v. 44, pp. 329-350.
https://doi.org/10.1007/s10919-019-00327-w

Bailey, Erika (2019). "A historical view of the pedagogy of public speaking". *Voice and speech review*, v. 13, n. 1, pp. 31-42.
https://doi.org/10.1080/23268263.2018.1537218

Bakker-Pieper, Angelique; **De-Vries, Reinout E.** (2013). "The incremental validity of communication styles over personality traits for leader outcomes". *Human performance*, v. 26, n. 1, pp. 1-19.
https://doi.org/10.1080/08959285.2012.736900

Barrett, Lisa-Feldman; **Adolphs, Ralph**; **Marsella, Stacy**; **Martinez, Alex M.**; **Pollak, Seth D.** (2019). "Emotional expressions reconsidered: challenges to inferring emotion from human facial movements". *Psychological science in the public interest*, v. 20, n. 1.
https://doi.org/10.1177/1529100619889954

Berne, Eric (1959). "The mythology of dark and fair: psychiatric use of folklore". *The journal of American folklore*, v. 72, n. 283.
https://doi.org/10.2307/538382

Beukeboom, Camiel J. (2009). "When words feel right: how affective expressions of listeners change a speaker's language use". *European journal of social psychology*, v. 39, n. 5, pp. 747-756.
https://doi.org/10.1002/ejsp.572

Bodie, Graham D. (2010). "A racing heart, rattling knees, and ruminative thoughts: defining, explaining, and treating public speaking anxiety". *Communication education*, v. 59, n. 1, pp. 70-105.
https://doi.org/10.1080/03634520903443849

Boersma, Paul; **Weenink, David** (2021). *Praat: Doing phonetics by computer* (Version 6.1.30) [Software]. University of Amsterdam.
http://www.praat.org

Bradley, Margaret M.; **Lang, Peter J.** (1994). "Measuring emotion: the self-assessment manikin and the semantic differential". *Journal of behavioral therapy and experimental psychiatry*, v. 25, n. 1, pp. 49-59.
https://doi.org/10.1016/0005-7916(94)90063-9

Brann, Maria; **Himes, Kimberly-Leezer** (2010). "Perceived credibility of male versus female television newscasters". *Communication research reports*, v. 27, n. 3, pp. 243-252.
https://doi.org/10.1080/08824091003737869

Brownlow, Sheila (1992). "Seeing is believing: facial appearance, credibility, and attitude change". *Journal of nonverbal behavior*, v. 16, pp. 101-115.
https://doi.org/10.1007/BF00990325

Bull, Peter; **Connelly, Gerry** (1985). "Body movement and emphasis in speech". *Journal of nonverbal behavior*, v. 9, pp. 169-187.
https://doi.org/10.1007/BF01000738

Carli, Linda L. (2001). "Gender and social influence". *Journal of social issues*, v. 57, n. 4, pp. 725- 741.
https://doi.org/10.1111/0022-4537.00238

Cassidy, Brittany S.; **Harding, Samuel M.**; **Hsu, Kristie Y.**; **Krendl, Anne C.** (2019). "Individual differences correspond with attention to the eyes of white versus black faces". *Journal of nonverbal behavior*, v. 43, pp. 435-449.
https://doi.org/10.1007/s10919-019-00308-z

Chang, Chingching; **Bush-Hitchon, Jacqueline C.** (2004). "When does gender count further insights into gender schematic processing of female candidates' political advertisements". *Sex roles*, v. 51, n. 3-4, pp. 197-208.
https://doi.org/10.1023/B:SERS.0000037763.47986.c2

Conway, Michael; **Vartanian, Lenny R.** (2000). "A status account of gender stereotypes: Beyond communality and agency". *Sex roles*, v. 43, n. 3-4, pp. 181-199.
https://doi.org/10.1023/A:1007076813819

Cordaro, Daniel T,; **Keltner, Dacher**; **Tshering, Sumjay**; **Wangchuk, Dorji**; **Flynn, Lisa M.** (2016). "The voice conveys emotion in ten globalized cultures and one remote village in Bhutan". *Emotion*, v. 16, n. 1, pp. 117-128.
https://doi.org/10.1037/emo0000100

Dael, Nele; **Mortillaro, Marcello**; **Scherer, Klaus** (2012). "Emotion expression in body action and posture". *Emotion*, v. 12, n. 5, pp. 1085-1101.
https://doi.org/10.1037/a0025737

Dimberg, Ulf; **Thunberg, Monika** (2007). "Speech anxiety and rapid emotional reactions to angry and happy facial expressions". *Scandinavian journal of psychology*, v. 48, n. 4, pp. 321-328.
https://doi.org/10.1111/j.1467-9450.2007.00586.x

Eagly, Alice H.; **Karau, Steven J.** (2002). "Role congruity theory of prejudice toward female leaders". *Psychological review*, v. 109, n. 3, pp. 573-598.
https://doi.org/10.1037/0033-295X.109.3.573

Eagly, Alice H.; **Mladinic, Antonio** (1994). "Are people prejudiced against women? Some answers from research on attitudes, gender stereotypes, and judgments of competence". *European review of social psychology*, v. 5, pp. 1-35.
https://doi.org/10.1080/14792779543000002

Eisenbarth, Hedwig; **Alpers, Georg W.** (2011). "Happy mouth and sad eyes: scanning emotional facial expressions". *Emotion*, v. 11, n. 4, pp. 860-865.
https://doi.org/10.1037/a0022758

Ekman, Paul; **Friesen, Wallace V.**; **Hager, Joseph C.** (2002). *Facial action coding system: the manual on CD ROM*. Salt Lake City, UT: The Human Face. ASIN: 0931835011

Glazer, Trip (2017). "Looking angry and sounding sad: the perceptual analysis of emotional expression". *Synthese*, v. 194, pp. 3619-3643.
https://doi.org/10.1007/s11229-016-1113-1

Glick, Peter; **Lameiras, Maria**; **Fiske, Susan T.**; **Eckes, Thomas**; **Masser, Barbara**; **Volpato, Chiara Manganelli, Anna-Maria**; **Pek, Jolynn C. X.**; **Huang, Li-li**; **Sakalli-Uğurlu, Nuray**; **Rodríguez-Castro, Yolanda**; **D'Avila-Pereira, Maria-Luiza**; **Willemsen, Tineke M.**; **Brunner, Annetje**; **Six-Materna, Iris**; **Wells, Robin** (2004). "Bad but bold: ambivalent attitudes toward men predict gender inequality in 16 nations". *Journal of personality and social psychology*, v. 86, n. 5, pp. 713-728.
https://doi.org/10.1037/0022-3514.86.5.713

Guyer, Joshua J.; **Briñol, Pablo**; **Vaughan-Johnston, Thomas I.**; **Fabrigar, Leandre R.**; **Moreno, Lorena**; **Petty, Richard E.** (2021). "Paralinguistic features communicated through voice can affect appraisals of confidence and evaluative judgments". *Journal of nonverbal behavior*, v. 45, pp. 479-504.
https://doi.org/10.1007/s10919-021-00374-2

Hack, Tay (2014). "Forming impressions: effects of facial expression and gender stereotypes". *Psychological reports*, v. 114, n. 2, pp. 557-571.
https://doi.org/10.2466/07.17.PR0.114k17w6

Hancock, Adrienne B.; **Stone, Matthew D.**; **Brundage, Shelley B.**; **Zeigler, Mark T.** (2010). "Public speaking attitudes: does curriculum make a difference?". *Journal of voice*, v. 24, n. 3, pp. 302-307.
https://doi.org/10.1016/j.jvoice.2008.09.007

Hoemann, Katie; **Crittenden, Alyssa N.**; **Msafiri, Shani**; **Liu, Qiang**; **Li, Chaojie**; **Roberson, Debi**; **Ruark, Gregory A.**; **Gendron, Maria**; **Feldman-Barrett, Lisa** (2019). "Context facilitates the cross cultural perception of emotion". *Emotion*, v. 19, n. 7, pp. 1292-1313.
https://doi.org/10.1037/emo0000501

Horwitz, Elaine (2001). "Language anxiety and achievement". *Annual review of applied linguistics*, v. 21, pp. 112-126.
https://doi.org/10.1017/S0267190501000071

Johnson, Stefanie K.; **Murphy, Susan-Elaine**; **Zewdie, Selamawit**; **Reichard, Rebecca J.** (2008). "The strong, sensitive type: effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders". *Organizational behavior and human decision processes*, v. 106, n. 1, pp. 39-60.
https://doi.org/10.1016/j.obhdp.2007.12.002

Jokisch, Oliver; **Iaroshenko, Viktor**; **Maruschke, Michael**; **Ding, Hongwei** (2018). "Influence of age, gender and sample duration on the charisma assessment of German speakers". In: *Proceedings 29th conference on electronic speech signal process*, pp. 224-231.

Juslin, Patrik; **Laukka, Petri** (2003). "Communication of emotions in vocal expression and music performance: different channels, same code?". *Psychological bulletin*, v. 129, n. 5, pp. 770-814.
https://doi.org/10.1037/0033-2909.129.5.770

Keltner, Dacher; **Sauter, Disa**; **Tracy, Jessica**; **Cowen, Alan** (2019). "Emotional expression: advances in basic emotion theory". *Journal of nonverbal behavior*, v. 43, n. 2, pp. 133-160.
https://doi.org/10.1007/s10919-019-00293-3

Kenton, Sherron (1989). "Speaker credibility in persuasive business communication: a model which explains gender differences". *The journal of business communication*, v. 26, n. 2, pp. 143-157.
https://doi.org/10.1177/002194368902600204

Klaas, Elena; **Boukes, Mark** (2020). "A woman's got to write what a woman's got to write: the effect of journalist's gender on the perceived credibility of news articles". *Feminist media studies*, online first.
https://doi.org/10.1080/14680777.2020.1838596

Kröger, Bernd; **Kopp, Stefan**; **Lowit, Anja** (2010). "A model for production, perception, and acquisition of actions in face-to-face communication". *Cognitive processing*, v. 11, n. 30, pp. 187-205.
https://doi.org/10.1007/s10339-009-0351-2

Lakoff, Robin (1973). "Language and woman's place". *Language in society*, v. 2, pp. 45-79.
http://www.jstor.org/stable/4166707

Leaper, Campbell; **Robnett, Rachael D.** (2011). "Women are more likely than men to use tentative language, aren't they? A meta-analysis testing for gender differences and moderators". *Psychology of women quarterly*, v. 35, n. 1, pp. 129-142.
https://doi.org/10.1177/0361684310392728

MacIntyre, Peter D.; **Thivierge, Kimly A.** (1995). "The effects of speaker personality on anticipated reactions to public speaking". *Communication research reports*, v. 12, n. 2, pp. 125-133.
https://doi.org/10.1080/08824099509362048

McCroskey, James C.; **Teven, Jason J.** (1999). "Goodwill: a reexamination of the construct and its measurement". *Communication monographs*, v. 66, n. 1, pp. 90-103.
https://doi.org/10.1080/03637759909376464

McNatt, D. Brian (2019). "Enhancing public speaking confidence, skills, and performance: an experiment of service-learning". *The international journal of management education*, v. 17, n. 2, pp. 276-285.
https://doi.org/10.1016/j.ijme.2019.04.002

Men, Linjuan; **Yue, Cen-April**; **Liu, Yonghong** (2020). "Vision, passion, and care: the impact of charismatic executive leadership communication on employee trust and support for organizational change". *Public relations review*, v. 46, n. 3.
https://doi.org/10.1016/j.pubrev.2020.101927

Nelson, Larry R.; **Signorella, Margaret L.**; **Botti, Karin G.** (2016). "Accent, gender, and perceived competence". *Hispanic journal of behavioral sciences*, v. 38, n. 2, pp. 166-185.
https://doi.org/10.1177/0739986316632319

Pereira-dos-Santos, Kariane; **Veis-Ribeiro, Vanessa**; **Donalonso-Siqueira, Larissa-Thais**; **Cruz-Brugnara, Larissa**; **Brugnolo-Rosa, Inaiê-Caroline**; **Dassie-Leite, Ana-Paula** (2020). "Does shyness influence the self-perception of vocal symptoms, public speaking, and daily communication?". *Journal of voice*, v. 36, n. 1, pp. 54-58.
https://doi.org/10.1016/j.jvoice.2020.02.015

Petrican, Raluca; **Todorov, Alexander**; **Grady, Cheryl** (2014). "Personality at face value: Facial appearance predicts self and other personality judgments among strangers and spouses". *Journal of nonverbal behavior*, v. 38, pp. 259-277.
https://doi.org/10.1007/s10919-014-0175-3

Ritchie, Kay L.; **Palermo, Romina**; **Rhodes, Gillian** (2017). "Forming impressions of facial attractiveness is mandatory". *Scientific reports*, v. 7, pp. 469.
https://doi.org/10.1038/s41598-017-00526-9

Rodero, Emma (2022). "Effectiveness, attractiveness, and emotional response to voice pitch and hand gestures in public speaking". *Frontiers in communication*, v. 7, 869084.
https://doi.org/10.3389/fcomm.2022.869084

Rodero, Emma; **Larrea, Olatz**; **Rodríguez-de-Dios, Isabel**; **Lucas, Ignacio** (2022). "The expressive balance effect: perception and physiological responses of prosody and gestures". *Journal of language and social psychology*, online first.
https://doi.org/10.1177/0261927X221078317

Rodero, Emma; **Larrea, Olatz**; **Vázquez, Marina** (2013). "Male and female voices in commercials. Analysis of effectiveness, adequacy for product, attention and recall". *Sex roles*, v. 68, n. 5-6, pp. 349-362.
https://doi.org/10.1007/s11199-012-0247-y

Sagie, Abraham (2009). "Effects of leader's communication style and participative goal setting on performance and attitudes". *Human performance*, v. 9, n. 1, pp. 51-64.
https://doi.org/10.1207/s15327043hup0901_3

Sander, David; **Grandjean, Didier**; **Kaiser, Susanne**; **Wehrle, Thomas**; **Scherer, Klaus R.** (2007). "Interaction effects of perceived gaze direction and dynamic facial expression: Evidence for appraisal theories of emotion". *European journal of cognitive psychology*, v. 19, n. 3, pp. 470-480.
https://doi.org/10.1080/09541440600757426

Scherer, Klaus R. (1986). "Vocal affect expression: A review and a model for future research". *Psychological bulletin*, v. 99, n. 2, pp. 43-65.
https://doi.org/10.1037/0033-2909.99.2.143

Sidanius, Jim; **Pratto, Felicia** (1999). *Social dominance: an intergroup theory of social hierarchy and oppression*. Cambridge, England: Cambridge University Press. ISBN: 978 0 521805407

Strangert, Eva; **Gustafson, Joakim** (2008). "What makes a good speaker? Subject ratings, acoustic measurements and perceptual evaluations". In: *Proceedings of the annual conference of the international speech communication association*, *Interspeech*, pp. 1688-1691.

Tcherkassof, Anna; **Bollon, Thierry**; **Michel, Dubois**; **Pansu, Pascal**; **Adam, Jean-Michel** (2007). "Facial expressions of emotions: a methodological contribution to the study of spontaneous and dynamic emotional faces". *European journal of social psychology*, v. 37, n. 6, pp. 1325-1345.
https://doi.org/10.1002/ejsp.427

Van-Vugt, Mark; **Grabo, Allen E.** (2015). "The many faces of leadership: an evolutionary-psychology approach". *Current directions in psychological science*, v. 24, n. 6, pp. 484-489.
https://doi.org/10.1177/0963721415601971

Wichmann, Anne (2000). "The attitudinal effects of prosody, and how they relate to emotion". In: *Proceedings of the ISCA workshop on speech and emotion*, pp. 143-148.

Wieser, Matthias J.; **Pauli, Paul**; **Reicherts, Philipp**; Mühlberger, Andreas (2010). "Don't look at me in anger! Enhanced processing of angry faces in anticipation of public speaking". *Psychophyisiology*, v. 47, n. 2, pp. 271-280.
https://doi.org/10.1111/j.1469-8986.2009.00938.x

Zebrowitz, Leslie A. (2017). "First impressions from faces". *Current directions in psychological science*, v. 26, n. 3, pp. 237-242.
https://doi.org/10.1177/0963721416683996