

ORIGINAL ARTICLE

Emotional response to U.K. political party leader facial displays of affiliation, reward, and ambiguity during Brexit

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Abstract

Objective: On December 12, 2019, the United Kingdom's ruling Conservative Party called an election that put the country's 2016 "Brexit" referendum on leaving the European Union to the test. The divisive campaign and a polarized electorate culminated in large losses by opposition Labour and Liberal Democratic parties. Amid a polarized electorate, lingering questions arise as to whether the election results reflect more upon partisan ties or the respective party leaders' ability to emotionally connect with followers through their nonverbal behavior.

Methods: Using a unique pre-registered design, this study considers the emotional response to leaders of the three major U.K. political parties in the week prior to the December 2019 election by drawing upon a national sample of 546 partisan participants. We examine self-reported happiness, affinity, anger, and distress in response to reward and affiliative smiles as well as ambiguous facial displays in short videos shown without sound featuring Conservative Party leader Boris Johnson and his opponents Jeremy Corbyn (Labour Party) and Jo Swinson (Liberal Democratic Party).

Results: The findings of this pre-registered study suggests partisan identity plays a powerful role in empathetic and counter-empathetic responses to leader facial displays generally. Further analysis reveals a more nuanced response to the competing leaders' facial displays with followers of all three parties responding to the different smiles in distinct manners.

KEYWORDS

affiliative smiles, Brexit, emotional response, facial displays, reward smiles

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Politics is by definition contentious, and thus marked by both competition and cooperation; however, rising political polarization in Western democracies threatens social and economic stability (Mason 2018). This became especially apparent in the United Kingdom when a 2016 national referendum marginally supported exit from the European Union, in turn leading to societal unrest (Devine 2021). Since then, discord has predominated leading to the deposition of the Conservative and Unionist Party (hereafter Conservative Party) Prime Minister Theresa May and, after much maneuvering, a general election by her replacement Boris Johnson (who subsequently resigned after a series of scandals and was replaced briefly by Liz Truss and then Rishi Sunak). The opposition, the Labour Party led by Jeremy Corbyn and the Liberal Democratic Party led by Jo Swinson, perceived the 2019 election as an opportunity to unseat Johnson and maintain a close connection with the European Union. However, they were unsuccessful, and both parties lost a large proportion of their seats in Parliament. Perhaps more telling is that both Corbyn and Swinson were removed from their leadership positions in the aftermath.

While social identity plays a major role in voters' connection with political parties, leaders have increasingly played a major role in how followers connect with the parties (Haslam, Reicher, and Platow 2010). Thanks in large part to visual communication, voters in recent years have come to feel a strong emotional connection with leaders relative to the parties and their agendas (Grabe and Bucy 2009). For their part, U.S. presidential elections often elicit stronger feelings toward candidates and expectations about their ability to affect change than is the case with other elections (Granberg and Brent 1983), although this is increasingly the case even within political parties during primaries (Rand et al. 2009). Based upon this enhanced visibility, feelings toward the party leaders can be expected to be accentuated as elections approach and the stakes mount.

In the media era, a major means by which public figures communicate with their followers, as well as to unaligned voters and those following competitors, is via nonverbal channels (Bucy and Stewart 2018; Stewart, Salter, and Mehu 2009). Individuals are more likely to pay attention to leaders and putative leaders than other lower-status individuals (Chance 1967; Gerpott et al. 2018; Ohlsen, van Zoest, and van Vugt 2013). They are also more likely to be emotionally affected by (McHugo et al. 1985; Sullivan and Masters 1988) and more accurately identify leaders' nonverbal display behavior (Stewart, Méhu, and Salter 2015).

Distinctly identifiable nonverbal behavior, especially facial displays, are recognized across cultures (Matsumoto et al. 2010); however, contextual information influences how voters respond to nonverbal behavior (Barrett et al. 2019; Crivelli and Fridlund 2018; Stewart, Méhu, and Salter 2015). This is especially the case with leaders during negotiations with embedded power differentials (Trichas and Schyns 2012) or during leader-subordinate interactions (Trichas et al. 2017). As pointed out by Trichas and Schyns (2012), there are 'a number of factors that contribute to shaping perceptions of leadership; such as physiognomy, dynamic facial expressions, context, authenticity, and appropriateness' (p. 564).

Within politics, the major contextual factors may concern whether a leader is rallying a nation together against an external threat (Schubert, Stewart, and Curran 2002; Stewart, Waller, and Schubert 2009), tending and befriending followers in the face of shared loss (Bucy 2016) or broadening and building an electoral coalition. A range of nonverbal behaviors may be effective depending upon their appropriateness for the circumstances (Bucy and Stewart 2018; Grabe and Bucy 2009). Of the range of nonverbal behaviors available, those reassuring followers and showing affinity with undecided voters are perhaps most important during elections. In the communication between leaders and followers, smiles are critical elements of broadening and building coalitions and are strongly correlated with electoral success (McHugo et al. 1985; Sullivan and Masters 1988). Ultimately, leaders who effectively communicate affiliation and dominance are perceived as more charismatic (Keating et al. 2020) and hence more likely to draw supporters.

Likewise, the national context, including the nature of the electoral system, might be seen as influencing the types of nonverbal strategies deemed as appropriate (Masters and Sullivan 1989; Sullivan 1996; Warnecke, Masters, and Kempter 1992). For instance, while leader's smiles signaling reassurance and affinity are more appropriate in egalitarian societies, there is a greater preference for anger and threatening behaviors in more authoritarian societies or those systems perceiving threat (Masters, Frey, and Bente 1991; Masters and Sullivan 1989; Warnecke, Masters, and Kempter 1992). However, with the exception of studies in Germany (Gabriel and Masch 2017; Nagel, Maurer, and Reinemann 2012) and France (Masters and Sullivan

1989) research regarding response to politician nonverbal behavior in nations other than the United States has been relatively sparse.

Building from Trichas and colleagues' work (Trichas and Schyns 2012; Trichas et al. 2017), we consider the effect of a highly salient yet rare external factor—the decision for a large-scale social group (the United Kingdom) to remove themselves from a superordinate entity (the European Union), by evaluating emotional response to putative leaders during a pivotal national election. This study's primary purpose thus is to investigate how followers of U.K. political parties react emotionally to different forms of facial displays, especially those by party leaders meant to broaden and build coalitions immediately prior to a polarizing election. In doing so, we consider two types of smiles: *affiliative smiles* posed to signal cooperative intent to others and *reward smiles* signaling amusement and endogenous feelings of enjoyment (Martin et al. 2018; Niedenthal et al. 2010; Rychlowska et al. 2017; Stewart, Bucy, and Mehu 2015). To allow for comparisons, we also collected videos of facial displays that may be considered ambiguous and presented these prior to the affiliative and reward smiles to establish a baseline emotional response. Altogether, nine stimulus videos were coded using the Facial Action Coding System (FACS) to compare the self-reported emotional responses of registered U.K. voters on four dimensions, two positive (happiness and affinity) and two negative (anger and distress), 1 week prior to the December 12, 2019, election.

In the following sections, we review literature on facial displays, focusing on different smile types and their effect on emotional response, then consider the influence of political context. We next characterize the different facial display behaviors of the Conservative (Johnson), Labour (Corbyn), and Liberal Democratic (Swinson) party leaders, before testing their influence using a nationally representative U.K. sample of 546 partisan participants—more than twice the size of previous studies concerning leadership and facial displays (Stewart, Salter, and Mehu 2009). We analyze and report our findings in light of pre-registered research design and hypotheses to meet open science principles and conclude by considering the implications of our findings.

Emotional response to facial displays signaling reward, affiliation, and ambiguity

Extensive research suggests competition primes individuals to have a predilection to be aware of and respond to anger displays as compared to other displays (e.g., happiness, fearful, and neutral facial displays) especially in social circumstances (Hermans, Putman, and Van Honk 2006; Wilkowski and Leki 2019), including politics. While facial displays of anger can be used by leaders to assert dominance over other contenders, outsiders, and even supporters, the major means by which leaders obtain consensus, support, and concomitantly followers is through facial displays signaling happiness and/or reassurance (Bucy and Grabe 2008). These facial displays encompass the array of smiles that signal not just the lack of threat generally but also the willingness to cooperate or endogenous feelings of enjoyment (Brown, Palameta, and Moore 2003; Gaspar, Esteves, and Arriaga 2014; Mehu and Dunbar 2008a; Mehu, Grammer, and Dunbar 2007; Mehu, Little, and Dunbar 2007; Stewart, Bucy, and Mehu 2015).

Smiles may thus be identified based upon their social intent. And the social intent of smiles may be dissociated from the felt experience of happiness as explicitly tested in the lab (Martin et al. 2018; Niedenthal et al. 2010; Rychlowska et al. 2017) and as inferred from statements and actions communicated in the field (Crivelli and Fridlund 2018; Fridlund 2017; Stewart, Bucy, and Mehu 2015). Regardless of intent, smiles are predicated upon contraction of the zygomatic major muscle pulling the lip corners up and at an angle; differentiation in smile types is found with other associated facial muscular movements. Rychlowska and colleagues (2017) found that three distinct smiles based upon subtly different muscular movements (Martin et al. 2018; Niedenthal et al. 2010; Rychlowska et al. 2017), which largely correlate with ethological research in the political sphere (Stewart, Bucy, and Mehu 2015; Stewart and Ford Dowe 2013). These displays—reward, affiliative, and dominance smiles—are so named due to their communicative intent.

Reward smiles (e.g., Duchenne smiles, felt smiles, amusement smiles, and “open mouth, bared teeth” displays), which are associated with playfulness, joy, and enthusiasm, are distinguished by multi-modal markers signaling feeling and intent, not just through the face, but also behaviorally through the utterance

of laughter and the slight shaking of the body during this vocalization (Davila-Ross et al. 2011; Gaspar, Esteves, and Arriaga 2014; Mehu and Dunbar 2008b; Stewart 2012). In the political arena, where it is vital to build electoral coalitions, we can expect these smiles to have the greatest signal power. Due to the higher likelihood of their being mimicked and resultant emotional contagion by followers, smiles may be seen as powerful communication tools for broadening and building political coalitions.

Affiliative smiles, which communicate approachability, acknowledgment, and appeasement, are associated with an affinity toward the individual to whom the display is directed. While affiliative smiles utilize the zygomatic muscle, they often involve controlling the display through muscles around the mouth, have timing that is marked by a sudden onset and offset and rarely (if at all) are seen in the eyes (Perusquia-Hernandez, Ayabe-Kanamura, and Suzuki 2019; Schmidt et al. 2006; Schmidt, Bhattacharya, and Denlinger 2009). Their social import of affiliative smiles may be seen in appropriate times and contexts; for example, Trichas and Schyns found that leaders with affiliative smiles were perceived as most appropriate prior to negotiations, and reward smiles were seen as most appropriate upon reaching a successful conclusion, reflecting contextual expectations (Trichas and Schyns 2012).

Based upon previous research (Stewart, Bucy, and Mehu 2015; Stewart and Ford Dowe 2013; Stewart, Senior, and Bucy 2020), we expect that reward smiles will elicit higher levels of happiness than affiliative smiles (H1a), which are in turn expected to generate greater self-reported happiness than the ambiguous displays (H1b) of the U.K. political figures. Likewise, we expect that anger and distress will be experienced at lower levels in response to reward smiles when compared to, respectively, affiliative smiles (H2a, H3a) and ambiguous facial displays (H2b, H3b). Finally, while research considering affinity is not extant, instead being subsumed into emotional warmth toward political figures (Masters and Sullivan 1989; McHugo et al. 1985; Sullivan 1996; Sullivan and Masters 1988), we expect that affiliative smiles will lead to greater experienced affinity in response to leaders than reward smiles (H4a) and ambiguous displays (H4b).

Emotional response to the facial displays of political party leaders

The influence of facial displays may be accentuated or attenuated depending on the relationship between the individual sending and the observer receiving the signal. In politics, that means followers identifying with a political party are more likely to have a stronger empathetic response (e.g., happiness and affinity in response to reward and affiliative smiles) and counter-empathy (e.g., distress in response to anger–threat) to their leader(s) than to the opposition (Stewart and Ford Dowe 2013; Stewart, Senior, and Bucy 2020). Intent to vote or having voted for a political party is a fundamental indicator of support and followership for not just the party but also its leader (Haslam, Reicher, and Platow 2010). Thus, we expect a greater positive emotional response (happiness and affinity) (H5a) and lower levels of distress and anger (H5b) to the viewer's own party leader compared to other party leaders. The ambiguous displays will likely reflect emotional empathy and counter-empathy depending on the subtle signals presented (RQ1a), although we might expect that the supported party's leader will have a greater response than will those of the other parties (RQ1b).

However, the differences in emotional response to facial displays of party leaders may be attenuated by the proximity of the political parties to one another and their goals of their opposition. Research comparing the United States with France suggests that while there are similarities in how participants responded to political leaders, cultural differences attenuated findings concerning response to happiness–reassurance displays but accentuated participant response to anger–threat and fear–evasion displays (Masters and Sullivan 1989; Sullivan 1996). More recently, Gabriel and Masch found that, contrary to findings in the United States and France, German partisanship was not an important moderator of participant reactions to political leaders due to less polarization between the two major, and moderate, German political parties (Gabriel and Masch 2017).

Whereas the U.S. political system is a two-party system marked by competition to the point of sharp polarization during elections and now in governing (Mason 2018; Stewart, George, and Adams 2019), the U.K. parliamentary system can find party collaboration in governance. Thus, differences in follower emotional response, whether positive (happiness and affinity) or negative (anger and distress), may reflect



FIGURE 1 1A–3C Peak facial display behavior (from top to bottom: 1 = Johnson, 2 = Corbyn, & 3 = Swinson; from right to left: A = ambiguous display, B = affiliative smile, C = reward smile)

proximity—or lack thereof—to leaders of opposition parties and to the possibility, even likelihood, of collaboration. Thus, our next research question concerns whether the leaders of a political party not in power emotionally affect participant followership through their facial displays as compared to the leader of the party in power (RQ2a) and leaders of the other parties out of power (RQ2b).

METHOD

Stimuli

The stimuli used for this study consist of nine 7–10 s facial displays from Boris Johnson, Jeremy Corbyn, and Jo Swinson, with each leader presented in three videos. We chose speaking events covered by media outlets in front of what appeared to be relatively well-attended political rallies; to maintain external validity, we did not edit textual background or media icons. Stimuli choice was based upon party leaders being presented in standardized head and shoulder shots in front of neutral backgrounds, with as high a video quality as possible. Events chosen were based upon their showing the political leaders nonverbally responding to constituent and journalist questions in the case of Boris Johnson (The Sun 2019) and Jo Swinson (ITV News 2019) or observable audience response (e.g., laughter, applause, and cheering) with Jeremy Corbyn (Labour Party, 2019). This allows for unimpeded and uninterrupted facial display behavior by the party leaders and in turn provides for the emotional response to discrete facial display behavior.

The facial displays extracted were chosen based upon their representing the theoretically and behaviorally distinct affiliative and reward smiles. To differentiate between the two types of smiles and the ambiguous displays that serve as the reference point, video clips were coded using the FACS (see Online Supplement for FACS coding in Table 2 and behavioral description) with the peak facial display behavior for the candidates seen in Figures 1A–3C.

Conservative Party—Boris Johnson

Boris Johnson's *ambiguous facial display* video (see Figure 1A for peak contraction) lasted 12-s and involved only movement in the lower face, with the eyes not visible for seven and a half seconds as he looked down.

At the beginning of the video, Johnson's mouth was open slightly with his jaw moderately loose while he faced to his right. As Johnson turned to face forward, his lips stretched back slightly twice, while his lips were tightened twice during the latter moments.

Johnson's *affiliative smile* video (Figure 1B) lasted just over 9-s. At the beginning of the video, Johnson leaned over with his elbows on the podium and then smiled with his lip corners being pulled up and at an angle at moderate strength after which he postured up and then swayed side-to-side behind the podium.

Johnson's *reward smile* (Figure 1C) occurred toward the end of a nine-and-a-half-second video. His lower face showed movement first with his mouth opening and a moderately dropped jaw. He then removed his hands from the sides of the podium with his palms up while his lip corners tightened slightly before displaying a reward smile with his lip corners pulled up and back moderately strongly as his mouth opened widely and jaw loosened to a greater extent before he looked down to the podium.

Labour Party—Jeremy Corbyn

Jeremy Corbyn's *ambiguous facial display* video (Figure 2A) lasted nearly 9-s and was marked by slight contraction of the eyebrows both upward and together with his lower face initially showing a slight lip corner tightening and being pulled back slightly before his mouth opened slightly as he stuck out his tongue. After this, his mouth closed and then opened again as he moved his attention slightly to his left in a relatively rapid manner.

During Corbyn's *affiliative smile* video (Figure 2B), he did not contract the muscles in his upper face beyond having an elevated eye blink rate; however, he engaged in multiple contractions of the zygomatic muscle. A total of four individual lip corner pulls upward and at an angle occurred during this nearly 9-s video, with each marked by quick onset and offset. While the last three were marked by an opening of the mouth and a slight drop of the jaw, his body movements suggested affiliative intent as he nodded during the first two smiles, then raised his right hand in a thumbs-up gesture in the interval between the third and fourth smiles.

Corbyn's *reward smile* video (Figure 2C) lasted just over 11-s and involved slight contraction of the frontalis muscle as his eyebrows were raised slightly for a comparatively long period of the clip. His zygomatic muscle contracted twice, pulling the lip corners up and at an angle, and both times occurred in conjunction with mouth opening and slight jaw relaxation, with his lips puckering in the interval between both smiles. Throughout, Corbyn had a relaxed posture with the first smile occurring as he looked over his glasses and then again toward the end of the clip after he brought his hand (holding a pen) to his mouth.

Liberal Democratic Party—Jo Swinson

Jo Swinson's *ambiguous facial display* (Figure 3A) was presented in a nearly 10-s video as she raised her outer eyebrows while looking downward at the podium. She then displayed a trace lip corner pull upward and at an angle but remained relatively expressionless.

Swinson's *affiliative smile* video (Figure 3B) lasted just over 8-s; her eyes marginally widened with the upper eyelid being raised during the first second. While her lower face displayed her teeth throughout the video, with her mouth moderately open, her affiliative smile evidenced a quick and moderately strong onset with her lips pulled up and at an angle. Additionally, her upper lip was pulled up showing more of her upper teeth. Swinson's affiliative smile ended abruptly upon her making a sharp nod and a quick offset of the zygomaticus muscle followed by her chin and lower lip being pressed upward.

Swinson's *reward smile* was presented in an 11-s video (Figure 3C). As with the affiliative smile, Swinson's eyes were marginally widened during the initial stages of the video before she looked down. The muscles around her eyes then moderately contracted concurrent with her lip corners being pulled strongly upward and at an angle. While a smile was apparent during the entire clip, her mouth was closed until midway through the video whereupon her mouth opened and jaw dropped substantially as her torso shook slightly

before she looked away and downward with her head tilted to the left. The video ended with Swinson pushing her chin and lower lip upward in a smile control.

EXPERIMENTAL TREATMENT

Participants and design

Participants taking part in this study were recruited via Qualtrics in the week prior to the election (starting December 5, 2019). Due to the devolved nature of national politics in the United Kingdom, only individuals residing in England who indicated they intended to vote for one of three main political parties were invited to participate. To ensure a nationally representative sample, the cohort consisted of a random sample from each of the 124 postal code zones in England and received financial compensation for their participation.

A total of 754 participants entered this study of which a total of 500 were contracted from Qualtrics. Data in this study were cleaned as per the pre-analysis plan (see footnote 1) by removing those who took less than half the 15 min allotted for this experiment (450 s) or who took more than 3 h (1800 s). Of those entering the study, 43 took more than 3 h, and another 153 exited the study in less than 450 s. Next, 12 individuals evidenced response sets across the initial three baseline ambiguous candidate displays and were removed from analysis leaving a total of 546 participants to analyze.

Participants were recruited on the basis of their identification with one of the three major political parties in the United Kingdom; 57.0 percent ($n = 311$) identified their intent to vote for the Conservative Party prior to the election, 20.7 percent ($n = 113$) did the same for Labour Party as did 22.3 percent ($n = 122$) for the Liberal Democratic Party. Demographic characteristics show that the average age of participants was 58.33 years old ($SD = 12.22$) with age ranging from 19 to 89 years. There were more males taking part in the study (38.3 percent female). All participants provided their informed consent prior to taking the study, and all procedures were approved by the local institutional review board (IRB Ref 1568).

Procedure

Participants were presented video through a web experiment hosted by Qualtrics using embedded MPEG-4 video clips without sound and with emotion terms and sliders situated underneath. The video clips were presented with a 5-s countdown. Two blocks of video clips were presented to participants. In the first block, participants viewed each political leaders' ambiguous display to provide a baseline. In the second block, participants viewed reward and affiliative smiles from each candidate as presented in random order. In summary, each participant viewed nine videos, with three each from the three political party leaders.

Measures

Measures of participant-expressed feelings were assessed through six slider bars arrayed under the video stimuli. The strength of the emotion felt was indicated when participants moved the slider bar across the screen in response to the question "How do you feel when you watch this video?," progressing from "not at all"/0 to "extremely"/100 with the default setting being "not at all." The eight felt emotion terms were combined into four 100-point variables, with "anger" (Angry + Disgusted), "distress" (Fearful + Anxious), and "happiness" (Happy + Excited) being constructed in line with the Stewart, Senior, and Bucy's (2020) study; we added a fourth variable to measure transactional positive affect "affinity" (Proud + Interested). The resulting Pearson's correlations for the scales ranged from 0.600 to 0.904 with the majority of correlations > 0.800 ($n = 23$; see Online Supplement 2).

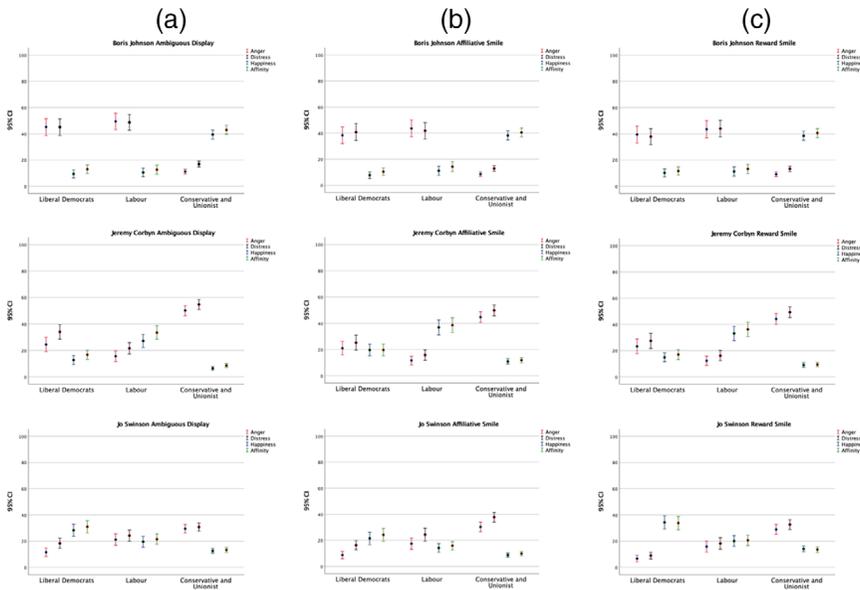


FIGURE 2 Participant emotional response (from top to bottom: 1 = Johnson, 2 = Corbyn, and 3 = Swinson; from right to left: A = ambiguous display, B = affiliative smile, C = reward smile)

Findings: Emotional response to political party leaders

Analysis of the general patterns of emotional response by participants to the leaders of the three political parties suggests that the Conservative Party identifiers are polarized in their response to all three candidates in each of their facial displays. With these participants, there are distinctly different responses in the negative-reported (anger and distress) and positive-reported (happiness and affinity) emotions when compared with the participants who identified with the Liberal Democratic or Labour Party. As can be seen in Figures 2A–3C 1A–3C, Conservative Party identifiers show distinct empathy and counter-empathy in their response in the expected manner, with higher levels of anger and distress felt in response to the opposition (Jo Swinson and Jeremy Corbyn) and higher levels of happiness and affinity to their own leader Boris Johnson.

At the same time, Boris Johnson was a highly polarizing figure for the respondents, more so than was the case with either Jo Swinson or Jeremy Corbyn. Participant response to all of Johnson's facial displays tended to be accentuated when compared with either of the other two candidates for prime minister. Although expected patterns of empathy and counter-empathy based upon political party affiliation can be seen in Figures 2A–3C 1A–1C, it is obvious that Johnson was a polarizing figure in the days leading up to the 2019 U.K. general election.

By way of comparison, visual analysis of Swinson and Corbyn shows a more muted emotional response by Liberal Democratic Party and Labour Party identifiers. In response to Jeremy Corbyn, Liberal Democrats reflected the patterns shown by Conservative Party supporters in their response to all displays, albeit to an attenuated extent (Figures 2A–2C). For their part, Labour Party supporters were empathetic to both his affiliative and reward smiles, reporting feeling substantially less anger and distress and more happiness and affinity; however, the ambiguous display elicited a nearly linear pattern increasing from reported anger to distress to happiness to ultimately at the highest level of felt affinity.

With the Liberal Democratic Party leader Jo Swinson, both Liberal Democrats and Labour Party identifiers had what is best characterized as mixed feelings. Specifically, as can be seen in Figures 2A–2C, Labour Party members did not have substantially differentiated emotional response to Swinson's displays. While followers in her Liberal Democratic Party had a distinctly different and expected response to Swinson's

reward smile, both her ambiguous display and affiliative smile evinced a near-linear pattern of response from reported anger to distress to happiness and then to affinity at the highest levels.

Comparing emotional response to reward and affiliation smiles with ambiguous displays

To assess the response of study participants in terms of self-reports of happiness, affinity, anger, and distress to the facial displays of the political figures, we used repeated measures Analysis of Variance (ANOVA) with the within-subjects factors of the ambiguous display as a comparison condition to the affiliative and reward smiles with response. Respondent report of political party affiliation and gender were between-subjects factors, while age was entered as a covariate. Tests for sphericity of the 12 equations considered here indicate significant departures from assumptions of sphericity with Mauchly's W ranging from 0.721 to 0.972 ($\chi^2(2) = 175.797 - 21.286$ all $ps < 0.001$). Due to 11 of 12 having Mauchly's W above 0.750, we use the Huynh-Feldt ϵ to adjust the degrees of freedom, allowing correction in the evaluation of the F-ratio (see online Supplement 3).

Response to Conservative Party leader Boris Johnson

Happiness

The happiness reported by participants in response to Boris Johnson's different facial displays does not reach significant differences for the main effect, $F(1.954, 539) = 1.202$, $p = 0.300$, $\eta^2_p = 0.002$. As expected, political party affiliation of participants affected reported happiness for both between-subject analyses substantially. Between-subjects effects showed a significant and strong relationship due to party identification, $F(2, 539) = 78.532$, $p < 0.001$, $\eta^2_p = 0.226$, with Conservative Party identifiers feeling significantly more happiness ($M = 38.020$, $SD = 1.473$) than those affiliated with either Liberal Democratic ($M = 7.777$, $SD = 2.552$; $p < 0.001$) or Labour Party ($M = 10.647$, $SD = 2.306$; $p < 0.001$). Liberal Democratic Party identifiers did not differ in reported happiness from their Labour Party counterparts in response to all three of Johnson's displays ($p = 0.401$). When participants expressed happiness as the interaction of political party identity and display type was considered, Labour Party, Liberal Democratic Party, and Conservative Party identifiers did not differ significantly, $F(3.907, 539) = 1.334$, $p = 0.256$, $\eta^2_p = 0.005$, as Johnson's discrete displays of ambiguity as well as his affiliative and reward smiles were not significantly differentiated.

Affinity

Affinity expressed toward Johnson's facial displays showed no significant main effect for the different types of displays, $F(1.975, 539) = 0.802$, $p = 0.447$, $\eta^2_p = 0.001$. Participant response with affinity to Boris Johnson's facial displays was affected by political party identification only in regards to between-subjects effects, which shows a significant and strong relationship due to party identification, $F(2, 539) = 82.009$, $p < 0.001$, $\eta^2_p = 0.233$, as Conservative Party identifiers felt significantly more affinity toward Johnson ($M = 40.788$, $SD = 1.463$) than either Liberal Democratic Party ($M = 10.090$, $SD = 2.534$; $p < 0.001$) or Labour Party ($M = 13.032$, $SD = 2.2899$; $p < 0.001$). For their parts, Liberal Democratic Party and Labour Party identifiers did not significantly differ ($p = 0.385$) in expressed affinity toward Johnson.

When considering the interaction of display type with party identification, we saw a significant albeit small effect, $F(3.950, 539) = 2.755$, $p = 0.027$, $\eta^2_p = 0.010$. Participant party identity suggests that those with Conservative Party affiliations significantly differentiated between Johnson's ambiguous display and his two smiles. Specifically, affinity was higher in response to his ambiguous display when compared to either Johnson's affiliative smile ($m_{Amb-AffSm} = 2.750$; $p = 0.001$) or reward smile ($m_{Amb-RewSm} = 2.650$;

$p = 0.001$). In other words, counter-intuitively affinity decreased when supporters of Johnson saw him smiling. Furthermore, Conservative identifiers did not differentiate between affiliative and reward smiles ($m_{AffSm-RewSm} = -0.100$; $p = 0.887$). Both Liberal Democratic Party and Labour Party identifiers responded in a similar manner to Johnson's displays by not significantly differentiating between the three different displays in terms of felt affinity.

Anger

Analysis of Boris Johnson's facial display behavior found no main effect for his different types of displays on anger by participants, $F(1.944, 539) = 1.698$, $p = 0.184$, $\eta^2_p = 0.003$. Participant political party identification played a significant role both with overall felt anger, $F(2, 539) = 111.036$, $p < 0.001$, $\eta^2_p = 0.292$, as participants affiliating with the Conservative Party expressed substantially less anger ($M = 9.443$, $SD = 1.429$) in response to Johnson's displays when compared with Liberal Democratic Party ($M = 39.884$, $SD = 2.476$; $p < 0.001$) and Labour Party identifiers ($M = 44.494$, $SD = 2.237$; $p < 0.001$). On the other hand, Liberal Democratic Party and Labour Party identifiers did not significantly differ in their expressed anger ($p = 0.164$).

Political party identity, when interacting with Johnson's facial displays, reveals expressed anger that significantly differed in degree, if not pattern of response, $F(1.944, 539) = 3.465$, $p = 0.009$, $\eta^2_p = 0.013$, with a small effect size. Both Liberal Democratic Party and Labour Party identifying respondents responded with significantly greater amounts of anger to Johnson's ambiguous display when compared to his affiliative smile (Liberal Democratic $m_{Amb-AffSm} = 7.134$; $p < 0.001$; Labour $m_{Amb-AffSm} = 5.476$; $p < 0.001$) and his reward smile (Liberal Democratic $m_{Amb-RewSm} = 6.306$; $p < 0.001$; Labour $m_{Amb-RewSm} = 5.795$; $p < 0.001$). For their part, Conservative Party identifiers responded with significantly more anger when comparing his ambiguous display and affiliative smile ($m_{Amb-AffSm} = 2.416$; $p = 0.006$), but not with his reward smile in either case ($m_{Amb-RewSm} = 1.667$; $p = 0.062$; $m_{AffSm-RewSm} = -0.749$; $p = 0.318$). This latter pattern, in which anger was not expressed as significantly different between the different party members, held out for both Liberal Democratic Party and Labour Party members (Liberal Democratic $m_{AffSm-RewSm} = -0.827$; $p = 0.524$; Labour $m_{AffSm-RewSm} = 0.319$; $p = 0.786$).

Distress

Participants viewing Johnson's facial display behavior were not affected in terms of the distress they expressed with no main effect for display type, $F(1.938, 539) = 2.018$, $p = 0.135$, $\eta^2_p = 0.004$. When considering political party identification and the role it has on eliciting distress in response to Boris Johnson's three displays, between-subjects effects show a significant and strong relationship, $F(2, 539) = 79.261$, $p < 0.001$, $\eta^2_p = 0.227$. Here, as expected, Conservative Party identifiers felt significantly less distress ($M = 13.817$, $SD = 1.482$) than either Liberal Democratic ($M = 40.320$, $SD = 2.567$; $p < 0.001$) or Labour Party ($M = 44.628$, $SD = 2.319$; $p < 0.001$). Finally, the Liberal Democrat Party and Labour Party identifying participants expressed distress at levels that did not reach significant differences ($p = 0.210$). While the interaction of display type with party identification approached significant differences, $F(3.876, 539) = 2.217$, $p = 0.067$, $\eta^2_p = 0.008$, participants, regardless of the political party, did not respond differentially to the three different facial displays.

Response to Labour Party leader Jeremy Corbyn

Happiness

Participant-reported happiness in response to Jeremy Corbyn's different facial displays does not reach the 0.05-level significance level for the main effect, $F(1.774, 539) = 0.385$, $p = 0.656$, $\eta^2_p = 0.001$. As expected,

political party identification affected reported happiness for both between-subject analysis and when interacting with display type. Between-subjects effects show a significant and strong relationship due to party identification, $F(2, 539) = 60.106, p < 0.001, \eta^2_p = 0.182$, as Labour Party identifiers felt significantly more happiness ($M = 31.699, SD = 1.735$) than either Liberal Democratic ($M = 14.058, SD = 1.920; p < 0.001$) or Conservative Party ($M = 9.064, SD = 1.108; p < 0.001$). For their part, Liberal Democratic Party identifiers expressed significantly more ($p = 0.026$) happiness than did their Conservative Party counterparts in response to all three of Corbyn's displays.

Expressed happiness based upon differences between political party identity and display type suggests that Labour Party, Liberal Democratic Party, and Conservative Party identifiers differ significantly, $F(3.548, 539) = 3.286, p = 0.014, \eta^2_p = 0.012$, with a small effect size. Jeremy Corbyn's Labour Party supporters respond with significantly different amounts of happiness when all three displays are compared. Unexpectedly, while Corbyn's reward smile elicited more Labour Party participant happiness than his ambiguous display ($m_{Amb-RewSm} = -9.865; p < 0.001$), it elicited less happiness when compared with his affiliative smile ($m_{AffSm-RewSm} = 4.096; p < 0.001$). Regardless, Corbyn's affiliative smile elicits more happiness when compared with his ambiguous display ($m_{Amb-AffSm} = -6.590; p < 0.001$). For their part, Liberal Party identifiers do not feel significantly more happiness to Corbyn's reward smile than his ambiguous display ($m_{Amb-RewSm} = -2.201; p = 0.124$), although they significantly differentiate between affiliative and reward smiles ($m_{AffSm-RewSm} = 4.568; p < 0.001$), albeit with greater felt happiness to the affiliative smile. The Conservative Party identifiers, for their part, showed a pattern similar to Labour Party members as they responded with significantly less happiness to either smile when compared with the ambiguous display ($m_{Amb-AffSm} = -4.629; p < 0.001; m_{Amb-RewSm} = -2.508; p = 0.001$) while the affiliative smile was higher in happiness than the reward smile ($m_{AffSm-RewSm} = 2.121; p < 0.004$).

Affinity

The reported feelings of affinity by participants in response to Jeremy Corbyn's facial displays showed no significant main effect for the different types of displays, $F(1.852, 539) = 2.249, p = 0.110, \eta^2_p = 0.004$. Participant response with affinity to Jeremy Corbyn's facial displays was affected by political party identification only in regard to between-subjects effects, which shows a significant and strong relationship due to party identification, $F(2, 539) = 75.278, p < 0.001, \eta^2_p = 0.218$, as Labour Party identifiers felt significantly more affinity toward Corbyn ($M = 35.648, SD = 1.753$) than either Liberal Party ($M = 15.970, SD = 1.940; p < 0.001$) or Conservative Party ($M = 10.027, SD = 1.120; p < 0.001$). Liberal Democratic identifiers expressed significantly less ($p = 0.009$) affinity toward Corbyn than did their Conservative Party counterparts. When considering the interaction of display type with party identification, no significant effect was found, $F(3.704, 539) = 0.900, p = 0.458, \eta^2_p = 0.003$.

Anger

There is no main effect for Corbyn's different facial displays on expressed anger, $F(1.705, 539) = 0.886, p = 0.398, \eta^2_p = 0.002$. Between-subjects effects, on the other hand, showed a significant and strong relationship due to party identification, $F(2, 539) = 62.201, p < 0.001, \eta^2_p = 0.188$, as Labour Party identifiers ($M = 12.461, SD = 2.736; p = 0.005$) felt less anger to Corbyn's displays overall than did Liberal Democratic ($M = 20.924, SD = 3.028; p < 0.001$) or Conservative Party ($M = 46.051, SD = 1.748; p < 0.001$) identifiers; likewise, Liberal Party identifiers expressed significantly less ($p < 0.001$) anger than did their Conservative Party counterparts in response to Corby. Unexpectedly, participant political party identification did not play a significant role when interacting with display type, $F(3.410, 539) = 0.916, p = 0.442, \eta^2_p = 0.003$.

Distress

Corbyn's facial display behavior does not affect participant distress with no main effect for display type, $F(1.684, 539) = 2.028, p = 0.140, \eta^2_p = 0.004$. When political party identification is considered, between-subjects effects showed a significant and strong relationship due to party identification, $F(2, 539) = 57.394, p < 0.001, \eta^2_p = 0.176$. Here, as expected, Labour Party identifiers felt significantly less distress ($M = 17.549, SD = 2.728$) than either Liberal Democratic ($M = 27.508, SD = 3.020; p = 0.014$) or Conservative Party ($M = 50.286, SD = 1.743; p < 0.001$); likewise, Liberal Democrats expressed significantly less ($p < 0.001$) distress than did their Conservative Party counterparts when responding to Corbyn's displays. When considering the interaction of display type with party identification, no significant effect was found, $F(3.369, 539) = 1.156, p = 0.327, \eta^2_p = 0.004$.

Response to Liberal Democratic Party leader Jo Swinson

Happiness

Felt happiness as reported by participants to Jo Swinson's facial displays, despite approaching significance, did not reach the 0.05-level posited for a main effect, $F(1.875, 539) = 2.902, p = 0.059, \eta^2_p = 0.005$. However, political party identification affected reported happiness for both between-subject analysis and when interacting with display type. Between-subjects effects show a significant and strong relationship due to party identification, $F(2, 539) = 21.306, p < 0.001, \eta^2_p = 0.073$, as Liberal Democratic Party identifiers felt significantly more happiness ($M = 25.372, SD = 1.804$) than either Labour ($M = 17.337, SD = 1.630; p = 0.001$) or Conservative Party ($M = 11.846, SD = 1.041; p < 0.001$). For their part, Labour Party identifiers expressed significantly more ($p < 0.005$) happiness than did their Conservative Party counterparts in response to Swinson's displays.

Expressed happiness based upon differences between party identity and display type suggests that Liberal Democrats, Labour Party, and Conservative Party identifiers differ significantly, $F(3.750, 539) = 5.010, p = 0.001, \eta^2_p = 0.018$, with a small effect size. Swinson's Liberal Democratic Party supporters responded with significantly different amounts of happiness to all three displays. As expected, Swinson's reward smile elicited greater expressed happiness, compared to her ambiguous display ($m_{Amb-RewSm} = -6.519; p < 0.001$) as it does when compared with her affiliative smile ($m_{AffSm-RewSm} = -13.330; p < 0.001$). However, that Swinson's affiliative smile elicited less happiness when compared with her ambiguous display ($m_{Amb-AffSm} = 6.811; p < 0.001$) suggests the multifaceted nature of this display. For their part, Labour Party and Conservative Party identifiers respond in a similar manner to her displays, with Swinson's affiliative smile responded with significantly less happiness when compared to either the reward smile (Labour Party $m_{AffSm-RewSm} = -6.385; p < 0.001$; Conservative Party $m_{AffSm-RewSm} = -5.366; p < 0.001$) or the ambiguous display (Labour Party $m_{Amb-AffSm} = 5.260; p < 0.001$; Conservative Party $m_{Amb-AffSm} = 3.872; p < 0.001$).

Affinity

The feelings of affinity reported in response to Swinson's facial display behavior showed no significant main effect for the different types of displays, $F(1.790, 539) = 2.215, p = 0.116, \eta^2_p = 0.041$. As expected, participant response with affinity to Jo Swinson's displays was affected by political party identification in both between and interacting with display type. Between-subjects effects show a significant and strong relationship due to party identification, $F(2, 539) = 24.947, p = 0.001, \eta^2_p = 0.085$, as Liberal Democratic identifiers felt significantly more affinity toward Swinson ($M = 26.414, SD = 1.791$) than either Labour ($M = 19.063, SD = 1.618; p = 0.002$) or Conservative Party ($M = 12.127, SD = 1.034; p < 0.001$) identifiers;

likewise, Labour identifiers expressed significantly less ($p < 0.001$) affinity toward Swinson than did their Conservative Party counterparts.

When considering the interaction of display type with party identification, we saw a significant effect, $F(3.580, 539) = 2.956, p = 0.024, \eta^2_p = 0.011$, with a small effect size. Liberal Democratic Party-affiliated participants significantly differentiate between Swinson's facial displays with affinity increased in response to her ambiguous display when compared to her affiliative smile ($m_{Amb-AffSm} = 5.846; p < 0.001$) and decreased in response to her reward smile ($m_{Amb-RewSm} = -3.680; p = 0.038$). Further, Swinson's reward smile was responded to with significantly greater affinity than her affiliative smile ($m_{AffSm-RewSm} = -9.526; p < 0.001$). Both Labour and Conservative Party identifiers responded in a similar manner when considering her affiliative smile, which elicited significantly less affinity than did her ambiguous display (Labour $m_{Amb-AffSm} = 5.802; p < 0.001$; Conservative $m_{Amb-AffSm} = 3.361; p < 0.001$) and her reward smile (Labour $m_{AffSm-RewSm} = -4.798; p < 0.001$; Conservative $m_{AffSm-RewSm} = -3.942; p < 0.001$).

Anger

Analysis of the emotional response of anger to Swinson's facial displays found no significant main effect, $F(1.585, 539) = 0.481, p = 0.574, \eta^2_p = 0.001$. However, political party identification played a role in both between and when interacting with display type. Between-subjects effects show a significant and strong relationship due to party identification, $F(2, 539) = 27.757, p < 0.001, \eta^2_p = 0.093$, as Liberal Democratic identifiers felt significantly less anger ($M = 7.940, SD = 2.597$) than either Labour ($M = 17.755, SD = 2.346; p = 0.005$) or Conservative Party ($M = 29.429, SD = 1.499; p < 0.001$); likewise, Labour identifiers expressed significantly less ($p < 0.001$) anger than did their Conservative Party counterparts in response to her facial displays.

When considering the interaction of display type with party identification, we see a significant effect, $F(3.170, 539) = 3.305, p = 0.018, \eta^2_p = 0.012$, with a small effect size. Political party identity shows significantly decreased anger from Swinson's ambiguous display when compared to her affiliative smile ($m_{Amb-AffSm} = 4.118; p = 0.037$) and reward smile ($m_{Amb-RewSm} = 5.864; p = 0.003$) by Labour Party identifiers, and a similar trend with her followers, albeit not reaching significant differences with the affiliative smile ($m_{Amb-AffSm} = 3.607; p = 0.099$) but with the reward smile ($m_{Amb-RewSm} = 4.976; p = 0.024$). For their part, post hoc pairwise comparisons of Conservative Party identifiers had nearly significant differences between the affiliative smile and the reward smile ($m_{AffSm-RewSm} = 1.495; p = 0.053$).

Distress

Participant distress in response to Jo Swinson's facial display behavior finds no main effect for the different types of displays, $F(1.779, 539) = 0.579, p = 0.541, \eta^2_p = 0.001$. As was the case with anger, political party identification played a role in eliciting distress in both between-subject comparisons and when interacting with display type. Between-subjects effects show a significant and strong relationship due to party identification, $F(2, 539) = 24.581, p < 0.001, \eta^2_p = 0.084$, as Liberal Democratic identifiers felt significantly less distress ($M = 13.940, SD = 2.555$) than either Labour ($M = 22.289, SD = 2.308; p = 0.012$) or Conservative Party ($M = 33.454, SD = 1.475; p < 0.001$); likewise, Labour identifiers expressed significantly less ($p < 0.001$) anger than did their Conservative Party counterparts in response to Swinson's displays.

When considering the interaction of display type with party identification, we see a significant effect, $F(3.508, 539) = 7.211, p < 0.001, \eta^2_p = 0.026$, with a small effect size. Political party identity shows Liberal Democrats and Labour Party identifiers having a similar pattern in response. Specifically, Swinson's reward smile elicited less distress in Liberal Democratic identifiers than did her ambiguous display ($m_{Amb-RewSm} = 8.786; p < 0.001$) and her affiliative smile ($m_{AffSm-RewSm} = 6.488; p = 0.001$). This pattern was seen in Labour Party followers, with the ambiguous display eliciting greater distress than the reward smile ($m_{Amb-RewSm} = 6.127; p = 0.005$) and the affiliative smile leading to greater participant distress than the reward smile

($m_{AffSm-RewSm} = 6.602$; $p < 0.001$). Conservative Party identifiers' pattern of response was substantially different as Swinson's affiliative smile elicited greater distress than either her ambiguous display ($m_{Amb-AffSm} = -7.398$; $p < 0.001$) or reward smile ($m_{AffSm-RewSm} = 5.513$; $p = 0.053$).

DISCUSSION

As has been the case with studies considering facial display behavior by leaders in the business world (Trichas and Schyns 2012; Trichas et al. 2017) and politics (Gabriel and Masch 2017; Masters and Sullivan 1989; Stewart, Senior, and Bucy 2020; Stewart and Svetieva 2021; Stewart, Waller, and Schubert 2009; Sullivan and Masters 1988; Sullivan and Masters 1994), context plays an important role in influencing observer response. While the December 2019 U.K. election over the nature of Brexit with a polarized electorate in a competitive context may be considered unique, indeed even an historical event, the inferences drawn regarding the strong feelings felt toward the three political party leaders in an intensely contested race may be seen as applicable across cultures, as well as a range of different political contests. Indeed, partisan social identity, and with it, followership, may be considered an evolved response (Gerpott et al. 2018; Haslam, Reicher, and Platow 2010; Mason 2018; Warnecke, Masters, and Kempter 1992) that has been accentuated by the virtual face-to-face contact of mass and social media (Bucy and Stewart 2018; Grabe and Bucy 2009).

In this study, we found that emotional response to first, ambiguous displays by the leaders of the three political parties: the Conservative Party's Boris Johnson, Labour's Jeremy Corbyn, and the Liberal Democrats' Jo Swinson, and then their discrete and behaviorally different affiliative and reward smiles strongly affected the participant social identity. This in turn affected participant emotional response to the different displays by both their party's leader and those of the opposition parties, suggesting facial displays are more than expressions of internal physiological states and instead are tools for social influence (Crivelli and Fridlund 2018; Rychlowska et al. 2017). In this sense, we build upon Trichas and Schyns's (2012) study 1 finding that social identity, as communicated through unique and identifiable leader facial characteristics, may serve "as a biasing filter for evaluations of dynamic facial expressions." (p. 553)

This helps explain the first and most unexpected finding: the absence of main effects for the emotional response to the different facial displays. Combined with the large effect size of political party identity, especially in emotional response to the incumbent Boris Johnson and his main challenger, Jeremy Corbyn, it appears that the initial presentation of ambiguous displays primed partisan social identity as the key decision rule. The effect of competition on the appraisal of political figures' facial displays, starting with research considering the 1984–1992 presidential elections, and more recently 2012 (Stewart, Senior, and Bucy 2020) and 2016 presidential elections (Stewart and Svetieva 2021), suggests that proximity to the election may lead to less reliance on subtle nonverbal behaviors in making trait judgements.

When we did see significant differences in emotional response to the three different displays by the U.K. party leaders, they came from the interaction of political party with display type, and the effect sizes were small. The comparatively large representative sample, more than twice the size of previous leader-focused (political or otherwise) studies (Stewart, Salter, and Mehu 2009), allowed us to probe these interactions, leading to some counter-intuitive findings. When felt affinity toward Prime Minister Johnson was analyzed, his followers—affiliated with the Conservative Party—felt significantly greater affinity (Proud + Interested) toward his ambiguous display when compared with either his affiliative or reward smile, whereas those affiliated with the opposition parties did not significantly differentiate between the three displays; expressed anger for its part was significantly lower for all participants in response to either smile type when compared with Johnson's ambiguous display. However, expressed anger was attenuated based upon party identity, with Conservatives affected least and Liberal Democrats most affected by smiles, although participants did not differentiate between affiliative and reward smiles. This may be due to Johnson successfully framing his "leadership niche" (Spisak et al. 2015) as rallying the country around a cause—Brexit—as opposed to broadening and building his followership around a range of policies as appeared to be the case for his competition.

The Labour Party's Jeremy Corbyn, for his part, had respondents, regardless of party identity, show similar patterns with significantly greater expressed happiness to both his affiliative and reward smiles when compared with his ambiguous display, although the differences were accentuated for his Labour Party followers. Furthermore, although Liberal Democrats did not reach significantly higher levels when comparing the reward smile to the ambiguous display, identifiers with each of the three parties expressed significant differences in expressed happiness to the affiliative and reward smiles, although the affiliative smile video elicited greater happiness. This is likely due to Corbyn engaging in multiple sequential affiliative smiles during that video.

That Liberal Democratic Party leader Jo Swinson saw a significant interaction effect between party and facial display with all four equations considering emotional response likely reflects her less contentious candidacy, especially as the third-party Liberal Democrats did not pose a major electoral threat. Namely, while participants significantly differentiated between the displays in expressed happiness, affinity, anger, and distress, Swinson was less politically polarizing as party identity had less than half the effect size of both Johnson and Corbyn. Both her Liberal Democratic Party and the Labour Party identifiers reported significantly less anger and distress in response to Swinson's reward smile, while only her fellow party members reported significantly higher comparative amounts of happiness and affinity; meanwhile, Conservative Party members did not significantly differ in their response to any of these measures. Swinson's affiliative smile, when compared with her ambiguous display baseline, was a different matter with all three parties reporting lower amounts of felt happiness and affinity. Furthermore, while Liberal Democrats did not report significant differences in felt anger or distress when the ambiguous display and affiliative smile were compared—possibly due to a floor effect—Labour Party-affiliated respondents reported significantly less felt anger, whereas Conservative Party respondents reported significantly higher levels of distress in response to Swinson's affiliative smile.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

Future research should continue to take into consideration a more fully elaborated corpus of display behaviors and contexts as “even minimal variation in a series of facial expressions can influence perceivers' judgment of leaders” (Trichas et al. 2017, p. 329). For instance, while rarely seen in political interactions, dominant smiles communicate superior status (Martin et al. 2018; Rychlowska et al. 2017) and often accompany statements of social sanction (Stewart, Bucy, and Mehu 2015; Stewart, Senior, and Bucy 2020). These facial displays are conveyed by contraction muscles that are associated with other emotions such as disgust (the levator labii superioris alaeque nasi), which results in the nose wrinkling, anger, with raising of the upper cheek regions and elevating the upper lip (the levator labii superioris), and contempt, which involves a one-sided smile while tightening that lip corner (asymmetrical contraction of the zygomatic major and orbicularis oris). While rare, these displays are seen on occasion, and thus should be more fully explored.

Likewise, the influence of leaders' nonverbal behavior should be considered throughout a full range of political contexts beyond just North American and European political systems. The effect leaders have on followers through their verbal and nonverbal behavior matters not just in the development and strengthening of social identity but has also been shown to have implications for representative democratic systems where violence on behalf of charismatic leaders threatens stability (Feinberg, Branton, and Martinez-Ebers 2022; Haslam et al. 2022). Anytime winning and losing occurs in politics, while taking into account a broader array of facial displays that includes dominance smiles and fear smiles, research should also utilize a broader array of measures that consider psychophysiological response (Bakker, Schumacher, and Homan 2020; Bucy and Bradley 2004; McHugo et al. 1985). While self-reports are not only useful in providing insights into the internal life of study participants, and by the generalization of these findings to voters, the underlying physiological foundations upon which such political appraisals are made should be better appreciated and understood.

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REFERENCES

- Bakker, B. N., G. Schumacher, and M. D. Homan. 2020. "Yikes! Are we Disgusted by Politicians?" *Politics and the Life Sciences* 39(2):135–53.
- Barrett, L. F., R. Adolphs, S. Marsella, A. M. Martinez, and S. D. Pollak. 2019. "Emotional Expressions Reconsidered: Challenges to Inferring Emotion from Human Facial Movements." *Psychological Science in the Public Interest* 20(1):1–68.
- Brown, W. M., B. Palameta, and C. Moore. 2003. "Are there Nonverbal Cues to Commitment? An Exploratory Study using the Zero-Acquaintance Video Presentation paradigm." *Evolutionary Psychology* 1:42–69.
- Bucy, E. P., and Grabe, M. E. 2008. "Happy Warriors' Revisited: Hedonic and Agonic Display Repertoires of Presidential Candidates on the Evening News." *Politics and the Life Sciences* 27(1):78–98. https://doi.org/10.2990/27_1_78
- Bucy, E. P. 2016. "The Look of Losing, Then and Now: Nixon, Obama, and Nonverbal Indicators of Opportunity Lost." *American Behavioral Scientist* 60(14):1772–98. <https://doi.org/10.1177/0002764216678279>
- Bucy, E. P., and S. D. Bradley. 2004. "Presidential Expressions and Viewer Emotion: Counterempathic Responses to Televised Leader Displays." *Social Science Information* 43(1):59–94.
- Bucy, E. P., and P. A. Stewart. 2018. "The Personalization of Campaigns: Non-Verbal Cues in Presidential Debates." In *Oxford Research Encyclopedia of Politics*, edited by W. R. Thompson, 1–33. New York: Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228637.013.52>
- Chance, M. R. A. 1967. "Attention Structure as the Basis of Primate Rank Orders." *Man* 2(4):503–18. <https://www.jstor.org/stable/2799336>
- Crivelli, C., and A. J. Fridlund. 2018. "Facial Displays are Tools for Social Influence." *Trends in Cognitive Sciences* 22(5):388–99.
- Davila-Ross, M., B. Allcock, C. Thomas, and K. A. Bard. 2011. "Aping Expressions? Chimpanzees Produce Distinct Laugh types when Responding to Laughter of Others." *Emotion* 11(5):1013.
- Devine, D. 2021. "Discrete Events and Hate Crimes: The Causal Role of the Brexit Referendum." *Social Science Quarterly* 102(1):374–86.
- Feinberg, A., R. Branton, and V. Martinez-Ebers. 2022. "The Trump Effect: How 2016 Campaign Rallies Explain Spikes in Hate." *PS: Political Science & Politics* 55(2):257–65.
- Fridlund, A. J. 2017. "The Behavioral Ecology view of Facial Displays, 25 Years Later." In *The Science of Facial Expression*, edited by J. M. Fernández-Dols and J. A. Russell, 77–92. Oxford: Oxford University Press.
- Gabriel, O. W., and L. Masch. 2017. "Displays of Emotion and Citizen Support for Merkel and Gysi." *Politics and the Life Sciences* 36(2):80–103.
- Gaspar, A., F. Esteves, and P. Arriaga. 2014. "On Prototypical Facial Expressions Versus Variation in Facial Behavior: What have we Learned on the "visibility" of Emotions from Measuring Facial actions in Humans and Apes." In *The Evolution of Social Communication in Primates*, edited by M. Pina and N. Gontier, 101–26. Cham: Springer.
- Gerpott, F. H., N. Lehmann-Willenbrock, J. D. Silvis, and M. Van Vugt. 2018. "In the Eye of the Beholder? An Eye-Tracking Experiment on Emergent Leadership in Team Interactions." *The Leadership Quarterly* 29(4):523–32.
- Grabe, M. E., and E. P. Bucy. 2009. *Image Bite Politics: News and the Visual Framing of Elections*. Oxford: Oxford University Press.
- Granberg, D., and E. Brent. 1983. "When Prophecy Bends: The Preference–Expectation Link in US Presidential Elections, 1952–1980." *Journal of Personality and Social Psychology* 45(3):477.
- Haslam, S. A., S. D. Reicher, and M. J. Platow. 2010. *The New Psychology of Leadership: Identity, Influence and Power*. Hove: Psychology Press.
- Haslam, S. A., S. D. Reicher, H. P. Selvanathan, A. M. Gaffney, N. K. Steffens, D. Packer, J. J. Van Bavel, E. Ntontis, F. Neville, S. Vestergren, K. Jurstakova, and M. J. Platow. 2022. "Examining the role of Donald Trump and his Supporters in the 2021 Assault on the US Capitol: A Dual-Agency Model of Identity Leadership and Engaged Followership." *The Leadership Quarterly* 101622: in press.
- Hermans, E. J., P. Putman, and J. Van Honk. 2006. "Testosterone Administration Reduces Empathetic Behavior: A Facial Mimicry Study." *Psychoneuroendocrinology* 31(7):859–66.
- Keating, C. F., F. Adjei Boateng, H. Loiacono, W. Sherwood, K. Atwater, and J. Hutchison. 2020. "Charismatic Nonverbal Displays by Leaders Signal Receptivity and Formidability, and Tap Approach and Avoidance Motivational Systems." *Frontiers in Psychology* 11:526288.
- Martin, J. D., H. C. Abercrombie, E. Gilboa-Schechtman, and P. M. Niedenthal. 2018. "Functionally Distinct Smiles Elicit Different Physiological Responses in an Evaluative Context." *Scientific Reports* 8(1):3558.
- Mason, L. 2018. *Uncivil Agreement: How Politics Became our Identity*. Chicago: University of Chicago Press.
- Masters, R. D., S. Frey, and G. Bente. 1991. "Dominance & Attention: Images of Leaders in German, French, & American TV News." *Polity* 23(3):373–94.
- Masters, R. D., and D. G. Sullivan. 1989. "Nonverbal Displays and Political Leadership in France and the United States." *Political Behavior* 11(2):123–56. <https://doi.org/10.1007/BF00992491>
- Matsumoto, D., D. Keltner, M. N. Shiota, M. O'Sullivan, and M. Frank. 2010. "Facial Expressions of Emotion." In *Handbook of Emotions* (3rd edition), edited by M. Lewis, J. M. Haviland-Jones, and L. F. Barrett, 211–34. New York: The Guilford Press.

- McHugo, G. J., J. T. Lanzetta, D. G. Sullivan, R. D. Masters, and B. G. Englis. 1985. "Emotional Reactions to a Political Leader's Expressive Displays." *Journal of Personality and Social Psychology* 49(6):1513–29.
- Mehu, M., and R. I. M. Dunbar. 2008a. "Naturalistic Observations of Smiling and Laughter in Human Group Interactions." *Behaviour* 145(12):1747–80.
- Mehu, M., and R. I. M. Dunbar. 2008b. "Relationship between Smiling and Laughter in Humans (Homo Sapiens): Testing the Power Asymmetry Hypothesis." *Folia Primatologica* 79(5):269–80.
- Mehu, M., K. Grammer, and R. I. M. Dunbar. 2007. "Smiles when Sharing." *Evolution and Human Behavior* 28(6):415–22.
- Mehu, M., A. C. Little, and R. I. M. Dunbar. 2007. "Duchenne Smiles and the Perception of Generosity and Sociability in Faces." *Journal of Evolutionary Psychology* 5(1):183–96.
- Niedenthal, P. M., M. Mermillod, M. Maringer, and U. Hess. 2010. "The Simulation of Smiles (SIMS) Model: Embodied Simulation and the Meaning of Facial Expression." *Behavioral and Brain Sciences* 33(06):417–33.
- Nagel, F., Maurer, M., & Reinemann, C. (2012). "Is There a Visual Dominance in Political Communication? How Verbal, Visual, and Vocal Communication Shape Viewers' Impressions of Political Candidates." *Journal of Communication*, 62(5):833–50. <https://doi.org/10.1111/j.1460-2466.2012.01670.x>
- Ohlsen, G., W. van Zoest, and M. van Vugt. 2013. "Gender and facial Dominance in Gaze Cuing: Emotional Context Matters in the Eyes that we Follow." *PLoS One* 8(4):e59471.
- Perusquia-Hernandez, M., S. Ayabe-Kanamura, and K. Suzuki. 2019. "Human Perception and Biosignal-Based Identification of posed and Spontaneous Smiles." *PLoS One* 14(12):e0226328. <https://doi.org/10.1371/journal.pone.0226328>.
- Rand, D. G., T. Pfeiffer, A. Dreber, R. W. Sheketoff, N. C. Wernerfelt, and Y. Benkler. 2009. "Dynamic Remodeling of In-Group bias During the 2008 Presidential Election." *Proceedings of the National Academy of Sciences of the United States of America* 106(15):6187–91. <https://doi.org/10.1073/pnas.0811552106> [doi]
- Rychlowska, M., R. E. Jack, O. G. B. Garrod, P. G. Schyns, J. D. Martin, and P. M. Niedenthal. 2017. "Functional Smiles: Tools for Love, Sympathy, and War." *Psychological Science* 28(9):1259–70.
- Schmidt, K. L., Z. Ambadar, J. F. Cohn, and L. I. Reed. 2006. "Movement Differences between Deliberate and Spontaneous Facial Expressions: Zygomaticus Major Action in Smiling." *Journal of Nonverbal Behavior* 30(1):37–52.
- Schmidt, K. L., S. Bhattacharya, and R. Denlinger. 2009. "Comparison of Deliberate and Spontaneous Facial Movement in Smiles and Eyebrow Raises." *Journal of Nonverbal Behavior* 33(1):35–45.
- Schubert, J. N., P. A. Stewart, and M. A. Curran. 2002. "A Defining Presidential Moment: 9/11 and the Rally Effect." *Political Psychology* 23(3):559–83.
- Spisak, B. R., M. J. O'Brien, N. Nicholson, and M. van Vugt. 2015. "Niche Construction and the Evolution of Leadership." *Academy of Management Review* 40(2):291–306.
- Stewart, P. A. 2012. *Debatable Humor: Laughing Matters on the 2008 Presidential Primary Campaign*. Lanham: Lexington Books.
- Stewart, P. A., E. P. Bucy, and M. Mehu. 2015. "Strengthening Bonds and Connecting with Followers: A Biobehavioral Inventory of Political Smiles." *Politics & the Life Sciences* 34(1):73–92. <https://doi.org/10.1017/pls.2015.5>
- Stewart, P. A., and P. K. Ford Dowe. 2013. "Interpreting President Barack Obama's Facial Displays of Emotion: Revisiting the Dartmouth Group." *Political Psychology* 34(3):369–385. <https://doi.org/10.1111/pops.12004>
- Stewart, P. A., J. R. George, and T. Adams. 2019. "Does Predisposition Toward Disgust Affect Emotional Response to Political Leaders? Evidence from the 2012 US Presidential Election." *Social Science Quarterly* 100(6):2033–46.
- Stewart, P. A., M. Méhu, and F. K. Salter. 2015. "Sex and Leadership: Interpreting Competitive and Affiliative Facial Displays Based on Workplace Status." *International Public Management Journal* 18(2):190–208.
- Stewart, P. A., F. K. Salter, and M. Mehu. 2009. "Taking Leaders at Face Value: Ethology and the Analysis of Televised Leader Displays." *Politics and the Life Sciences* 28(1):48–74. https://doi.org/10.2990/28_1_48
- Stewart, P. A., C. Senior, and E. P. Bucy. 2020. "Honeymoon or Hangover? How Election Outcomes Produce Emotional Shifts to Winning Candidate Smiles." *Personality and Individual Differences* 152:109599.
- Stewart, P. A., and E. Svetieva. 2021. "Micro-Expressions of Fear During the 2016 Presidential Campaign Trail: Their Influence on Trait Perceptions of Donald Trump." *Frontiers in Psychology* 12:20210602. <https://doi.org/10.3389/fpsyg.2021.608483>
- Stewart, P. A., B. M. Waller, and J. N. Schubert. 2009. "Presidential Speechmaking Style: Emotional Response to Micro-Expressions of Facial Affect." *Motivation and Emotion* 33(2):125–35.
- Sullivan, D. G. 1996. "Emotional Responses to the Nonverbal Behavior of French and American Political Leaders." *Political Behavior* 18(3):311–25.
- Sullivan, D. G., and R. D. Masters. 1988. "'Happy Warriors': Leaders' Facial Displays, Viewers' Emotions, and Political Support." *American Journal of Political Science* 32(2):345–68. <https://doi.org/10.2307/2111127>
- Sullivan, D. G., and R. D. Masters. 1994. "Biopolitics, the Media, and Leadership: Nonverbal Cues, Emotions, and Trait Attributions in the Evaluation of Leaders." In *Research in Biopolitics: Biopolitics in the Mainstream*, 2nd edition, edited by A. Somit and S. A. Peterson, Vol. 2, 237–73. Bingley: Emerald Group Publishing Ltd.
- Trichas, S., and B. Schyns. 2012. "The Face of Leadership: Perceiving Leaders from Facial Expression." *The Leadership Quarterly* 23(3):545–66.
- Trichas, S., B. Schyns, R. Lord, and R. Hall. 2017. "'Facing' Leaders: Facial Expression and Leadership Perception." *The Leadership Quarterly* 28(2):317–33.
- Warnecke, A. M., R. D. Masters, and G. Kemper. 1992. "The Roots of Nationalism: Nonverbal Behavior and Xenophobia." *Ethology and Sociobiology* 13(4):267–82.

Wilkowski, B. M., and E. L. Leki. 2019. "Taking the Fight out of People: Exploring how Defeat Modulates the Automatic Aggressive Response to Facial Anger." *Aggressive Behavior* 45(5):537–49.

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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