**Laughter and effective presidential leadership:
A case study of Ronald Reagan as the 'great communicator'**

A preregistered submission

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Abstract: President Ronald Reagan's expert use of media and his charismatic connection with viewers earned him the moniker "the great communicator". This study examines one aspect of his charisma, the influence of elicited laughter, during a much-discussed and highly critical 5-minute news story by CBS reporter Leslie Stahl during the 1984 US presidential election. Production choices regarding observable audience responses (OAR) on viewer perceptions of politicians have not been extensively studied. The focus of the present study is to explore the effects of audience laughter on perceived leadership traits. Two experiments examining the mediating effects of audience laughter on perceptions of presidential leadership are reported. The first shows that perceptions of Reagan's perceived warmth significantly diminish when strong laughter is removed from the presentation, whereas perceptions of competence remain unaffected. The second study proposes a between-subjects experiment (*preregistered report*) to confirm and extend the findings of the first study by considering trait charisma and the influence of specific humorous comments that are accompanied by laughter.

Key words: observable audience response (OAR): laughter; applause; ridicule; self-deprecatory humour; Ronald Reagan; presidential leadership

INTRODUCTION

Among the salient findings regarding politics and the life sciences, which considers how evolved psychological adaptations affect political interaction, concerns how nonverbal signals influence perceptions of political leaders, especially as presented in television news. With the introduction of high-definition portrayals and ubiquitous hand-held devices, the role of media in the portrayal of political leaders has grown. Experimental research on the visual primacy effect has also demonstrated that when there is conflicting information between the verbal and nonverbal channels in an audiovisual presentation, viewers have difficulty processing the verbal attributes of television news reports and remember the visuals with far more fidelity (Holbert, Lambe, Dudo, & Carlton, 2007; Sharps, Price, & Bence, 1996). More attention is also paid to affectively important nonverbal communication when the nonverbal attributes of televised leader displays appear inappropriately matched to the rhetorical context (Bucy, 2011; Bucy & Newhagen, 1999; Bucy, 2000; Burgoon & Hale, 1988) .

The majority of research concerning the influence of nonverbal leader communication focuses on how visual attributes of posture, body movements, and facial display behaviours affect viewer perceptions and trait attributions. At the same time, there is a small but growing literature that considers the role played by audible signals. Specifically, research considering the influence of the observable audience response (OAR) to political figures suggests there is a significant intra-

audience effect of emotional and evaluative signaling on other audience members while watching mediated events (Stewart et al., 2018; Fein, Goethals, & Kugler, 2007). Applause-cheering, laughter, booing, chanting and combinations of these audible signals significantly influence how audience members view the televised political event or news coverage (Stewart et al., 2018). Viewers may unknowingly monitor and respond to the expressed intensity and type of follower utterance in support or opposition to the speaker and their stated political positions (Dunbar, 1993; West, 1984). Media audiences, whether streaming debates, watching on television, or viewing through other media platforms, and perhaps more crucially, journalists who may be reporting on the event, may likewise be influenced by information conveyed via this audible channel. In other words, the social influence asserted through an OAR, similar to emotional contagion effects (Stewart et al., 2018; Fein, Goethals, & Kugler, 2007), can affect viewer and listener perceptions with or without express awareness; however, the specific influence of different OARs such as applause-cheering, laughter, and booing has yet to be studied in depth.

Despite the influence that OARs may have on perceptions of leaders, systematic evaluation of audience responses to political figures and OAR's affect on the efficacy of politician narratives is limited. The few studies providing insight into the social influence of OAR on political figures and policy issues tend to incorporate both audible and visually observable audience response. Wiegman's (1987) field experiment involved a videotaped studio audience either reacting positively,

negatively, or neutrally to a well-known Dutch politician through audible utterances and different visible nonverbal behaviors. Fein and colleagues' experiments considering Ronald Reagan's second 1984 presidential debate performance did not differentiate between applause and laughter nor the moderator's verbal and nonverbal response (Fein et al., 2007). Considering the verbal channel alone with regards to specific policy issues (e.g., imprisonment/probation) allows comparison of "enthusiastic applause-cheering" to unenthusiastic and polite applause with occasional derisive cries (Axsom, Yates, & Chaiken, 1987). This research finds a tendency towards a simple consensus heuristic to make social judgments. While the scant research regarding political candidates and issues provide useful insights, it does not differentiate between OAR types and often conflates visual and audible stimuli.

Laughter

Laughter has been studied extensively across a broad range of contexts with a wide range of approaches and techniques. Indeed, it is one of the few positive emotions considered in great detail, likely due to the social and survival benefits it confers. Across such species as canines (Faragó, Pongrácz, Range, Virányi, & Miklósi, 2010), rats (Burgdorf, Panksepp, Brudzynski, Kroes, & Moskal, 2005; Kisko, Himmler, Himmler, Euston, & Pellis, 2015; Panksepp & Burgdorf, 2003; Panksepp, 2007; Panksepp, 1998), and multiple primate species (Gaspar, Esteves, & Arriaga, 2014; Preuschoft & Van Hooff, 1997; van Hooff & Preuschoft,

2003; Visalberghi, Valenzano, & Preuschoft, 2006) – including humans – laughter signals playfulness, and with it benign intent (Pellis, Pellis, & Himmler, 2014; van Hooff & Preuschoft, 2003). In other words, social animals are more likely to cooperate and learn when in a playful state of mind as signalled by laughter.

Within humans, laughter emerges early and is seen across different cultures. Spontaneous laughter is observed in infants as young as 17 to 26 days (Kawakami et al., 2007), well before socially stimulated laughter occurs at three-to-four months of age (Provine, 2015; Provine, 2001). Laughter is also observed within individuals who are blind since birth suggesting a possible adaptive function in social bonding (Eibl-Eibesfeldt, 1989) .

The study of laughter is thus rightfully situated as a social phenomenon and would benefit from application of different techniques; despite this, the primary method for analysing laughter has been naturalistic observational studies. Here, the effects of laughter are studied in its natural social ecology. For instance, the ground-breaking work of Provine and colleagues took a “side-walk scientist” approach to laughter, finding that its role as a social lubricant by which mutual conversational grooming occurred was underappreciated, whereas its role as response to humorous comments was over-stated (Provine, 1992; 1993; 2001; 2015).

Laughter can be seen as socially influential due in large part to it being reliably identified through audible and visual characteristics. When nonverbal signals are

easily and accurately identified, the more they are likely to affect perceptions and behaviour by being part of a highly learned (near automatic) repertoire of behaviours and responses that are likely to have been evolutionarily selected for survival purposes (Eibl-Eibesfeldt, 1989; Grammer & Eibl-Eibesfeldt, 1990; Tinbergen, 1963). Thus, accurate recognition of the emotional state and behavioural intent of communicators provides relevant social information that influences perceptions and evaluations of others (Masters, 1991).

Reliable indicators of emotion may be defined as first, leading to an accurate recognition of the emotional state of the communicator, along with their resultant behavioural intent (e.g., bonding), and second, providing an index of the sender's underlying state as one that is costly to produce (Mehu, Mortillaro, Bänziger, & Scherer, 2011) . Such signals are emotionally costly to produce due to their communicating underlying physiological states potentiating specific behaviour; furthermore, even when such signals are faked, physiological change can and does occur through the posing or acting out of these display behaviours.

Laughter may be classified as a costly, and hence reliable, signal when evoked or when it is difficult to control; even when faked, the initially emitted laughter leads to physiological change (Bachorowski & Owren, 2001; Devereux & Ginsburg, 2001; McGettigan et al., 2015; Provine, 1992; Ruch & Ekman, 2001). Individual laughter likewise serves as a social emollient by affecting perceiver mood states by dampening negative affect, increasing positive affect (and pain tolerance), while

increasing social cooperation and group identity (Van Vugt, Hardy, Stow, & Dunbar, 2014). Laughter thus serves as a highly reliable social signal regarding behavioral intent (Panksepp, 2007; Pellis et al., 2014; van Hooff & Preushoft, 2003) .

Laughter across differing social contexts

Because laughter provides a mechanism for the facilitation of affiliative social interactions that go beyond physical contact and is inclusive of large numbers of individuals, it should be easily and accurately recognized to indicate the underlying behavioural intent of the senders. Socially important utterances, such as laughter, can be seen as stereotyped activities by having coherent and identifiable vocalic, facial and even postural displays reliably associated with them. As pointed out by Gaspar and colleagues, the multimodal nature of this affiliative display behavior, together with its early emergence in ontogenetic development and its stability throughout an individual's lifespan, make it a predictable and reliable signal even as context changes (Gaspar et al., 2014) . Thus, due to the important role it plays in facilitating extended social interaction laughter may be one of the most reliable of nonverbal signals (e.g., Manninen, Tuominen, Dunbar, Karjalainen, Hirvonen, Arponen et al, 2017; Dunbar, 2018).

That is not to say that laughter cannot function in varying contexts, or convey differing or nuanced information, rather, that it is reliably recognized across

cultures. Research regarding laughter at the individual level focuses on the role of such expressiveness being a pervasive social signal during interpersonal interactions. Here, laughter may serve to punctuate speech and indicate turn-taking and transitions within conversations (Gilmartin, Bonin, Vogel, & Campbell, 2013; Gilmartin et al., 2013; Provine, 1993; Provine, 1993; Scott, Lavan, Chen, & McGettigan, 2014; Scott et al., 2014) .

Laughter by individuals indicates social intent through the conveyance of vocalic qualities. Voiced laughter, with its sing-song characteristics, can communicate the experience of amusement, contempt, and even *schadenfreude* (Szameitat, Darwin, Wildgruber, Alter, & Szameitat, 2011; Szameitat et al., 2009) . Unvoiced laughter on the other hand, with its gruntlike characteristics (Bachorowski & Owren, 2001; Owren & Bachorowski, 2003), can be seen as signalling more competitive intent by being connected with aggressive statements (Foster & Stewart, 2017) . This is perhaps due to the interrelationship between vocalic and facial movements seen with laughter and the amusement smile; facial display behaviour immediately after laughter-eliciting comments help convey social intent by punctuating the preceding statement (Stewart, 2010; Stewart, Bucy, & Mehu, 2015). In summary, laughter at the individual level serves a multitude of social functions based upon reliable multi-modal nonverbal signalling that is easily recognized. At the same time, the nuanced expression of laughter allows for subtle differences in to be conveyed in its meaning.

Intra-audience effects of audience laughter

Laughter, as an important communicative signal, should also be socially contagious, or at least mimicked, to allow for the cohesion, broadening, and building of groups. Hatfield and colleagues define social contagion as the “tendency to automatically mimic and synchronize facial expressions, vocalizations, postures, and movements with those of another person’s and, consequently, to converge emotionally” (Hatfield, Bensman, Thornton, & Rapson, 2014, p. 169). Thus, laughter would meet the definition of a socially contagious behaviour and indeed might provide the modal behaviour by meeting each of the above criteria in the convergence of mimicry and emotional response (Gaspar et al., 2014; Stewart et al., 2018) . While group laughter is readily identifiable and distinct from other types of OARs, it does not appear to have distinguishable characteristics that allow for the differentiation of members of different social groups from each other (Ritter & Sauter, 2017) , nor in identifying nuanced social intent, as is the case with individual laughter.

Experimental research considering how individuals respond to group laughter tends to focus mainly on perceptions of how funny a stimulus is, whether visually with cartoons and written jokes (Brown, Dixon, & Hudson, 1982; Cupchik & Leventhal, 1974; Donoghue, McCarrey, & Clément, 1983; Leventhal & Cupchik, 1975; Olson, 1992) , audio tapes of jokes, funny stories and stand-up routines (Chapman & Chapman, 1974; Freedman & Perlick, 1979; Fuller & Sheehy-

Skeffington, 1974; Gruner, 1993; Lawson, Downing, & Cetola, 1998; Martin & Gray, 1996; Nosanchuk & Lightstone, 1974; Platow et al., 2005; Young & Frye, 1966) , bloopers (Pistole & Shor, 1979; Porterfield et al., 1988) , or scenes from television shows and movies (Devereux & Ginsburg, 2001; Gillespie, Mulder, & Leib, 2016; Lieberman, Neuendorf, Denny, Skalski, & Wang, 2009; Neuendorf & Fennell, 1988) . When the source of the humour is taken into account, findings show that group laughter leads to individuals within the group being perceived more favourably across multiple dimensions relevant to leadership, including potential for success (Platow et al., 2005), authoritativeness, character, dynamism and interestingness (Gruner, 1993) , and credibility, likability, and lowered aggressiveness (Vraga, Johnson, Carr, Bode, & Bard, 2014) .

While each of the above studies were influenced by multiple factors, Vraga and colleagues accurately comment that, “a humorous cue might be more important when faced with a more ambiguous context... as people have substantially less information on which to rely” (2014, p. 145). Much of this research focuses on entertainment figures in which preconceptions either do not play a role due to low awareness, or by being so heterogeneous as to be randomly distributed. Political figures are different. Not only does their humour play a role in audience response, their group membership and social status predisposes perceptions (Platow et al., 2005) . Politicians, through their leadership role in society, belong to a clearly demarcated social group that is defined by a more restrictive set of social rules. Thus, the effects of receiving and perceiving laughter within a political context

could be manifestly greater than in a non-political context, where it is expected and therefore part of the routine dialogue.

Political laughter

When considering group level behaviour in political contexts, research regarding observable audience responses tends to focus on the target and intent of verbal statements rather than the social influence process that laughter facilitates (Choi, Bull, & Reed, 2016; Stewart, 2012; Wells & Bull, 2007) . Current analyses describe audience response to political figures, by considering the length, strength, and intensity of audience laughter during political events (Eubanks, Stewart, & Dye, 2018; Stewart et al., 2018) however, the results reflect descriptive and correlational findings regarding response to individual speakers rather than group-related outcomes.

In group interactions, laughter is arguably more stereotyped and easily identified than other types of observable audience responses. The vocalic utterances that constitute laughter are much shorter in duration than applause-cheering, for instance. Analysis shows that group laughter in political contexts lasts on average 1-3 seconds in comparison with 2-8 seconds for applause-cheering (Eubanks et al., 2018; Stewart, 2015; Stewart, Eubanks, & Miller, 2016) . Booing, another form of observable audience response, is surprisingly rare in political contexts. Interestingly, when an audience shows their appreciation for a humorous

comment, applause-cheering prolongs the laughing response (Stewart, 2012; Stewart et al., 2016). This points to high levels of social mimicry in the case of group laughter, and then likely social contagiousness through its continuation via applause.

Studies regarding the use of humour during presidential primary debates in 2008 (Stewart, 2012) and the 2016 general election presidential debates (Eubanks et al., 2018; Stewart et al., 2018) suggest that the main targets of humour during electoral campaigns tend to be out-group members. Here, ridicule and other forms of disparagement humour are used as a form of political rhetoric. In addition, self-deprecatory humour, where speakers poke fun at themselves or other in-group members, also occurs with regularity. The use of these different types of humour, ridicule and self-deprecation, likely holds strategic value, as ridicule can be used to derogate the competition or set normative boundaries on behaviour. On the other hand, self-deprecatory humour is useful for making a candidate more likable.

While there is an emerging body of research examining the type of humour employed by political candidates and the strength and duration of the laughter response, the correlational nature of this work limits the kinds of inferences that may be drawn. Furthermore, failed humour – which may be defined by the absence of laughter, its muted presence, or even booing – is rarely studied due to the difficulty of identifying a sufficient number of occurrences for analysis (Bell, 2009).

The experimental research discussed in the previous section suggests that audience laughter certainly affects perceptions of humourousness and trait evaluations of the speaker. A number of scholars have shown that audience responses affect perceptions of political candidates (e.g., Fein et al., 2007; Stewart et al., 2018; Wiegman, 1987) ; however, the question remains as to how robust a role laughter, and the eliciting humour, plays in perceptions of political figures.

This question may be elaborated by considering what leadership traits are influenced by group laughter—and in what direction. The perception of competence and warmth are considered central to the identification and choice of leaders (Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013; Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, & Glick, 2007; Keating et al., 1981; Spisak, O'Brien, Nicholson, & van Vugt, 2015) . At the same time, these traits may be moderated or mediated by perceptions of leader charisma (Antonakis & Eubanks, 2017; Cherulnik, Donley, Wiewel, & Miller, 2006; Damen, Van Knippenberg, & Van Knippenberg, 2008; Keating, 2011; Keating, 2018; Keating, 2002) . In the present study the effects of the observable audience response of laughter on the perception of trait charisma is examined

Humour types and political laughter

When humour in conjunction with laughter has been experimentally studied, the stimuli has tended to have been written (Bitterly, Brooks, & Schweitzer, 2017) . In

other words, the type of humour used in combination with the laughter (or its absence) indicates the success or lack thereof. As observed by Bitterly, Brooks, and Schweitzer (2016) in their extensive analysis of the effect of humour on interpersonal status:

Though humor can boost status, using humor is risky. Humor attempts can fail in several ways: by being too boring (i.e., not funny), too bold (i.e., inappropriate), or failing to elicit laughter from the audience. How the audience reacts profoundly influences perceptions. If the audience does not laugh, observers are less likely to view the humor attempt as appropriate or funny, and the joke teller may lose status. (p. 17)

While the work of Bitterly and colleagues' is indeed informative, their use of written vignettes as experimental treatments limits generalizability. Likewise, their focus on inappropriate humour relied upon sexually-charged quips; while important for the workplace with mixed sexes and fluid power dynamics, this type of humour is not used much by politicians in our technologically mediated era (Stewart, 2012; Udall, 1988) . Indeed, the use of sexualized humour in today's political climate would probably not only be unsuccessful in eliciting laughter, it would likely alienate a substantial proportion of the electorate.

Regardless, their focus on perceptions of competence and status in response to humour – and the laughter that it elicits – is applicable to contests for leadership within politics. This is especially the case in viewer observations regarding leader

competence, which in addition to perceptions of prestige is key to understanding why followers defer to, and confer status on, potential leaders.

Existing research in the use of humour by political figures suggest that it is used to either attack opponents, often through ridicule, or make light of oneself or allies (Dye, 2018; Eubanks et al., 2018; Stewart, 2012) . Smith and Powell found in the case of other- and self-disparaging humour by group leaders that ridicule attempts directed downwards at lower status group members were perceived as less effective, less encouraging, less helpful, and less socially attractive than those using self-directed humour (Smith & Powell, 1988) . However, this investigation also showed that not using humour was perceived as leading to better outcomes; in almost all leadership-based attributions that were considered save for tension relief and opinion offering, leaders who did not attempt any humourous remarks were perceived in a more positive light.

Arguably, the key factor here is the presence or absence of the laughter that is recognized to be an observable audience response to the politician. In the case of other-deprecatory humour, ridicule may increase perceived competence by virtue of martialing an audience together in their response to a tangible target; likewise, failure would see its reduction, negatively affecting the joke-teller. On the other hand, self-deprecatory humour successfully eliciting audience laughter would presumably lead to greater perceptions of warmth and communication effectiveness for the joke-teller (Smith & Powell, 1988) . Ultimately, observable

(here audible) support for specific leader comments helps followers to identify leadership potential and other related traits.

Ronald Reagan's leadership style

Ronald Reagan's moniker as "The Great Communicator" inspired a large body of literature assessing his communication style and its effects on public perceptions and the expectations of the American presidency (Greenstein, 2000; Smith, 2017). As the first "celebrity" politician, Reagan provides insight into the role of media notoriety in politics. Consequently, re-examining Reagan's relationship with the press and his ability to manipulate public perception is relevant in the current American political climate. The return of the celebrity presidency with the ascension of Donald Trump further warrants an historical examination of Reagan to glean insight into his unique communication style and public perception in the Trump era.

Reagan's leadership style developed from his natural ability to connect with audiences and years of experience as a recognized film actor and television personality (Ritter & Henry, 1992) . Upon entering national politics, Reagan was successful in enjoining his conservative agenda with the Republican Party establishment, garnering successful victories in the 1980 and 1984 presidential elections and passing supply side economic policies. Although he suffered from periods of public scrutiny during his time in office, he was known as the "Teflon president" for his ability to rebound from criticism and controversy and gainfully

employed rhetorical strategies to develop a reputation as humorous, charismatic, and likeable (Dye, 2018). Now some 30 years since the Reagan era, the study of Reagan's communication and leadership style has much to offer our current understanding of the normative behaviour of presidents and candidates operating under conditions of constant media scrutiny. Whereas Reagan was adept at connecting with Americans through television, contemporary office holders (and presidential hopefuls) must be able to compete with the flood of media choices now available across numerous platforms (Eshbaugh-Soha, 2016; Prior, 2013) and the fast pace of the issue-attention cycle.

Now more than ever, Converse's assertion that the public pays more attention to, and takes cues from individuals *in politics*, rather than to politics and policy making itself is apparent in the individual-centered nature of the contemporary political environment (Converse, 2006) . If politicians possess the capacity to control the political agenda and how they are perceived by voters, then they have the ability to "go public" without relying on the mass media to set the agenda (Peake, 2001) . The specific case of Leslie Stahl's mini-documentary on Reagan from the 1984 campaign is exemplary of this ability to skirt around the media narrative and control perceptions simply through imagery and audience response. Reagan's mastery of image management in relation to television, including the use of self-deprecatory humour and direct appeals to supporters, provides a blueprint for understanding how presidential contenders must operate in order to maximize effectiveness in today's hybrid media era (Chadwick, 2017)

The case study approach employed here has its limitations; however, the case utilized not only provides a historically relevant example that is recognized by many political communication scholars as a turning point in how nonverbal cues and signals are considered, it also presents an emotionally evocative stimuli that better reflects the “real world” of media consumption. Here, we test specific hypotheses concerning the influence of the observable audience response of laughter, as driven by the research reviewed above on not just leadership traits, but also perceived charisma. Reagan’s ability to elicit audience laughter sets up following research questions:

H1_{competence}: OAR-laughter in response to Reagan’s humourous comments will increase perceptions of his competence.

H1_{warmth}: OAR-laughter in response to Reagan’s humourous comments will increase perceptions of his warmth.

H1_{charisma}: OAR-laughter in response to Reagan’s humourous comments will increase perceptions of his charisma.

Furthermore, due to Ronald Reagan’s effective and prolific use of a range of humour types with strategic intent, we can further test the effect of successful and unsuccessful humour, as marked by the presence of absence of laughter. Specifically, the literature reviewed suggests differential impact of Reagan’s use of self-deprecatory and ridicule humour. This presents the following testable hypotheses:

H2_{competence}: OAR-laughter in response to Reagan's ridicule of audience members will increase perceptions of his competence.

H3_{warmth}: OAR-laughter in response to Reagan's self-deprecatory comments will increase perceptions of his warmth.

H4_{charisma}: OAR-laughter in response to Reagan's humour will increase perceptions of his charisma.

The perception of audience laughter to Reagan's humour will increase judgments of his leadership competence and approachability. However, this will be dependent on whether or not the humour is self-deprecatory or directed to other parties. Thus, there will be a main effect of humour on judgments of leadership traits and an interaction between the different types of humour that Reagan displays.

RQ1_{competence}: Will absence of OAR-laughter to self-deprecatory humour decrease or increase perceptions of competence?

RQ2_{warmth}: Will absence of OAR-laughter to other-deprecatory humour decrease or increase perceptions of warmth?

RQ3_{charisma}: Will the presence or absence of OAR-laughter differentially influence perceptions of his charisma based upon whether the humour is other- or self-deprecatory?

GENERAL METHODOLOGY

Content coding of the Reagan-Stahl News Story (1984)

The key news story was shown on Thursday, October 4, 1984 via a CBS network primetime television news broadcast, one month before Reagan's landslide election victory. The news story as analysed had a video clip length of five minutes and forty-five seconds (5:44.^{85/100s} ; 345 seconds) with the story length after the introduction by Dan Rather being five minutes and twelve seconds. In the five-minute (306 seconds) news story, Leslie Stahl narrated for just over three minutes (194 seconds), while Reagan had twenty-seven seconds of speaking time dispersed throughout five sound bites. These sound bites all took place during the second half of the news story.

Throughout the news story, two minutes and five seconds of audience applause-cheering, laughter, and mixed response could be heard. Applause-cheering can be heard throughout almost two minutes of the story (111 seconds). This is notable because support from partisans in the form of audible responses took place in over one-third of a purportedly critical news-story. While Stahl talked over much of the applause-cheering and mixed applause-cheering and booing, laughter was presented without interruption. Indeed, of Reagan's five sound bites, three were presented with elicited laughter uninterrupted. The first of these laughter events started at two minutes and forty-five seconds into Stahl's story, whereas the last occurred just under 2 minutes (114 s) from the end. While the placement of the

humorous comments did not give Reagan the first or final word in the story, these three laughter-eliciting comments provided him with punctuated support from the audience when he did talk.

ANVIL content coding software was used to characterize and analyse the news story (Kipp, 1994). ANVIL allows for frame-by-frame analysis of speaking time and the ability to disambiguate the observable audience responses by considering both audible response by the audience (Stewart et al., 2016; 2018) , and camera shots of the audience (Grabe & Bucy, 2009) . Adobe Premier Pro software was then used to edit the video and develop the various experimental conditions.

A content analytic approach was applied to the visual coding of the key news report (Grabe & Bucy, 2009) . Specifically, the presence of large (16 of 59 camera shots; 80s and 26.2% of camera time) and approving audiences (15/59 shots; 62.12s and 20.3% of camera time) were coded. When the audible response by the audience is considered in tandem with these types of camera shots, it is found that large, yet non-responsive, audiences were presented in three shots (19.72s), whereas thirteen shots and just over a minute of applause-cheering (60.28s) was heard from large audiences. Audiences seen as approving were evident in fourteen shots for just under one minute (55.52s) where applause-cheering occurred, while laughter was seen in one nearly seven second shot (6.60s).

It was expected that the applause-cheering would be most likely observed in media coverage of group settings such as political speeches (Dye, 2018) and intra-party debates (Stewart, 2015; Stewart et al., 2016) . This is due to such observable audience responses predominating in political discourse because of the ease with which candidates are able to evoke it among supporters in partisan settings. As a result, applause-cheering plays a role as an important barometer of a politicians' individual appeal during speeches (Atkinson, 1984; Bull, 2003; Bull, 2016; Heritage & Greatbatch, 1986; West, 1984) or when in direct competition with other candidates during debates (Stewart, 2015; Stewart et al., 2016) . However, the production decision to incorporate applause-cheering as a major part of a critical news story may be seen as at odds with the perceived intent. So too was the decision to incorporate laughter in response to humourous comments by the then presidential candidate Ronald Reagan.

Experimental Study 1:

The objective of the first study is to examine the effects of the observable audience response of laughter and how it moderated the perception of Reagan as an effective presidential leader. It can be expected from the literature reviewed that audience laughter in response to Reagan's humourous comments will affect perceptions of the leadership traits he holds, whether warmth or competence. The question is, to what extent will the presence or absence of laughter, indicating

success or failure of Reagan's humorous comments differentially affect perceptions of these traits.

While Stahl spoke over the great majority of applause, the first three of Reagan's sound bites led to observable audience laughter in response to his quips. These occurrences were not spoken over, and ensued during a middle portion of the story where Stahl commented on Reagan by stating, "This tight control has baffled those who think that Mr. Reagan is at his very best when he is spontaneous...." With this in mind, three edits totalling just under six seconds ($5.46/100s = 2.93 + .83 + 1.7$) were made. The video was presented in a between subjects design with three different conditions. The first, presented unedited video as the control condition, with participants seeing what viewers of the CBS news story viewed in 1984. The second two treatments involved either the audience laughter being removed completely, with no noise from the video during the edits, or the audience laughter being faded-out to a level at just under fifty percent of that presented during the original news story. As a result, the treatment effect being considered equals 0.016% of audio-visual time (5.46s/344.83) for the total video.

The first edit took place at 3:19:02 (until 3:21:25) of the video clip after Reagan was shown commenting "I'll raise his taxes" in response to audience members shown as heckling him. The audience, presumably at a campaign speech held during the Missouri State Fair (based upon the scene prior) responded with loud laughter followed by mixed cheering and applause. At the same time Reagan,

shown with his suit jacket off in front of hay bales, displayed a smile of amusement after delivering his punchline and during the audience's laughter and applause-cheering.

The second edit, of less than a second (3:26:29 – 3:27:21), took place after Stahl commented positively on Reagan's ability for "tossing off one-liners," Here Reagan, dressed in a suit and tie and presumably sitting down for an interview, quipped "I never get good reviews from TASS" after shaking his head, presumably to a difficult question. As a small group of individuals laughed at his response Reagan smiled in amusement.

The third edit (3:41:26 – 3:43:03) was set up by Stahl as Reagan being "masterful at deflecting a hostile question" when he responded to a reporter at a press conference commenting on his keeping Republican Party representatives in line. Here Reagan responded with a self-deprecatory comment, "How can you say that about a sweet fellow like me?" and laughed while displaying an smile of amusement

Participants

Participants were recruited from introductory-level political science classes and were provided extra course credit for taking part in the study. A total of 317

participants took part in the study that lasted from March 2 to April 28, 2018. So as to ensure task compliance those individuals who stopped engaging within the first 7 minutes and who did not respond to the open-ended prompt “(P)lease list some of the thoughts you had while watching the video clip” were removed from subsequent analysis, which resulted in a final sample of 283 participants.

Of these participants, 61.8% identified as female, 81.3% identified as Caucasian (with 5.3% African-American, 2.1% Asian, 8.5% Hispanic, .4% Native American, and 2.5% other ethnicity), and the average age was twenty-one years old (range 18 – 71, SD = 4.55). The majority of participants identified themselves as identifying with the Republican Party (40.3%), followed by Democratic Party identifiers (35.3%), as independent (15.2%), Libertarian Party (6.7%), Green Party (.7%) and other (1.8%). Random assignment of participants to the different treatments was balanced (unedited video/laughter-in/control [$n = 96$], laughter faded out [$n = 95$], and laughter removed [$n = 92$]) across the three conditions. When tested for randomness in assignment to the treatment condition, we found no statistical bias (all p -values $< .10$) for sex, ethnicity, age, party identification, and political ideology (social, economic, overall conservative-liberal).

Procedure

Prior to the taking part in the protocol, participants were asked to provide basic demographic information (age, sex, ethnicity), whether they were registered to

vote, the political party they best identify with and their attitudes towards the main US political parties, as well as their own political ideology. At this point, participants were randomly assigned to one of the three different laughter categories.

Immediately after the video clips were viewed, participants were first asked to describe their thoughts on the video, how strongly they felt in reference to different emotions at that moment (anxious, proud, angry, reassured, fearful, irritated, disgusted, sad, and happy) on a 0-10 (not at all to extremely). They were then asked their evaluation of the reporter, Leslie Stahl, in terms of their overall impressions of her, as well as how credible, appropriate, and likable she was on a seven-point scale. These items were then combined into an additive index (Cronbach's $\alpha = .873$). A final measure, that of how aggressive Stahl was perceived to be, due to weak correlations with the other measures, was analysed separately.

Participants were then asked to evaluate Ronald Reagan's leadership traits in terms of his *competence*, which was based upon measures of how sincere, aggressive, strong, active, competent he appeared to be (Cronbach's $\alpha = .779$); additional measures considered a scale of his *warmth* with questions regarding how intelligent, caring, trustworthy, agreeable, and warm (Cronbach's $\alpha = .928$) he appeared during the news story. Responses regarding evaluation of both Leslie Stahl and Ronald Reagan ranged from "Not at all" to "Extremely" on a seven-point (0-6) scale. Finally, to evaluate whether participants noticed the treatment, we

asked “How believable did you find the video clip to be?” on the same seven-point scale.

RESULTS

Emotional response to the video showed that, how anxious ($F = .283, p = ns$), proud ($F = .465, p = ns$), angry ($F = 1.448, p = ns$), reassured ($F = .644, p = ns$), fearful ($F = 1.848, p = ns$), disgusted ($F = .632, p = ns$), sad ($F = .192, p = ns$), and happy ($F = .119, p = ns$) participants felt was unaffected by the laughter. However, when least significant differences are considered participants felt significantly less irritated ($F = 4.124, p = .017$, partial $\eta^2 = .029$) when watching the original video ($M = 3.646$) when compared with the treatment videos with laughter faded out ($M = 2.611, p = .008$) and laughter completely removed ($M = 2.793, p = .029$).

Participant ratings of Leslie Stahl in a similar manner suggested the treatment had little effect. Specifically, the index considering overall performance, perceived credibility, appropriateness, and likability, exhibited no significant violations of homogeneity ($F [2, 280] = 1.298, p = .275$) according to the Levene's test. Analysis of the index shows participants were largely unaffected by whether there was laughter present, faded, or removed entirely ($F [2, 280] = 0.480, p = .619$). Likewise, Stahl's perceived aggressiveness ($F [2, 280] = 2.722, p = .067$) was not significant at the .05-level.

Similarly, participants did not seem to notice a difference between the different videos. When asked “how believable did you find the video clip to be,” there was no significant difference between the treatments ($F = 1.005, p = ns$). In combination with the preceding findings, there was not apparently a cognitively perceived effect from the video as participants were not aware of the treatment.

Analysis of the effect of laughter on evaluation of Ronald Reagan’s leadership traits tells a more nuanced story. Tests for homogeneity of variance regarding the *competence* index finds no significant violations ($F [2, 280] = 1.536, p = .217$) as does the between-subjects ANOVA between the three groups: $F [2, 280] = 2.677, p = .071$. Although the patterns of response mirror those of perceived *warmth* (Laughter in $M = 23.80$; Laughter faded out $M = 22.31$; Laughter removed $M = 22.20$).

When the Levene test for homogeneity of variance regarding the index of Reagan’s *warmth* is considered, no significant violations were found ($F [2, 280] = 1.699, p = .185$). However a highly significant between-subjects effect across the three humour groups was revealed : $F [2, 280] = 4.078, p = .018, \text{partial } \eta^2 = .028$. Here, Reagan’s trait evaluations were enhanced by the presence of the loud laughter evident in the original news story, with post-hoc comparisons showing that the laughter remaining condition ($M = 25.94, p=0.05$) was significantly greater than the faded out condition ($M = 23.39$) and the complete removal of the laughter ($M = 23.60$). Thus, while perceptions of his *warmth* are all relatively high, they are

significantly reduced by the laughter either being faded out or removed entirely ($p=ns$).

Finally, as a control item a single measure of how humorous participants thought Reagan to be was included. No significant violations of homogeneity were found ($F [2, 280] = 1.497, p = .226$) and the pattern revealed was similar to that regarding Reagan's *warmth* index. Namely, a significant between-subjects effect between the three humour groups, $F [2, 280] = 3.411, p = .034$, partial $\eta^2 = .024$. When post-hoc least significant differences are considered, there were no significant differences between the laughter faded out ($M = 5.13$) and laughter completely removed ($M = 4.96$) groups, as was the case with perceptions of Reagan's *warmth*. However, Reagan was considered significantly more humorous with the laughter in ($M = 5.52$) at the .05-level and approached significant differences when comparing the laughter faded to the laughter in groups ($p = .075$).

DISCUSSION

The finding that observers' emotion was largely unaffected by the treatment, with the exception of feeling irritated, is perhaps not unexpected. The treatment, which is comprised of less than five seconds of laughter across the three Reagan excerpts, is a subtle and unobtrusive stimulus that potentially would not have an observable effect on self-reports of introspective evaluation of emotional response. Furthermore, by only considering between-subjects effects we cannot tease out

whether the news story had a greater influence on participant emotional response and how this might have differed across the treatments. Even though the sole finding concerning irritation was aligned too the expectations both in the pattern of response, with greater irritation felt by those either not hearing laughter or diminished laughter, suggesting a failed humour attempt, and the comparatively weak effect of the treatment, future studies should consider change in self-reported emotional state through within-subjects design.

The lack of significant effect of the observable audience response treatment on evaluation of the reporter, Leslie Stahl, is likely due to the average age of the participants, which may have rendered her work as a nationally known figure unknown. While Ronald Reagan is recognized as a Republican Party icon and is mentioned in both glowing and critical terms by participants, Stahl is not so well recognized. As noted by Vraga and colleagues when comparing participant response to a famous U.S. talk show host and an unfamiliar moderator "... a laugh track has very different effects when a host is a well-known comedian versus an unknown talk show host." (p.143) In other words, the perceptions of newscaster Stahl and the presentation of Reagan's (un)successful humour may be premised upon the humour being interpreted as a benign violation of expectations (McGraw, Williams, & Warren, 2014; Warren & McGraw, 2015) , as opposed to ridicule that is received as more aggressive and less socially acceptable.

Experimental Study 2:

Type of humour likely play a role in perceptions of Ronald Reagan and how he is portrayed in this news story. As noted by Baumgartner, not only does “prior knowledge of the target of the humour affects susceptibility to attitude change” but also the context of political humour plays a role. Whether the humour is other-deprecatory and ridicule-oriented or self-deprecatory, plays a role in its perceptions especially when considering the audience (Stewart, 2011) when Reagan ridicules an audience member. Because of Reagan’s standing as a Republican Party icon, the effect of the audience’s response to his rejoinder to the dissenter within the audience might be accentuated if participants perceive his response being received in a less than flattering manner. This finding is consistent with considerable prior research considering the target of the humour, especially political figures (Baum, 2005; Baumgartner, 2018; Baumgartner, Morris, & Coleman, 2018; Baumgartner & Morris, 2006; Spira, 2002; Stewart, 2011)

As a result, the second experimental study will consider the effect of these different types of humorous comments during the Stahl-Reagan report. Specifically, the first experimental study is extended by including control and full treatment levels, with all three laughter events present or removed; this allows replication of the first hypotheses regarding responses to observable audience responses of laughter in the evaluation of leadership *competence* and *warmth*. By including a measure of charisma, the second experimental study will also examine the presence of

audience laughter in response to Ronald Reagan's humour and the effect that it will have on his perceived *charismatic leadership traits*.

Second Experimental Study is preregistered

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