Psychology of Language and Communication 2024, Vol. 28, No. 1

sciendo

DOI: 10.58734/plc-2024-0003

Maxwell Ely and David Matthew Markowitz
School of Journalism and Communication, University of Oregon, United States

The psychological focus of white house press secretaries during scandal: A case study of the Obama and Trump administrations

This case study investigated how the language of White House press secretaries is modified by periods of scandal and by administration goals. We evaluated two administrations and their associated scandals: The Benghazi attack from the Obama administration and Russian election interference from the Trump administration. Results suggested the psychological and emotional focus of press secretaries changed during scandal compared to before scandal. That is, press secretaries had a more negative tone during each scandal compared to before each scandal. Contrary to prior evidence, time after scandal was not associated with a reduction in self-focus, and press secretary language patterns were largely not moderated by administration (nor their goals). Therefore, language patterns of press secretaries reveal their psychological and emotional processing during a scandal using naturally occurring and in-the-moment text data.

Key words: scandal, language, press secretaries, political communication

Address for correspondence: David Matthew Markowitz
School of Journalism and Communication, University of Oregon, Eugene, United States.
E-mail: dmark@uoregon.edu

Political communicators often experience personal or professional negative events like scandals during their time in office (Dziuda & Howell, 2021). Famous scandals in the US include those that were personally embarrassing for high-ranking officials (e.g., President Bill Clinton and the Monica Lewinsky scandal) and others that were policy-based, including the de-escalation of tensions with other nations (e.g., The Iran-Contra affair). Central to political scandals is language and how key people in an administration communicate about them (e.g., the president, press secretaries). For example, trying to cover up or blame others for a scandal often exacerbates the issue. Therefore, it is critical to evaluate how high-ranking political communicators use language during (compared to before) scandals because this information can help to understand how people manage negative life events psychologically. Such data may also indicate strategies that administrations use to manage impressions of the public at the language level.

While scandals are common in politics and for politicians at different levels of government, presidents are the leaders most commonly evaluated in political communication to understand why scandals occurred and their effects (Dziuda & Howell, 2021; Markowitz & Hancock, 2019; Pfiffner, 1999). The current study takes a complementary and necessary approach to identify how political scandals are reflected in the language patterns of other consequential communicators in government, namely, press secretaries. Press secretaries "are the authorized sources of information about what the president of the United States is thinking about on almost any subject," which makes them valuable proxies for the pulse of an administration (Klein, 2008, p. 13). Therefore, press secretaries serve as a presidential mouthpiece and the first line of defense to have a person (or group) involved in scandal avoid embarrassment, difficult questions, or incriminating themselves. Such individuals are critical members of an administration who can help to identify how leadership has psychologically managed and appraised a scandal.

Given the central role that press secretaries play in presidential politics and in contributing to public discourse, the current study investigated how their language patterns are modified by an administration's scandal. We drew on political communication and psychology of language research to measure how language patterns change from prescandal (before) to periscandal (during), with the goal of using words as a lens into the psychological processing of press secretaries during this time. Our work is timely and important because despite their high rank in presidential administrations (Johansson & Johansson, 2022), press secretaries are typically underanalyzed in empirical research compared to other figures (e.g., the president, vice president, Eshbaugh-Soha, 2016; Pfiffner, 1999). Therefore, press secretaries represent a relatively understudied population in political communication scholarship and deserve attention to understand how they respond to scandals psychologically and linguistically. The current study is also important because press secretaries, as mouthpieces for an administration, are expected to "hold it together" when a negative event such as a scandal occurs for an administration. It is unclear if press secretaries are immune to the effects of

an administration's scandal and if language patterns betray their psychological processing of such events. We examined this possibility directly in a case study of two administrations and their respective scandals, (e.g., the Obama and Trump administrations in the US).

Political Scandals and Psychology of Language Research

Scandals, or events that suggest misbehavior and generally lead to negative perceptions of a target (Garrard & Newell, 2006), have become a part of the modern political climate at least in the US. Due to the hard work of investigative journalists and the "always on" nature of political reporting, it is difficult for politicians to keep their name out of the press, especially when a scandal occurs (Puglisi & Snyder, 2011). Scandals often have negative effects on the reputation and public opinion of politicians when they experience them (Stockemer & Praino, 2019). For example, politicians who lie about a wrongdoing tend to be perceived more negatively than those who simply admit to wrongdoing (Swire-Thompson et al., 2020). President Bill Clinton's involvement in an extramarital affair was also damaging to his reputation, and deceptions surrounding the event further undermined his credibility or any goodwill that people were willing to extend to him during this time (Sonner & Wilcox, 1999).

While a political scandal may negatively impact the perpetrator(s), its effects on the public can also be far-reaching. For example, prior work suggests general trust in government and political institutions decreases after a scandal (Bowler & Karp, 2004), and scandals can lead to dysfunction in political systems at large (not just for the specific party or administration involved, Maier, 2011). Given that scandals can have immediate negative effects on the perpetrator and more distant negative effects on society, it is critical to understand how political communicators use language in the process of managing or controlling the public message. Specifically, through their words, mouthpieces of an administration like press secretaries can impact public feelings and perceptions of an event. Minimizing a scandal may create a public that is unaware or uninformed about an administration's wrongdoings; exaggerating the impact of a scandal may cause unnecessary harm or public distress. Press secretaries, through language, suggest how the public should think and feel about a scandal, which requires deeper interrogation because of its high probability of propagating in society.

What words may be impacted by scandal in political communication? According to Pennebaker (2011), there are two general classes of words that help to reveal a communicator's psychological focus: content words and style words. Content words (e.g., nouns, verbs) describe what a person is communicating about and can help to form themes or topics (Markowitz, 2021). For example, prior work suggests Reddit data from the US can reveal what people from healthy and unhealthy cities tend to discuss (Blackburn et al., 2018). That is, people in unhealthy cities tended to focus on words such as *pizza* and *alcohol* whereas people in

healthy cities tended to focus on *home cooking*. Style words, on the other hand, are small words that form the connective tissue of a sentence. For example, words such as pronouns (e.g., *I*, *my*), articles (e.g., *a*, *the*), and prepositions (e.g., *above*, *below*) are style words and indicate how a person communicates the content in their disclosures (Ireland & Pennebaker, 2010). Style words are often associated with a range of psychological dynamics such as social status (Kacewicz et al., 2014; Markowitz, 2018), personality traits (Ireland & Mehl, 2014), and deception (Markowitz et al., 2021; Markowitz & Hancock, 2016). Together, word patterns reveal what communicators are attending to, which can indicate what they are thinking, feeling, and experiencing psychologically at a particular moment in time (Boyd & Schwartz, 2021).

Primary study evidence suggests people who experience negative life events (e.g., an emotional upheaval) tend to communicate with a different psychological focus than those who do not experience negative life events. For example, a seminal study by Cohn et al. (2004) evaluated how bloggers responded psychologically to the September 11th terrorist attacks. An evaluation of their language revealed that such negative life events changed bloggers' self-focus and emotional-focus. Bloggers became more psychologically distant after 9/11 compared to before (e.g., a reduction in "I" words) and were more emotional (e.g., people used more negative emotions) after 9/11 compared to before. Critically, it took weeks for such word patterns to return to baseline (Cohn et al., 2004). This evidence, alongside other that documents the linguistic shifts after negative life events (Markowitz, 2022), provides an important empirical foundation to evaluate how press secretaries experience a negative event like a scandal as indicated by language.

Consistent with prior work (Cohn et al., 2004; Markowitz, 2022), we expected that a negative life event like the scandal of a presidential administration would change how press secretaries communicate. Specifically, press secretaries would focus less on the self and more on negative emotions when communicating during a scandal compared to before a scandal.

H1a: During a scandal, press secretaries will experience a psychological distancing effect (e.g., use fewer self-references) compared to before a scandal.

H1b: During a scandal, press secretaries will focus more on negative emotion terms compared to before a scandal.

While negative emotions like sadness, anger, and disgust are often considered in language evaluations, negative sentiment can also be considered as well. For example, the words *coffin* and *war* are negative in nature, but they do not reflect an emotion per se. In an exploratory and complementary analysis to the negative emotion effect, we evaluated how negative sentiment is associated with time during scandal.

Pragmatic Goals and The Role of Context

While our main prediction considers an overall main effect of time (prescandal

vs. periscandal) on language patterns, we were also interested in the moderating role of pragmatic goals in shaping how press secretaries communicate. We specifically drew on the contextual organization of language and deception (COLD) model for this foundation (Markowitz & Hancock, 2019), which argues that three aspects of a negative life event (e.g., in one example, deception) modify how people communicate about such experiences via language: (a) psychological dynamics (e.g., the emotional and cognitive experience of the communicator), (b) pragmatic goals (e.g., what the communicator is trying to accomplish), and (c) genre conventions (e.g., aspects of the genre or "discourse community" that shape how people speak) (Biber et al., 2007). Pragmatic goals are immediately relevant to the current investigation due to varying dynamics associated with each scandal we evaluated: (a) The Benghazi attack during the Obama administration, and (b) Russian election interference during the Trump administration. Both administrations investigated in the current study had different and oftentimes simultaneous pragmatic goals during the scandals. For example, in the Benghazi attack, for example, the Obama administration would often attempt to disassociate from the scandal (Baumgardner, 2013; Bell, 2012). Disassociation attempted to resolve the public's concern that the Obama administration was directly involved with Benghazi and instead focused the scandal on other causes. In addition to disassociation, members of the Obama administration likely endured many face-threats and, therefore, might have used deception to prevent embarrassment (e.g., Turner et al., 1975).

For the Russian election interference scandal, the Trump administration often tried to conceal information from the public, which would help to minimize the severity of election meddling claims (The Moscow Project, 2021). Given the different pragmatic goals associated with each administration and their scandals, we expected language patterns to differ as a reflection of the time (prescandal vs. periscandal) and administration goals (Obama vs. Trump). Drawing on the COLD model, and others that suggest goals may change how people communicate (Buller & Burgoon, 1996; Dillard et al., 1989), we performed several exploratory analyses to identify the joint impact of time and administration pragmatic goals. We proposed the following question:

RQ: What is the joint impact of time and pragmatic goals of each administration on the linguistic styles of each press secretary?

The Current Study: The Press Secretary

Political communication research has often focused on US presidents and members of Congress to investigate how communication patterns reveal social, psychological, and institutional dynamics through language (Chen & Hu, 2019; Markowitz & Hancock, 2019; Olson et al., 2012). However, members of a president's communications team play a crucial role in preparing and developing statements for the president to communicate publicly. The press secretary helps to ensure the administration is "on message" and they have many roles, most notably

giving a daily press briefing. Here, it is often the press secretary who "spins" the narrative to put the president in a favorable light or to downplay an issue. Press secretaries are a critical front line during a scandal, and their language patterns are essential for determining how an administration publicly responds to scandals.

We expected press secretaries — who often do the president's bidding publicly during a scandal (Klein, 2008) — would also display signals of concealment during such negative life events to protect the president, the administration, or the public. Further, given that the communications by a president are also repeated by a press secretary (e.g., President Trump stating "This was the largest audience to ever witness an inauguration—period—both in person and around the globe" was repeated by his press secretary; Spicer, 2017), we suggest press secretaries provide an important lens into how the president and the administration manage events psychologically.

Taken together, we used language patterns to identify how an administration is internally managing pre- and periscandal experiences as communicated by press secretaries, a technique successfully applied to other psychology of language studies (Markowitz, 2022; Seraj et al., 2021). This is some of the first research to evaluate the language patterns of press secretaries to reveal how an administration psychologically attends to scandal. In addition to our a priori interest in using self-references and negative emotions to indicate press secretary language patterns during scandal, plus the exploratory evaluation of negative sentiment or tone, we also performed additional exploratory analyses using rates of second-person pronouns ("you" words) and cognitive processing terms (e.g., words like *think*, *believe*). "You" words are often associated with blame and accusation (Xi & Singh, 2023). These terms may therefore serve as another psychological distancing attempt by press secretaries during a negative life event (e.g., blaming others instead of the self or the administration) (Markowitz & Slovic, 2020). Cognitive processing terms describe a person "working through" a challenge or issue (Boyd et al., 2020). For example, after or during a negative life event (e.g., a romantic breakup, after the COVID-19 pandemic), people often write with a greater rate of cognitive processing terms as a reflection of their attempts to manage and organize their thoughts compared to before the event (Cohn et al., 2004; Markowitz, 2022; Seraj et al., 2021). Altogether, we assessed how communicating about a scandal may shape one's psychological focus through various a priori and exploratory dimensions.

Method

Scandal Selection

The scandals evaluated in this work include the Benghazi attack during the Obama administration (n = 113 statements) and the Russian election interference investigation during the Trump administration (n = 88 statements). The Benghazi attack was an attack on the US Consulate in Benghazi, Libya, on September 11,

2012. The attack took the life of Chris Stevens, the US ambassador to Libya, and many others who were stationed in Libya. The Obama administration's messaging around the cause of the attack and its origins were unclear, leading to a scandal about how the event started. Initially, messaging suggested the attack was not premeditated; this was not the case. Jay Carney, President Obama's press secretary, and Josh Earnest, Carney's deputy, were in office during our time period of interest: 90 days before the attack and the 90 days after (see below). Therefore, we investigated their language patterns before and after the September 11, 2012 start-date.

Unlike the Benghazi attack, an exact date of the Russian election interference investigation does not exist. Therefore, based on journalistic evidence and investigative reporting, we chose May 17, 2017, as the start-date for this scandal, or the day special prosecutor Robert Mueller was appointed to oversee the investigation (Department of Justice, 2017). This scandal involved hacking and disinformation campaigns by Russia during the 2016 US presidential election, plus Russian officials meeting with the Trump Campaign for the President's election bid. These events, which resulted in the special investigation, examined possible collusion between the Trump campaign and the Kremlin, finding many counts of campaign malpractice outside of Russian interference. Here, 90 days before May 17, 2017 and the 90 days after, President Trump had two press secretaries, Sean Spicer, and Sarah Huckabee Sanders.

The scandals in question were selected for several reasons. First, to obtain an ideologically balanced evaluation of scandals as revealed by language patterns, press secretaries from Democratic and Republican administrations were selected. We also selected press secretaries from recent administrations since their language patterns were systematically recorded, cataloged, and the data are publicly available online. Selecting press secretaries from older administrations might be incomplete. Critically, as prior work also suggests (Jordan et al., 2019), there are natural trends in political language that indicate an increase in pronoun use over time (e.g., the reduction in analytic thinking). Therefore, we specifically chose consecutive and more recent administrations as a case study to avoid the alternative explanation that naturally, over time, speakers may have different pronoun use (e.g., I-words are a key metric for our study), independent of scandal. Finally, the scandals were selected because they were seminal events in the most recent presidential administrations. Minor scandals in an administration may be common, but the Benghazi attack and the Russian election interference investigation were top-of-mind scandals for most Americans over the past two presidencies.

Data Collection

Public texts from each administration were automatically extracted from *The American Presidency Projec*t (Woolley & Peters, 2009). This archive contains texts from political figures since George Washington's inaugural address and has been used in evaluations similar to ours (Jordan et al., 2019; Markowitz & Hancock,

2019; Markowitz & Slovic, 2020). Only statements by press secretaries and deputy press secretaries from the Obama and Trump administrations were considered in the data extraction process.

Preprocessing. To understand how each press secretary's language changed over the course of a scandal, we tracked language patterns 90 days prior to a scandal's start date and 90 days after a scandal's start date. The 90-day benchmark was selected because it covered key moments in each scandal, and we expected that interest in or attention on each scandal would wane over time. Across scandals and timeframes, 123 statements were communicated prescandal and 78 were communicated periscandal. We excluded any text that did not originate from press secretaries (e.g., questions from the press, statements by other politicians in a briefing) to ensure we captured language patterns from the persons of interest, only.

Automated Text Analysis

We used the automated text analysis program, Linguistic Inquiry and Word Count (LIWC: Pennebaker et al., 2022), to count words from press secretary transcripts. LIWC counts words as a percent of the total word count per text. For example, the statement "We need to hold other countries accountable" contains 7 words and increments categories in its internal dictionary of social (e.g., words related to friends), psychological (e.g., words related to emotion), and part of speech dimensions (e.g., pronouns, articles). LIWC identifies first-person plural pronouns (e.g., *we*; 14.29% of the total word count), prepositions (e.g., *to*; 14.29%), and other dimensions as part of the prior verbal output. Together, LIWC is a tool commonly used to evaluate the language style of politicians (Braun et al., 2015; Jordan et al., 2019; Markowitz & Hancock, 2019; Markowitz & Slovic, 2020), which is why we applied it to the current study. Across 201 speeches, a total of 646,391 words were counted (M = 3,215.88 words, SD = 2,407.12 words).

Measures

We evaluated several language dimensions to reveal press secretaries' psychological focus before and during scandal, and as modified by pragmatic goals. First, consistent with prior work (Cohn et al., 2004; Newman et al., 2003), we evaluated psychological distancing through the rate of self-references (e.g., *I, me, myself*) and rates of negativity through the negative emotion term (emo_neg) category of LIWC (e.g., *hate, dislike, disgust*). Negative sentiment or tone was evaluated using the tone_neg category of LIWC.

Second, to address our research question, we performed several exploratory Time (prescandal vs. periscandal) × Administration/goals (Obama vs. Trump) interaction effects. This process identified the joint impact of time and pragmatic goals on language patterns for self-references (e.g., *I, me*) and negative emotion terms (e.g., *bad, hate*). We also examined two exploratory interaction effects, spe-

Table 1. *Descriptive Statistics Across Press Secretaries*

			Word count		Self-references		Negative emotion terms	
Administration	Press secretary	n	M	SD	M(%)	SD(%)	M(%)	SD(%)
Obama	Jay Carney	94	2882.51	2278.65	2.14	0.82	0.19	0.18
Obama	Josh Earnest	19	1800.89	1644.85	1.86	0.92	0.13	0.19
Trump	Sarah Sanders	26	2070.77	780.65	3.48	0.78	0.18	0.15
Trump	Sean Spicer	62	4635.13	2575.31	2.80	0.88	0.09	0.07

cifically for second-person pronouns and cognitive processing terms, to identify how time and administration were jointly impacted. Recall, these variables were selected based on prior evidence that suggests such language dimensions are often reliably impacted by negative life events as well (Cohn et al., 2004; Markowitz, 2022). Descriptive statistics across speakers are shown in Table 1.

Results

Linear mixed models, with a random intercept for speaker (to control for data nonindependence), evaluated the relationship between Time (prescandal vs. periscandal) and language patterns[1]. Sample excerpts demonstrating the relationship between Time and language patterns are available in the Supplementary Materials.

Inconsistent with H1a, the relationship between time and self-references was not statistically significant, $t(197.58) = -1.34$, $p = .181$, $R^2c = 0.42$[2]. Further, inconsistent with H1b, the relationship between time and negative emotion terms was not statistically significant, $t(189.86) = 1.28$, $p = .202$, $R^2c = 0.06$[3]. The exploratory analysis between time and negative sentiment or tone was statistically significant, $t(197.42) = 2.61$, $p = .009$, $R^2c = 0.13$, where press secretaries had a more negative tone periscandal ($M = 0.80\%$, SE = 0.09%) compared to prescandal ($M = 0.62\%$, SE = 0.09%).

Exploratory Interaction Effects

To evaluate the joint impact of Time (prescandal vs. periscandal) and Administration/goals (Obama vs. Trump), several exploratory interaction effects were computed using linear mixed models with a random intercept for speaker. Time × Administration interaction effects were not statistically significant for self-references, $F(1, 186.83) = 0.13$, $p = .716$, cognitive processing terms, $F(1, 181.19) = 0.03$, $p = .873$, nor "you" words, $F(1, 197) = 0.15$, $p = .697$, and therefore, were not probed

1 Sample regression equations are in the online supplement.

2 R^2c is variance explained by the fixed and random effects, calculated by the MuMIn package in *R* (Bartoń, 2020).

3 We also explored the relationship between Time and positive emotion terms, though this pattern was not statistically significant, $B = 0.03$, SE = 0.06, $t = 0.54$, $p = .591$.

further. A Time × Administration interaction effect for negative emotion terms was statistically significant, $F(1, 72.68) = 4.19$, $p = .044$, though post hoc tests revealed no reliable or systematic differences at the 5% level after multiple comparisons testing with Bonferroni correction. This pattern was therefore not explored further.

Overall, these data suggest pragmatic goals were not a significant contributor to differential language pattern effects, at least for the scandals and speakers in this paper.

Discussion

The current study used language patterns to evaluate how press secretaries psychologically manage scandals. H1a and H1b were not supported, though press secretaries had a more negative tone periscandal compared to prescandal. This exploratory result generally revealed patterns in press secretaries' internal psychological focus and negative appraisal of the events in real time. Together, this evidence suggests the language of press secretaries is psychologically rich and is associated with time (pre- vs. periscandal), but pragmatic goals did not moderate these effects.

This work adds to existing scholarship by evaluating the language patterns and psychological processing of an understudied population of political communicators — press secretaries. The present evidence, which builds on prior work suggesting that negative life events leave a trace in the communication patterns of individuals (Cohn et al., 2004; Markowitz, 2022), argues that various members of an administration carry a psychological signal of scandal in their emotional tone. Presidents, while higher in rank and power, are not the only communicators who need to be evaluated during negative administration events. As mouthpieces for a president and their administration, press secretaries are a source of rich communication and psychological information that can help people understand how an administration is thinking, feeling, and functioning via language patterns. From the present evidence, we have a more refined understanding of press secretary psychological processing during scandal and the potential strategies they use to communicate about such negative life events to the public.

This work broadens the scope of political communication research by focusing on an under-investigated group of political figures. Recall, presidents are commonly evaluated in empirical research, though our work suggests those who speak for presidents and an administration are critical, and their words have much psychological value. The language of press secretaries can be studied to proxy the emotional tone of an administration, even though they are often trained in public speaking and spin control. Words reveal the psychological and emotional processing of those who might believe their intentions are hidden from public view.

It is also important to discuss potential explanations for several null effects reported here. First, the null relationship between self-references and time might be explained by each press secretary's status or rank within their administration. Despite often communicating about the self and expressing one's own opinions,

press secretaries represent the administration and a group of people that is larger than the self (e.g., the president, the president's chief of staff). Prior work suggests people of higher social status or rank tend to use more "we" words and fewer "I" words compared to those of lower social status or rank (Kacewicz et al., 2014). It is possible that press secretaries indeed experience a psychological distancing effect during (compared to before) a scandal, but it is represented in different language dimensions than self-references because of their place and position in an administration. Therefore, future research should examine how the expression of psychological distancing might be moderated by high or low social rank.

Second, why did time after scandal associate with negative sentiment but not negative emotion? One possibility is that methodologically, emotions are a more restrictive linguistic category to represent feelings, whereas sentiment or tone is broader and more inclusive. Further, true emotions (e.g., anger, sadness) are perhaps unconventional for press secretaries to express during (compared to before) a scandal because emotions may represent value judgments and press secretaries are often trained to be more objective (Klein, 2008). Instead, the negative sentiment or tone of a press secretary may be associated with time after scandal because press secretaries are communicating about negatively valenced events. Using words to convey negative sentiment (e.g., *violence, attacks, threats*), which are different from true emotion words that are more psychological in nature, is a reasonable communication strategy for press secretaries who need to inform the public in a fact-based and unemotional manner. The null relationship between positive emotions and time further suggests that press secretaries did not seem to attempt to restore their reputation by talking about positive concepts to distract the public, either. Following a negative life event like a scandal, our evidence suggests press secretaries tend to focus on negative concepts but not negative emotions.

From this case study of press secretaries and their language, we learned that as mouthpieces of an administration, such individuals may not experience the typical psychological effects of scandal compared to people in other settings or those who do not hold high administrative rank. It is also possible that because press secretaries are well-trained and professional communicators, they can use language to get a message across without revealing or leaking their internal processing of such events. Still, scandals are associated with the expression of negative sentiment, which demonstrates how press secretaries cannot avoid the discussion of negative administration events despite their possible attempts at spin or influence. Finally, we learned that automated text analysis continues to play an important role in understanding social and psychological dynamics that impact political communicators like scandal. Modern politicians are some of the most recorded individuals in history (Galanes, 2016), suggesting it is important to continually monitor how they speak to reveal important cultural, social, and psychological moments in history. Text analysis unearths how people are thinking and feeling during key life events, and our work supports the utility of analyzing language in this regard.

Limitations and Future Directions

There are several limitations of the current study worth resolving in future work. First, the effects in this work are correlational. Therefore, it will be unclear why language patterns might differ over time (prescandal vs. periscandal), and experimental research should complement the current study. Second, effect sizes in psychology of language studies involving negative life events are often small (Hauch et al., 2015; Luke, 2019). Therefore, future work should ensure that enough cases are selected to prevent Type I errors. Relatedly, base-rates of some language dimensions (e.g., negative emotion) were low, which may require some caution in interpreting the effects and could partially explain some of the null interaction effect findings. We also only selected two scandals and administrations for this work. Future research should expand the number of scandals and administrations to assess the generalizability of the current results. Future work should also identify if the planned versus unplanned nature of press secretary speeches offered different linguistic signals, and how the role of pragmatic goals could be investigated more systematically in a large-scale analysis of scandals.

Finally, future work may benefit from identifying how different scandal types are communicated about and therefore managed psychologically by press secretaries. We evaluated two different scandals, though a systematic evaluation of how scandal type and additional communicative goals (e.g., personal scandals, administration-wide scandals, international scandals) moderate linguistic patterns and psychological processing can suggest the strategies that communicators use for impression management and controlling public opinion. Being transparent and creating an informed public is part of a press secretary's duty; understanding their communication strategies during such negative life events may indicate if they are adequately reaching this standard.

Conflict of Interest Disclosure

The Authors declare no conflicts of interest.

Funding

The Authors report no sources of funding for the current study.

Research Ethics Statement

The data are public and archival. Therefore, no ethics board approval was required. We did not interact with any human subjects during this research process. This work is not considered human subjects research according to The Common Rule.

Data Availability Statement

The data that support the findings of this study are available from the author upon reasonable request.

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Supplementary Materials

Obama – Pre-Scandal: June 13, 2012

MR. CARNEY: I don't -- I can't speak for everyone. I have not had a chance to read it. I've read the excerpts, I've read about it, but I have not read it in full.

Obama - Peri-Scandal: November 28, 2012

MR. CARNEY: No, I don't. The White House and the State Department have made clear that the single adjustment that was made to those talking points by either of those two -- of these two institutions were changing the word "consulate" to "diplomatic facility," because "consulate" was inaccurate. Those talking points originated from the intelligence community. They reflect the IC's best assessments of what they thought had happened.

Trump - Pre-Scandal (H1): February 21, 2017

MR. SPICER: Well, I think -- first, I want to be clear that we feel confident that we're still going to prevail on the case -- the merits of the case. I think that as was seen in the case of Massachusetts, once it is fully adjudicated, we will prevail because the authority is granted to the President to do what he has to, to protect the country. So I feel very, very confident about where we're going to go.

Trump - Peri-Scandal (H1): June 26, 2017

MR. SPICER: The statement that he made in January is consistent with what he said the other day, which is that he believes that Russia probably was involved; potentially some other countries, as well, could have been equally involved -- or could have been involved -- not equally. And he stands by the statements that he made in January.

Trump - Peri-Scandal (RQ): June 26, 2017

MR. SPICER: Well, there's two aspects to that question. One is, if you believe the story that was written, that means from August through November 8th, two things: One, that if you believe that, then they did know about this.

Mixed Model Regression Equations

For self-references:

$$\mathrm{i}_i \sim N\left(\alpha_{j[i]} + \beta_1(\text{time\_point}_{\text{Peri-scandal}}), \sigma^2\right)$$
$$\alpha_j \sim N\left(\mu_{\alpha_j}, \sigma^2_{\alpha_j}\right), \text{for speaker j} = 1, \ldots, \mathrm{J}$$

For negative emotion:

$$\text{emo\_neg}_i \sim N\left(\alpha_{j[i]} + \beta_1(\text{time\_point}_{\text{Peri-scandal}}), \sigma^2\right)$$
$$\alpha_j \sim N\left(\mu_{\alpha_j}, \sigma^2_{\alpha_j}\right), \text{for speaker j} = 1, \ldots, \mathrm{J}$$