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Short Communication

Grammar matters: The tainting effect of grammar usage errors on judgments of competence and character

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ABSTRACT

The human tendency to judge another person's personality traits can be prompted by as little as a snapshot of that person, and such judgments can have consequences for future interactions (Snyder, Tanke, & Berscheid, 1977). We tested the hypothesis that people make judgments about others' personality traits – particularly those desired by employers – on the basis of their written grammar usage. In the study, community adults read a hypothetical job application cover letter and then rated the applicant on a variety of dimensions. Unbeknownst to the participants, there were three cover letters that held the same content but differed in their rate of surface-level grammar usage errors (no errors; an average error rate of 2/100 words; or a high error rate of 4/100 words). Participants who read a letter that contained grammar usage errors downgraded the applicant's writing as well as their standing on personality traits such as capable, hard-working, and team-oriented. The effects were consistent and imply that people should attend to their grammar usage if they want to make a positive first impression. We propose that the effects we documented are due to actual associations between the quality of individuals' grammar competence and their conscientiousness and intelligence.

1. Introduction

Humans reveal their underlying personality traits through many cues, including how loudly they talk (Letzring, 2008), how they decorate their living spaces (Gosling, Ko, Mannarelli, & Morris, 2002), and even how they walk (Johnson, Gill, Reichman, & Tassinary, 2007). In turn, humans are natural experts at picking up on those cues in others (Funder, 1995) and making judgments on the basis of those cues (Snyder, Tanke, & Berscheid, 1977). People can make moderately accurate judgments about other individuals, such as how extraverted and open they are, from as little as a snapshot (Naumann, Vazire, Rentfrow, & Gosling, 2009) or a minute standing in their living space (Gosling et al., 2002). In the current study, we tested the hypothesis that people make judgments about others' character on the basis of their written grammar usage.[1]

Several strands of research contribute to our hypothesis that errors in grammar usage negatively affect how individuals are perceived by others. First, language is a defining feature of human interaction (Pinker, 1994) and a fundamental way in which people express their enduring thoughts and emotional styles (Tauszcik & Pennebaker, 2010). In text messages, for example, more extraverted people use more positive-emotion words and more disagreeable people use more negative-emotion words (Holtgraves, 2011). Further, analyses of people's conversations (Mehl, Gosling, & Pennebaker, 2006) and Facebook messages (Schwartz et al., 2013) suggest that people who are disagreeable and impulsive are far more likely to swear and use hateful words than their agreeable and conscientious counterparts are.

Second, research has shown that the language people use can affect how others view them. Individuals who swear often are judged as disagreeable and uncultured (Mehl et al., 2006), and writers who use big words unnecessarily are judged as relatively unintelligent (Oppenheimer, 2006).

A third line of research implies that individuals' understanding of grammar usage may be a reliable signal of their general intelligence. Specifically, sophisticated language use is related to scoring high in openness to experience (Schwartz et al., 2013), which is positively associated with general intelligence (DeYoung, Quilty, Peterson, & Gray, 2014). Grammar competency is also a key component of the verbal

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[1] "Grammar" refers to the way words are put together to create meaning. Information about grammar usage can be either *descriptive* (i.e., describing the way things generally are done, which can change over time and context), or *prescriptive* (i.e., providing guidelines about how people *should* write or speak). In this research, we take an implicitly prescriptive approach by presupposing that at any given point in time, there is consensus (albeit imperfect) about "correct" and "incorrect" grammatical forms.

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section of the SAT, and SAT scores correlate strongly with other measures of general intelligence (Frey & Detterman, 2004).

Finally, research suggests that professionals and academics find common grammatical usage errors to be quite annoying (Bean, 1996; Gilsdorf & Leonard, 2001; Gray & Heuser, 2003; Hairston, 1981). However, annoyed responses from professionals do not mean that people in general make character judgments about a person because of how well they follow what is deemed to be grammatically correct. One study involving an idiographic analysis of business professionals' thoughts as they considered questionable grammar usage elements does imply that such judgments are made (Beason, 2001), but no study has demonstrated those effects systematically with a non-professional community sample. The current study was designed to fill that gap.

2. Method

2.1. Participants

Participants were recruited via the researchers' community networks (e.g., community organization membership directories). An original sample of 298 men and women in the Midwestern U.S. were mailed a letter inviting them to participate in a study evaluating college students' readiness for the real world (with a 50% response rate, we would have nearly 80% power to detect moderate effects). A total of 72 men and 128 women (1 unspecified) responded, for a 68% response rate. Respondents varied widely in age (range = 22–80 years, $M = 49.54 \pm 10.83$ years) and education level (20% Associate degree or less, 45% Bachelor's degree, 35% Master's/Doctoral level degree).

2.2. Materials and procedure

The invitation letter to participants stated that the first author was conducting research on college students' preparedness for the real world. Participants were asked to read the enclosed job application "cover letter" and then provide their perceptions of the letter and the real-world preparedness of the (hypothetical) student who wrote it.

The cover letter came in three versions that contained the same content but varied in rate of grammar usage errors. The "Low Error Rate" letter contained zero errors, the "Average Error Rate" letter contained a typical rate of two errors per 100 words, and the "High Error Rate" letter contained four errors per 100 words. These error rates were used because they matched what has been documented in other studies of grammar usage errors (Connors & Lunsford, 1988; Lunsford & Lunsford, 2008). We included common usage errors, such as wrong word (e.g., *lead* for *led*), lack of subject-verb agreement, and plural instead of possessive (Connors & Lunsford, 1988; Lunsford & Lunsford, 2008). Table 1 provides an excerpt from the three versions of the cover letter (full materials are provided in the Supplemental materials).

The writer was given an invented gender-neutral name (Jordan Richmond). The one-page letter described strong qualifications for the position of research analyst: two years as a research assistant, proficiency with statistical analysis, and interpersonal and leadership skills developed through activities such as conference presentations and campus ambassador (for details, see Supplemental materials).

Upon reading the letter, participants used seven-point scales to rate the quality of the writing (*Poor* to *Excellent*) and how the applicant did in terms of selling themselves as an applicant, structuring their argument, and supporting their argument (*They did poorly* to *They did really well*). Responses to these last three items were averaged ($\alpha = 0.94$) and labeled "Substance of Letter." Participants used five-point scales (*Not at all–A little–Moderately–Quite–Very*) to provide their perception of the student's standing on eight different traits: *clear thinker*, *good communicator*, *capable*, *engaged*, *hard-working*, *skilled*, *team-oriented*, and *thorough*. We intentionally included traits employers want (National Association of Colleges and Employers, 2017), some with obvious ties to grammar usage (e.g., good communicator) and some without (e.g., team-oriented).

3. Results and discussion

3.1. Effects of grammar usage errors on competence and character

Because we engaged in multiple comparisons, we set the Type I error rate at $p < .0025$. As shown in Fig. 1 (also see Supplemental materials), participants' perceptions of the writing quality were affected by which version of the cover letter they read, $F(2, 198) = 62.33$, $p < .001$, $\eta^2 = 0.39$. Quality ratings were two points higher (on the seven-point scale) for those who read the clean letter ($M = 5.79$) over the average error rate letter ($M = 3.61$), and there was a slight additional drop for those who read the high error rate letter ($M = 2.95$). Further, although the *substance* of the letter (e.g., stated credentials) was identical across the three versions, Fig. 1 shows that participants who read a letter with grammatical errors were much less impressed with the substance of the letter (Ms = 4.46 and 4.03) than were those who read a letter without errors ($M = 5.85$), $F(2, 196) = 31.27$, $p < .001$, $\eta^2 = 0.24$.

The findings displayed in Fig. 2 and detailed in the Supplemental materials show that, as we hypothesized, grammar usage errors also tainted judgments of the applicant's *personality* (character composite $F(2, 191) = 45.19$, $p < .001$, $\eta^2 = 0.32$). On every dimension we measured, participants who read the error-free (low error rate) letter gave high ratings, and those who read a letter with grammatical errors gave ratings that tended to be nearly a full point lower. The negative effect of grammar usage errors held even for character traits that do not have obvious links to grammar, such as "engaged" and "team oriented."

Table 1
The manipulation of grammar usage errors.

Low Error Rate:
My time in those positions has allowed me to practice reading and analyzing primary literature, generate hypotheses, conduct statistical analyses, and interpret data.

Average Error Rate:
My time in those positions has allowed me to; practice reading and analyzing primary literature, generate hypotheses, conduct statistical analyses, and interpret data.

High Error Rate:
My time in those positions have allowed me to; practice reading and analyzing primary literature, generate hypotheses, conduct statistical analyses, and interpret data.

Note. Errors are circled.

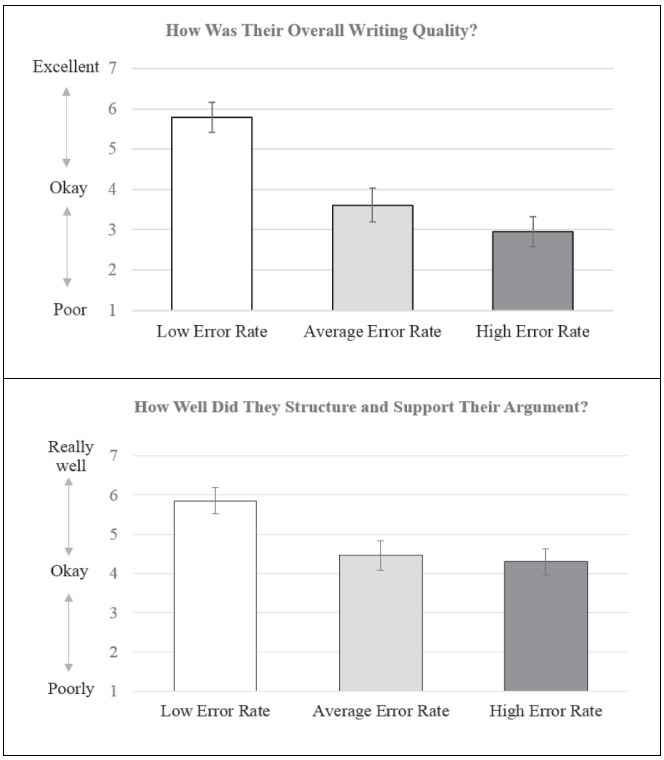

Fig. 1. Participants' judgments of the applicant's overall writing quality (upper panel) and substance of the cover letter (lower panel), as a function of which version of the cover letter they reviewed. Error bars represent ± 2 SEM.

3.2. Additional analyses

We conducted additional analyses on participant gender, age, and education as correlates of applicant judgments and as moderators of the effect of the grammar usage manipulation on judgments. None of the moderation analyses was significant at $p < .0025$, and neither gender nor age was associated with judgments. However, compared to their less-educated counterparts, participants of higher education level gave less positive ratings of the applicant's skill in selling themselves ($p = .002$) and less positive ratings of how capable ($p < .001$), hard-working ($p < .001$), and team-oriented ($p < .001$) the applicant was.

3.3. Discussion

In summary, we predicted and demonstrated that grammar usage errors negatively impact people's judgments of others' competence and character. Participants who read a cover letter with a typical error rate reacted far more negatively to the applicant on every dimension compared to participants who read a clean cover letter. Participants who read a cover letter with a high rate of grammatical errors trended toward even lower ratings.

In this study, we intentionally chose grammar usage errors that do not impede readers' understanding. Further, the substance of all three cover letters was the same: the applicant wrote a letter with several well-structured paragraphs, described strong credentials, and wrote with a respectful and professional tone. Regardless, the grammar usage errors still tainted evaluators' impressions of the applicant on every dimension we measured. Our findings may have important real-world implications. Job applicants – including highly qualified applicants – may end up categorically excluded from consideration for a position if they make small (but apparently noticeable and bothersome) grammatical errors in the materials they provide. We suggest that job applicants pay close attention to their cover letters and resumes.

Some may object to our use of the term grammar usage *error*, which is prescriptive and does not necessarily acknowledge the degree to which criteria for "correct" can change with time, context, and audience. However, to the degree that the words and grammatical structures people use are systematically associated with their intelligence and personality traits that are relevant to real world outcomes, it might be important for people to recognize that regardless of whether we call these "grammar usage errors" or "questionable usage elements" (Gilsdorf & Leonard, 2001), the consequence for individuals who make them is likely the same: negative impressions.

In conclusion, our findings imply that grammar usage matters. Indeed, grammar may be a little clue that can reveal big truths about who we are (Hertenstein, 2013). We suggest that writers attend closely not only to the content of their message (i.e., what they are saying), but also to their grammar usage (i.e., how they say it).

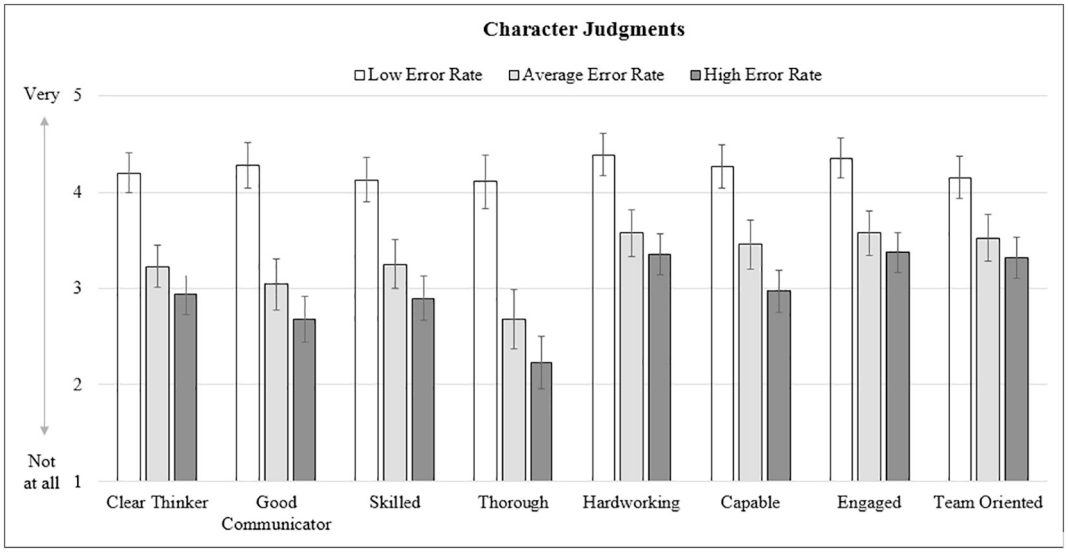

Fig. 2. Participants' judgments of the applicant's competence and character, as a function of which version of the cover letter they reviewed. Error bars represent ± 2 SEM.

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Declarations of interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.paid.2018.12.016.

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