Thinking of You: How Second-Person Pronouns Shape Cultural Success

Grant Packard[1] and Jonah Berger[2]
[1]Schulich School of Business, York University, and [2]The Wharton School, University of Pennsylvania

Abstract
Why do some cultural items succeed and others fail? Some scholars have argued that one function of the narrative arts is to facilitate feelings of social connection. If this is true, cultural items that activate personal connections should be more successful. The present research tested this possibility in the context of second-person pronouns. We argue that rather than directly addressing the audience, communicating norms, or encouraging perspective taking, second-person pronouns can encourage audiences to think of someone in their own lives. Textual analysis of songs ranked in the Billboard charts ($N = 4,200$), as well as controlled experiments (total $N = 2,921$), support this possibility, demonstrating that cultural items that use more second-person pronouns are liked and purchased more. These findings demonstrate a novel way in which second-person pronouns make meaning, how pronouns' situated use (object case vs. subject case) may shape this meaning, and how psychological factors shape the success of narrative arts.

Some songs become hits, while others languish. Some books become best sellers, while others fail to resonate. What causes some things to win out in the marketplace of ideas?

To succeed at the collective level, it helps to build on psychological processes at the individual or interpersonal level (Kashima, Bain, & Perfors, 2019; Schaller & Crandall, 2004). People spend vast quantities of time and money consuming narrative works of art, such as songs, literature, and movies, but the works' fundamental functions remain murky. Some researchers have theorized that the narrative arts have a social role, fostering a sense of connection with other people (Hargreaves & North, 1999; Schäfer, Sedlmeier, Städtler, & Huron, 2013). However, because prior work usually involved asking people to report how much they agree with different functions, it remains unclear whether these aspects truly drive behavior. If one function of music is to connect listeners to others in their own social lives, then songs that do a better job of facilitating such connections should be more successful (i.e., liked and purchased more).

We examine this possibility in the context of second-person pronouns. In modern English, these pronouns are represented by four variations of the word "you" (i.e., *you, your, yours*, and *yourself*). Their unique, fundamental role is to signal attentional focus—that a speaker is directly addressing cognitively or physically present people or their things (e.g., "You're great" or "Your shoes are great"; Kacewicz, Pennebaker, Davis, Jeon, & Graesser, 2014; Pennebaker, 2011). Neither first-person nor third-person pronouns serve this function (Brener, 1983; Lyons, 1977).

While speakers and listeners pay second-person pronouns little conscious attention (Chung & Pennebaker, 2007; Pennebaker, 2011), we suggest that these words may help shape cultural success. Prior research suggests two ways this might occur. First, by directly addressing the audience as the subject (e.g., "You are slicing a

Corresponding Author:
Grant Packard, York University, Schulich School of Business, 4700 Keele St., Toronto, Ontario, M3J 1P3, Canada
E-mail: gpackard@schulich.yorku.ca

tomato"), second-person pronouns may bolster mental simulation and involvement (Brunyé, Ditman, Mahoney, Augustyn, & Taylor, 2009; Escalas, 2007). Second, "you" words can convey norms or imperatives whether they are expressed generically by other people (e.g., "You should pound in nails"; Orvell, Kross, & Gelman, 2017) or by oneself (self-talk; e.g., "You should work out more"; Dolcos & Albarracin, 2014; Kross et al., 2014).

The present research offers a third possibility. Use of second-person pronouns offers insight into people's relationships with others (Chung & Pennebaker, 2007; Simmons, Gordon, & Chambless, 2005). But what happens when people experience "you" as a third-party observer, such as when they consume narrative works of art? When Shakespeare says, "Shall I compare thee to a summer's day?" Whitney Houston sings, "I will always love you," or Freddie Mercury shouts, "We will rock you!" it seems unlikely that the audience thinks the speaker is directly addressing them. These examples also do not seem to convey norms or imperatives. Instead, when consuming such utterances, audiences are exposed to a protagonist communicating about or to another human object.

We propose that these situations should encourage audiences to conjure up a specific "you" in their own lives. Audiences tend to slip into the protagonist's (grammatical subject's) perspective when processing narratives (Green & Brock, 2000; Hartung, Burke, Hagoort, & Willems, 2016), so rather than interpreting themselves as the "you" the cultural item references, second-person pronouns should invite audiences to imagine a personal "you" who is the recipient of their own attention (the grammatical object). Rather than thinking that Whitney loves them, listeners imagine a "you" whom they love or have loved. Rather than thinking Queen is going to rock them, listeners imagine another person or persons they want to "rock" (e.g., an opposing sports team). Evoking such personal connections should make narrative songs more relevant (Baumeister & Leary, 1995; Deci & Ryan, 2000) and make people like them more (Escalas, 2007; Green, 2004).

Note that this suggested process differs from traditional notions of perspective taking (Galinsky & Moskowitz, 2000). We suggest that second-person pronouns, rather than putting listeners in the singer's shoes, or encouraging them to see the singer's personal perspective (e.g., Whitney Houston's views about her own love), seem to encourage audiences to imagine the narrative in relation to someone in their own lives. In this way, second-person pronouns encourage narrative transportation (Green, 2004; Strange & Leung, 1999), but rather than being transported into someone

else's narrative, people are given a new way of looking at their *own* lives (Escalas, 1998). Rather than transporting people out of their own lives, the lyrics encourage people to experience some aspect of their lives through the lens of the singer's lyrics.

In sum, we propose that songs that use more second-person pronouns (i.e., "you") should be liked more and purchased more (Hypothesis 1). This occurs not because "you" words directly address the audience as the subject, convey norms or imperatives, or activate perspective taking but, rather, because second-person pronouns activate thoughts of someone in the audience's own life (other-activation; Hypothesis 2).

General Method

Analyses of field data used in Studies 1 and 2 were performed in the R programming environment (Version 3.6.2; R Core Team, 2017) using the *car, lme4, nlme, NLP, olsrr, tm*, and *topicmodels* packages. Analyses of variance (ANOVAs) and mediation analyses for the experiments in Studies 3 and 4 were performed in SPSS. Mediation analyses used the PROCESS macro (Hayes, 2018). The participation-check procedure used for Studies 3 and 4 is detailed in the Supplemental Material available online. Data and materials for all studies are available on the Open Science Framework at https://osf.io/d2xbu, and the preregistration for Study 4 can be seen at https://osf.io/wgr4u.

Study 1

To begin to examine our main hypothesis, we used natural language processing of thousands of songs to test whether songs with lyrics that include more second-person pronouns are more successful (purchased more).

This study also provided a preliminary process test. If second-person pronouns engage audiences by activating thoughts of someone in their own lives, as we suggest, then how "you" is used should influence its impact. Prior work suggests that second-person pronouns can engage audiences by directly addressing the audience as the protagonist, or grammatical subject (e.g., "You love cats"; Brunyé et al., 2009; Escalas, 2007). If this is driving the effect, then songs should be more successful when they directly address the listener as the subject (i.e., subject-case uses). In contrast, we take an other-activating, or object-case "you," perspective. This suggests that second-person pronouns should boost success more when "you" is the object of a protagonist's thoughts or actions ("Cats love you"; Hypothesis 2). We tested this possibility.

Method

First, data on songs and song performance were collected. Billboard's digital download rankings (www .billboard.com/charts/digital-song-sales) were sampled for all of the major genres (Christian, country, dance, rock, pop, rap, and R&B; data for the alternative genre were incomplete) every 3 months for a 3-year period (2014–2016). We obtained all songs that appeared in each ranking and their position in that chart (1–50). These rankings capture downloads on more than 90% of major paid song services (e.g., Apple iTunes, Google Play, Spotify). Chart ranks were reverse coded so that positive coefficients described a positive relationship with audience engagement. Digital downloads were chosen in particular because they are more likely to be driven by consumer preferences rather than by institutional actors (e.g., radio DJs, professional critics, or awards). This netted a data set of 4,200 song rankings over 1,736 unique songs from 1,187 artists. The large sample was motivated in part by a desire to assess robustness of results within genres (n = 600 per genre) and over time (n = 450 per quarter). Artist name and whether the song appeared on the Billboard radio airplay lists for the same periods were also captured as controls.

Second, we measured second-person pronouns. The complete lyrics for each song were acquired from Song Lyrics.com and processed using the Linguistic Inquiry and Word Count (LIWC) text-analysis program (Pennebaker, Boyd, Jordan, & Blackburn, 2015) to identify the percentage of words in each song that are second-person pronouns (M = 5.20, SD = 3.95; 93.9% of songs had at least one second-person pronoun).

Finally, linear regression was used to examine the relationship between second-person pronouns and song success. Treating rank-dependent measures as continuous is appropriate given the large number and fixed range of ranks.

Results

As predicted, songs that used "you" words more often were more successful (had a higher sales rank), b = 0.19, $t(4198)$ = 3.35, p < .001, f^2 = 0.003.

Testing robustness. The results persisted after we controlled for a range of alternative explanations. First, one could wonder whether certain music artists who are more popular also happen to use more second-person pronouns, and this unobserved factor could be driving the results. We controlled for this by including random effects for artist. We also nested song within artist, given that some songs are performed by more than one artist (e.g., covers).

Second, one could wonder whether songs that are played on the radio more often might contain more second-person pronouns, and that this, rather than consumer preferences, is what drives popularity. Consequently, we controlled for radio airplay.

Third, one could wonder whether songs that use more second-person pronouns also tend to touch on certain topics (e.g., love or dancing) and whether it is those topics, rather than the "you" words, that drive popularity. We controlled for the song's topic mixture using a latent Dirichlet allocation (LDA) topic model (Blei, 2012; see the Supplemental Material for details).

Fourth, one could wonder whether some other major linguistic feature or frequently used word is correlated with second-person pronoun usage, and whether that, rather than "you" words, drives popularity. To address this possibility, we measured language features capturing major psychological constructs (LIWC dictionaries for cognitive processing, emotion, perception, motivation, time, relativity, and formality; Pennebaker et al., 2015) as well as the presence of the top 100 words appearing across all songs, excluding the second-person pronouns we examined separately.

Finally, we also controlled for song attributes, such as genre, how many genres the song charted in, which quarters the song charted in, and how many times the song charted.

Even after including all of these controls (135 fixed effects; 1,186 random effects for song nested within artist) in a linear mixed-effects regression model, the effect of second-person pronouns still persisted, b = 0.19, $t(4063)$ = 2.35, p = .019, f^2 = 1.184.

We also examined each of these control sets independently to consider their contribution to model fit (see Table S2 in the Supplemental Material for details). The positive effect of second-person pronouns still persisted when we excluded control sets that did not improve model fit (genre and time), b = 0.19, $t(4082)$ = 2.40, p = .016, f^2 = 0.974. The effect of "you" words on song success also persisted when we used automatic variable selection to select the best set of individual control variables under either stepwise-forward or stepwise-backward approaches (R package *olsrr*)—forward: b = 0.23, $t(4143)$ = 3.85, p < .001, f^2 = 0.187; backward: b = 0.22, $t(4129)$ = 3.80, p < .001, f^2 = 0.185. The relationship between "you" words and song success was also robust to a logit specification. Although linear regression was appropriate given the large number and fixed range of ranks, ordered logistic regression of song ranking as a 50-level factor produced the same result either without controls, b = 0.02, $t(4198)$ = 3.36, p < .001, odds ratio (OR) = 1.023, or with controls, b = 0.02, $t(4063)$ = 2.74, p = .006, OR = 1.025.

Although songs that use more second-person pronouns are more popular, one might wonder whether

this relationship is restricted to only highly popular (i.e., Billboard-ranked) songs. It could be that while the most popular songs in the Billboard charts use more second-person pronouns than less popular songs on the charts, songs that do not make the charts may also use many second-person pronouns.

To address this possibility, we collected a set of less popular songs. The ideal comparison group would include songs that are as similar as possible to the popular songs (i.e., same artist and album) but not as successful. To provide such a matched comparison, research assistants who were blind to our hypotheses randomly selected a song from a Billboard-ranked artist and album that did not make the Billboard charts. These songs were performed by the same artists and launched at the same time (or if the song was launched as a single or multiartist compilation, it was on the artist's immediately prior album), but they were less successful. Matched pairs were successfully produced for 1,735 (92.3%) of the 1,879 top-50 songs in the data set. In addition to controlling for song popularity, this approach offered a test of second-person-pronoun effects within artist.

Consistent with the notion that second-person pronouns increase song popularity (compared with less popular songs by the same artist), results showed that more popular (i.e., top-50) songs used more "you" words ($M = 5.39$, $SD = 3.99$ vs. $M = 5.07$, $SD = 4.04$), $b = 0.32$, $t(5134) = 2.86$, $p = .004$, $f^2 = 0.001$. Using the main linear regression model and treating less popular songs as rank 51 produced a similar result, $b = 0.19$, $t(1733) = 3.33$, $p < .001$, $f^2 = 0.002$.

As an additional test for robustness to selection of popular (Billboard-ranked) songs, we used the two-stage Heckman (1979) model. The first-stage probit model replicated the relationship between "you" use and top-50 status, $b = 0.01$, $t(1733) = 2.86$, $p = .004$, $f^2 = 0.020$, with a nonsignificant inverse Mills ratio ($\lambda = -992.35$, $t = -0.13$, $p = .896$), which was consistent with the results above. This suggests that selection is unlikely to impact the relationship between the use of second-person pronouns and song success.

Testing other-activation. The results so far were supportive, but if second-person pronouns engage audiences by activating thoughts of someone in their own lives, as Hypothesis 2 predicted, then how "you" is used should influence its impact. Second-person pronouns should boost popularity more when "you" is the object of a protagonist's thoughts or actions ("Cats love you").

To test this possibility, we asked two raters to code whether each "you" was used in the subject or object case. Judges were told that subject-case uses refer to "you" as the protagonist or actor (e.g., "You can think about it"), while object-case uses refer to "you" as the target of someone's (or something's) thoughts or behaviors (e.g., "Thinking about you"). To give raters enough context to identify the grammatical subject and object, we extracted the two words before and after each second-person pronoun (resulting in a unit called a *5-gram*; see "5-gram Judge Instructions" and Table S1 in the Supplemental Material for details). Agreement was high (86% of cases), and a third judge resolved disagreements. Forty-seven of the 6,084 unique 5-grams (0.7% of total) could not be assigned (e.g., "you yeah you you you"). These 5-grams did not predict song success, $b = -0.01$, $t(4198) = -0.83$, $p = .407$, $f^2 = 0.004$, and their inclusion did not change the pattern of results. To be consistent with the LIWC measure used for the main analysis, we converted subject and object cases to a percentage of words in the song.

As predicted, the type of "you" used moderated the effect. Consistent with the other-activation hypothesis, results showed that songs that used "you" more frequently as an object (e.g., "Coming at you like a dark horse") were more popular, $b = 0.36$, $t(4197) = 3.10$, $p = .002$, $f^2 = 0.003$, and this relationship remained significant even when controls were included, $b = 0.45$, $t(4062) = 2.94$, $p = .003$, $f^2 = 1.136$. In contrast, songs that used "you" more frequently as a subject (e.g., "You know how the time flies") were marginally more popular, $b = 0.16$, $t(4197) = 1.86$, $p = .063$, $f^2 = 0.002$, but this relationship fell to nonsignificance when the additional controls were included, $b = 0.17$, $t(4062) = 1.47$, $p = .142$, $f^2 = 1.136$.

Other personal pronouns. Although the present research was focused on second-person pronouns, one might wonder whether other personal pronouns (first or third person) also play a role. For example, although people tend to automatically adopt a first-person perspective when processing narratives (Green & Brock, 2000; Hartung et al., 2016), perhaps explicit mention of the first person bolsters this tendency, increasing song liking. This was not the case. First-person singular pronouns (e.g., *I, me, my*) were linked to popularity when examined in isolation, $b = 0.15$, $t(4198) = 3.37$, $p < .001$, $f^2 = 0.002$, but their impact fell to nonsignificance when controls were included, $b = 0.09$, $t(4063) = 1.05$, $p = .294$, $f^2 = 1.167$. First-person plural pronouns (e.g., *we, us, ours*) also did not predict song success with or without controls—with controls: $b = 0.07$, $t(4063) = 0.56$, $p = .576$, $f^2 = 1.176$; without controls: $b = 0.01$, $t(4198) = 0.13$, $p = .896$, $f^2 = 0.0002$. Third-person pronouns (e.g., *she, he, her, his*) were similarly not linked to song success, either with controls, $b = -0.16$, $t(3928) = 1.44$, $p = .150$, $f^2 = 1.172$, or without controls, $b = 0.12$, $t(4197) = 0.80$, $p = .424$, $f^2 = 0.000$. Correlations between second-person pronouns and other personal pronouns are presented in Table S3 in the Supplemental Material.

Discussion

Analysis of thousands of songs demonstrated that those that use more second-person pronouns are more popular (Hypothesis 1). Consistent with the hypothesized role of other-activation (Hypothesis 2), this result seemed to be driven by situations where "you" is the object, rather than by direct address of "you" as the subject.

Study 2

Study 2 used a more controlled design to test the relationship between second-person pronouns and song success (Hypothesis 1) at the individual level and beyond hit songs. We examined whether a song that participants heard recently was liked more when it included more second-person pronouns.

This study also further tested the hypothesized process through moderation and mediation. If second-person pronouns are linked to audience engagement through other-activation (Hypothesis 2), then this relationship should be moderated by the type of second-person pronoun used (i.e., object-case "you") and should be mediated by whether the lyrics activate thoughts of another person in the listener's own life.

Method

We sought a sample of 200 participants to allow detection of a small effect size (f^2) of 0.03 with 80% power at an alpha of .05. To allow for exclusions, we offered 225 Amazon Mechanical Turk participants $0.30 each to complete the study. Twenty-nine (12.9%) failed the participation check (see the Supplemental Material), leaving 196 participants for analysis (100 female).

First, participants were asked to name any song they had heard recently and the artist who sang it. Second, they indicated how much they liked the song using two items ("How much do you like this song?" and "How much do you enjoy listening to this song?" $r = .89$). Third, we measured the hypothesized process—whether the lyrics encouraged people to think about someone from their own lives—using two items ("Do the song lyrics make you think about someone you know?" and "Does this song remind you of a person in your own life?" $r = .62$). All items were rated on 7-point scales from 1 (*not at all*) to 7 (*very much*).

SongLyrics.com was used to collect the lyrics for each song. Data were not available for eight of the songs listed, so these responses were excluded, leaving 188 records for analysis (182 unique songs over 161 unique artists). As in Study 1, the song lyrics were processed in LIWC to generate the percentage of words in the lyrics that were "you" pronouns ($M = 5.09$, $SD = 3.82$; 90.3% of songs had at least one "you").

Results

As predicted, and consistent with the results of Study 1, linear regression results revealed that songs that contained more second-person pronouns were liked more, $b = 0.05$, $t(186) = 2.48$, $p = .014$, $f^2 = 0.032$. This result persisted, $b = 0.07$, $t(159) = 2.46$, $p = .015$, $f^2 = 0.470$, after including the same song (nested within artist), LDA topic, and dictionary controls as in Study 1 in a linear mixed-effects regression model. Full results for the controls are presented in Table S4 in the Supplemental Material.

Testing other-activation. To test whether second-person pronouns boost popularity more when "you" is the object of a protagonist's thoughts or actions, we asked two independent judges blind to hypotheses to assess whether each "you" in a given song was in the subject case (intra-class correlation coefficient, or ICC = .90) or the object case (ICC = .92). ICCs were used here, rather than Pearson correlations, because judges counted the number of instances at the song level, rather than at the 5-gram level (as in Study 1). To make our procedure consistent with the prior study, we converted the counts to a percentage of words in each song.

As observed in Study 1, the link between use of the second-person pronoun and liking depended on how "you" was used. Linear regression revealed that although songs with more object-case second-person pronouns were liked more, $b = 0.10$, $t(186) = 2.78$, $p = .006$, $f^2 = 0.036$, subject-case uses of "you" had no effect, $b = 0.04$, $t(186) = 1.20$, $p = .232$, $f^2 = 0.002$. These results were also robust with controls—object-case "you": $b = 0.13$, $t(159) = 2.99$, $p = .003$, $f^2 = 0.511$; subject-case "you": $b = 0.04$, $t(159) = 0.86$, $p = .389$, $f^2 = 0.421$.

Bootstrapped mediation analysis (Hayes, 2018; Model 4) confirmed that the relationship between object-case uses of "you" and song liking was mediated by the song's ability to make listeners imagine a person from their own lives, indirect effect = 0.05, 95% confidence interval, or CI = [0.019, 0.089], proportion mediated (PM) = .475. Object-case second-person pronouns increased the audience's ability to imagine a personal other, $b = 0.19$, $t(192) = 3.67$, $p < .001$, $f^2 = 0.072$, which, in turn, made them like the song more, $b = 0.24$, $t(192) = 5.26$, $p < .001$, $f^2 = 0.197$. This relationship did not hold for subject-case uses (indirect effect = 0.02, 95% CI = [−0.013, 0.054], PM = .371). Subject-case uses of "you" had no effect on listeners' ability to imagine another person from their own lives, $b = 0.06$, $t(192) = 1.15$, $p = .254$, $f^2 = 0.007$.

Alternative explanations. Alternative explanations do not adequately account for the results. First, one could wonder whether second-person pronouns make people feel as if the singer is reaching out to connect with them

personally (i.e., direct address). Alternatively, one could argue that second-person pronouns might offer a window into the singer's private thoughts (i.e., in relation to the singer's personal "you").

To test these possibilities, we collected additional items, including personal connection with the singer ("The song makes me feel a personal connection with the singer" and "The lyrics speak to me personally"; $r = .93$) and insights into the singer's personal life ("The song says something about the singer's private life" and "The song shares something personal about the singer"; $r = .83$). All items were rated on 7-point scales from 1, *not at all*, to 7, *very much*.

Neither alternative, however, mediated the effect of second-person pronouns on song liking, either individually (personal-connection: indirect effect = 0.007, 95% CI = [−0.0005, 0.020], PM = .134; insights into singer's personal life: indirect effect = 0.004, 95% CI = [−0.002, 0.013], PM = .080) or when included as simultaneous mediators in parallel (personal-connection: indirect effect = −0.004, 95% CI = [−0.015, 0.002], PM = .077; insights into singer's personal life: indirect effect = −0.007, 95% CI = [−0.024, 0.002], PM = .123) with the predicted other-activation mediator, which remained significant (indirect effect = 0.038, 95% CI = [0.010, 0.077], PM = .416). These results suggest that rather than creating a direct connection with the singer, or offering a voyeuristic peek into the singer's life, "you" pronouns increase engagement by evoking a personal other in the audience's mind.

Other personal pronouns. As in Study 1, while this research focused on second-person pronouns, one might wonder whether other personal pronouns also played a role. They did not, replicating the results of Study 1. Neither first-person pronouns nor third-person pronouns were linked to song liking, either with or without the standard controls ($ts < 0.99$, $ps > .340$). Correlations between second-person pronouns and other personal pronouns are presented in Table S5 in the Supplemental Material.

Discussion

Study 2 provided additional evidence that second-person pronouns are linked to song success, while further demonstrating the underlying process. First, songs with more second-person pronouns were liked more (supporting Hypothesis 1). Second, consistent with Hypothesis 2, this effect was driven more by other-activating uses of "you" (i.e., object case rather than subject case) and was mediated by second-person pronouns' ability to evoke a personal other. Third, looking at a broader range of songs (e.g., relatively unknown songs such as "The Underwater Garden" by Septicflesh and "Unraveling" by

Wax Motif) underscored the idea that the results generalize beyond hit songs.

Study 3

In Study 3, we directly tested second-person pronouns' causal impact by manipulating them in a fictitious song, measuring their impact on liking, and testing whether any effect was driven by activation of thoughts about someone in participants' own lives.

Method

Participants. We sought 300 participants to allow detection of an effect size comparable with that observed in Study 2 ($f^2 \sim 0.03$) at 80% power and an alpha of .05. To allow for exclusions, we offered 350 Amazon Mechanical Turk panelists $0.30 each to complete the study. Forty-one (11.7%) failed the participation check (see the Supplemental Material), leaving 309 for analysis (192 female). Excluding the last 9 participants collected did not change the results.

Procedure. All participants were asked to read the lyrics of a fictitious song (see Table S6 in the Supplemental Material) three times. In the *second-person-pronoun condition*, the lyrics featured "you" words (e.g., "I've known you for a while now"). The percentage of other-activating uses of "you" (object-case use) was matched to the mean percentage observed in the field data.

There were two comparison conditions. The first comparison condition, the *no-personal-pronoun condition*, removed all "you" pronouns, replacing them with impersonal pronouns, such as "this" and "it" (e.g., "I've known it for a while now"), or generic references to love.

As a more conservative test of Hypothesis 1, we included an additional condition that replaced second-person pronouns (e.g., "you") with third-person pronouns (e.g., "I've known her for a while now"). This condition referenced a person in the object case, but because she was not a participant in the immediate situation (Brener, 1983; Lyons, 1977), she was presented as a more psychologically distant other (Enfield & Stivers, 2007). Characters and people described using third-person pronouns feel less identifiable and personally close to readers (De Graaf, Hoeken, Sanders, & Beentjes, 2012) and should be less likely to be experienced from a protagonist perspective (Brunyé et al., 2009), which should in turn decrease the likelihood of other-activation.

All participants were asked their gender and sexual orientation prior to song-condition assignment. This was done so that participants in the *third-person-pronoun condition* could be presented with a third person likely
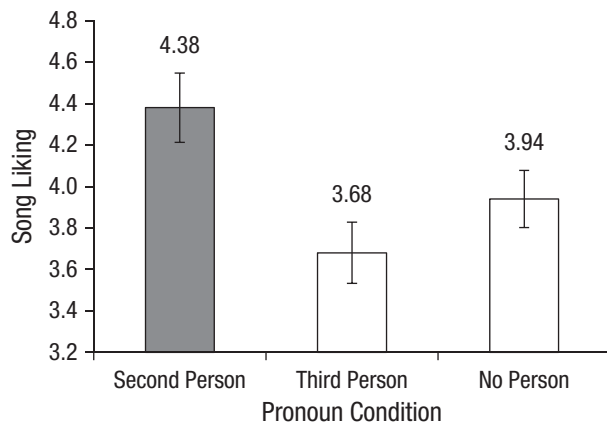
Fig. 1. Mean song liking in each pronoun condition (Study 3). Error bars represent standard errors of the mean.

to be consistent with the gender of their own romantic interests (e.g., he/him for heterosexual females), given the song's romantic nature. Eight (out of 100) participants in the third-person-pronoun condition reported nonbinary or nondefined orientations (*asexual, bisexual, other, prefer not to answer*). These participants were presented with the female third person (she/her). Excluding these participants from analysis did not change the results.

Participants indicated how much they liked the song ($r = .91$) and responded to measures of the underlying process (other-activation; $r = .94$) using the same items as in Study 2.

Results

An ANOVA revealed that, as predicted, second-person pronouns influenced liking, $F(2, 306) = 5.43$, $p = .005$, $\eta_p^2 = .034$. Compared with songs that used third-person pronouns ($M = 3.68$, $SD = 1.48$) or did not use personal pronouns at all ($M = 3.93$, $SD = 1.43$), songs that used second-person pronouns were liked more ($M = 4.38$, $SD = 1.68$), $F(1, 307) = 10.54$, $p = .001$, $\eta_p^2 = .047$, and $F(1, 307) = 4.51$, $p = .034$, $\eta_p^2 = .021$, respectively (see Fig. 1).

Testing other-activation. Consistent with our hypotheses, these effects were driven by other-activation. Bootstrapped mediation analysis (Hayes, 2018; Model 4) indicated that the relationship between second-person pronouns and liking was driven by the song's activation of thoughts of someone from participants' own lives (indirect effect = 0.16, 95% CI = [0.050, 0.274], PM = .557). "You" words activated thoughts of people in participants' lives, $b = 0.35$, $t(306) = 2.91$, $p = .004$, $f^2 = 0.027$, which, in turn, made people like the song more, $b = 0.46$, $t(306) = 12.70$, $p < .001$, $f^2 = 0.365$.

Alternative explanation. One might wonder whether the comparison conditions (third person and no personal pronouns) seemed more unusual or unexpected to participants and that this, rather than the positive effects of second-person pronouns, drove the results. This was not the case. In addition to the measures mentioned above, participants completed the language-typicality scale (i.e., how typical, expected, or standard the song's language seemed; Kronrod, Grinstein, & Wathieu, 2012). There was no difference in language typicality due to condition ($\alpha = .90$, $F < 1$), and it did not mediate the effects (indirect effect = −0.014, bootstrapped 95% CI = [−0.049, 0.029], PM = −.048).

Discussion

The direct manipulation of the language used in Study 3 underscores both the causal impact of "you" pronouns on cultural success and the process behind this effect. Second-person pronouns made people like a fictitious song more, and this was driven by the activation of thoughts of someone in their own lives.

Study 4

In Study 4, we assessed the robustness of the Study 3 results to various song lyrics (i.e., stimulus-sampling concerns; Wells & Windschitl, 1999) by testing whether the results held across a larger sample of different songs (one song per participant in a between-subjects design). This study was preregistered.

Method

Participants. We sought a sample of 1,500 participants over five songs to allow detection of effect sizes comparable with those observed in the prior studies ($f^2 \sim 0.03$) at 80% power and an alpha of .05. To allow for exclusions, we offered 1,800 Amazon Mechanical Turk participants $0.35 each to complete the study. Two hundred (11.1%) failed the participation check (see the Supplemental Material), leaving 1,600 participants for analysis (925 female).

Procedure. As in Study 3, participants were asked to read the lyrics of a single song three times. Both real, existing songs and fictitious, newly created songs were used. We adapted two real songs using the "random" song button at Lyrics.com. We used fictitious lyrics in the remaining three songs to show that the effect was not somehow driven by editing the real songs in some conditions and not others. In addition to using the same fictitious song from Study 3 to demonstrate reliability, we created two new fictitious songs. Each song was written

by a different person who was blind to the research and our specific hypotheses. Procedural details and materials are presented in the Supplemental Material.

Following Study 3, we compared the focal second-person-pronoun condition with comparison conditions that replaced the second-person pronouns with either impersonal pronouns (i.e., no personal pronouns) or third-person pronouns matched to gender (e.g., "I can't wait to see [you, it, her] tonight"; see Tables S7–S11 in the Supplemental Material).

Participants completed the key dependent measure (i.e., how much they liked the song, $r = .92$) and measures of the hypothesized process (i.e., other-activation; $r = .92$) using the same items as in Studies 2 and 3.

Results

As noted in the preregistration, we were interested in two key tests. First, is there a main effect of second-person-pronoun condition across stimuli? Specifically, compared with the control conditions, does using second-person pronouns increase song liking? Second, is this effect driven by other-activation?

An ANOVA revealed that, as predicted, using second-person pronouns enhanced song liking, even with a broader range of songs, $F(1, 1598) = 17.69$, $p < .001$, $\eta_p^2 = .011$. Compared with songs that used third-person pronouns ($M = 3.61$, $SD = 1.65$) or did not use personal pronouns at all ($M = 3.67$, $SD = 1.64$), songs that used second-person pronouns were liked more ($M = 4.01$, $SD = 1.71$), $F(1, 1598) = 15.36$, $p < .001$, $\eta_p^2 = .014$, and $F(1, 1598) = 11.02$, $p = .001$, $\eta_p^2 = .010$, respectively (see Fig. 2). We also controlled for potential differences across song variants and the interaction of pronouns with song variants, and the results remained the same (see the Supplemental Material).

Testing other-activation. Replicating the results of Studies 2 and 3, these effects were driven by other-activation. Bootstrapped mediation analysis (Hayes, 2018; Model 4) confirmed that the relationship between second-person pronouns (vs. the comparison conditions) and liking was again driven by the songs' activation of thoughts of someone from participants' own lives (indirect effect = 0.08, 95% CI = [0.03, 0.13], PM = .435). "You" words activated thoughts of someone else, $b = 0.19$, $t(1597) = 3.41$, $p < .001$, $f^2 = 0.007$, which, in turn, made people like a given song more, $b = 0.11$, $t(1597) = 2.80$, $p = .005$, $f^2 = 0.421$.

Alternative explanations. Ancillary analyses cast doubt on a number of alternative explanations. First, given that some real songs were used in Study 4, one could wonder whether changing their lyrics somehow made the lyrics less typical, which decreased liking. This was not the
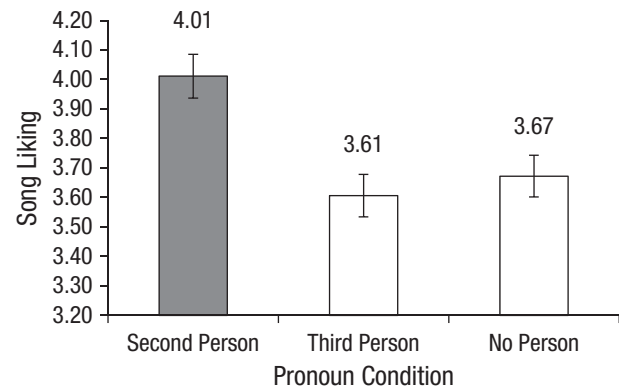

Fig. 2. Mean song liking in each pronoun condition (Study 4). Error bars represent standard errors of the mean.

case. We included the same language-typicality scale used in Study 3 ($\alpha = .90$; Kronrod et al., 2012), but even after accounting for typicality, $F(1, 1598) = 61.86$, $p < .001$, $\eta_p^2 = .037$, the effect of second-person pronouns on song liking persisted, $F(1, 1598) = 9.84$, $p = .002$, $\eta_p^2 = .006$, consistent with Study 3. Further, the fact that the effect of second-person pronouns on song liking held even when only the three fictitious songs were used casts additional doubt on this possibility, $F(1, 1598) = 8.24$, $p = .004$, $\eta_p^2 = .009$. Although making a change to a real song could theoretically make it less pleasing, the lyrics for fictitious songs were created equally across all pronoun conditions, making it unlikely that this alternative can explain the effects.

Second, one could wonder whether the results among the real songs were driven by the second-person-pronoun versions being more familiar. This was also not the case. Participants were asked a binary (yes/no) measure of song familiarity ("Have you heard this song before?"). The number of people who said they had heard the song before was extremely low (yes: $M = 2.69\%$), and logistic regression revealed that familiarity did not vary by pronoun condition, Wald $\chi^2(2, N = 1,600) = 2.71$, $p = .258$, pairwise ORs = 0.528 and 0.719. The effect of second-person pronouns on song liking persisted, $F(1, 1598) = 16.52$, $p < .001$, $\eta_p^2 = .010$, when song familiarity was included as a control in the ANOVA.

Third, one might wonder whether perspective taking (Brunyé et al., 2009; Galinsky & Moskowitz, 2000) could explain the results. Rather than other-activation, perhaps second-person pronouns encouraged people to put themselves in the singer's shoes or experience the singer's perspective toward things in their own lives. They did not. Two items about taking the singer's own perspective toward someone or something were collected ("The song helped me imagine how the music artist relates to something in their own life" and "Did you imagine singing to someone in the music artist's

own life?" $r = .60$; responses ranged from 1, *not at all*, to 7, *very much*). There was no effect of second-person pronouns on perspective taking, however, $F(1, 1598) = 0.646$, $p = .422$, $\eta_p^2 = .000$, nor did perspective taking drive the effect of second-person pronouns on song liking (indirect effect = 0.01, 95% CI = [−0.019, 0.044], PM = .070).

Fourth, one could wonder whether the ability of second-person pronouns to evoke norms (e.g., Orvell et al., 2017), rather than other-activation, could explain the results. To test this possibility, we collected two items ("The song was about how people normally act or feel" and "The song was about what most people would do or think in a given situation"; $r = .69$). Although the norm measure partially mediated the focal relationship when considered alone (indirect effect = 0.07, 95% CI = [0.031, 0.102], PM = .357), when other-activation and norm measures were included simultaneously, other-activation remained significant (indirect effect = 0.07, 95% CI = [0.027, 0.109], PM = .367) and explained 69.8% more of the total effect than norms (indirect effect = 0.04, 95% CI = [0.019, 0.064], PM = .216). Further analysis (see the Supplemental Material) also suggests that the effect of perceived norms is likely driven by other-activation rather than by a separate process. A self-talk version of normative influence also seems unlikely to explain the effect. Some self-talk work (Dolcos & Albarracin, 2014; Zell, Warriner, & Albarracín, 2012) has suggested that a second-person perspective can motivate behavior through priming participants with a scenario in which someone the participant cares about is giving the participant commands (e.g., "You shouldn't do that"). It seems unlikely, however, that song lyrics that use object-case "you" (e.g., "I will always love you") are commonly seen as commands.

Fifth, one might wonder whether the presence of first-person pronouns is required for second-person pronouns to have an effect. To test this possibility, we examined what happens when explicit subject-case first-person pronouns are removed from stimuli in the second-person-pronoun condition (e.g., "I can't wait to see you tonight" becomes "Can't wait to see you tonight"; see Table S12 in the Supplemental Material). Following the same preregistered procedures, we collected 600 participants (along with the main sample) for this "you but no I" condition. Seventy-eight participants (13.0%) failed the participation checks, leaving 522 for this experimental condition (281 female) across the five songs. An ANOVA, however, revealed that there was no difference in song liking between this ancillary condition and the second-person-pronoun condition from the main analysis, $F(1, 1053) = 0.06$, $p = .801$, $\eta_p^2 = .000$; results were the same with the controls (see the Supplemental Material).

While this casts doubt on the notion that first-person pronouns are required for second-person pronouns to

have an effect, this does not mean that narratives' ability to transport audiences into the first-person perspective is not important. Prior work suggests that people automatically tend to assume a first-person perspective when processing narratives (Green & Brock, 2000; Hartung et al., 2016). Consequently, even if first-person pronouns were not present, being transported into the first-person perspective of the song should facilitate second-person pronouns' ability to activate thoughts of someone from the listeners' lives.

Discussion

The fact that second-person pronouns increase song liking (Hypothesis 1), that this relationship is driven by other-activation (Hypothesis 2), and that these results replicated over additional song stimuli in a preregistered experiment provides further support for the effects observed in Studies 1 through 3.

General Discussion

While songs, poems, and stories are a fundamental aspect of human culture, little work has directly tested why people consume such narrative arts. The present research suggests that a small, often ignored linguistic feature (Chung & Pennebaker, 2007; Pennebaker, 2011) may help determine which cultural items are more successful.

Because popular music is said to help listeners experience and give voice to their own lives (Frith, 1996), this narrative art may be particularly conducive to other-activation through second-person pronouns. That said, given that lyrical music and other narrative arts evolved together and serve similar purposes (Brown, 1970), similar results may hold in lines from other narrative arts, such as Shakespeare's "Shall I compare thee to a summer's day?" in literature or Humphrey Bogart's "Here's looking at you, kid" in film. Indeed, although further exploration is needed, an additional replication of Study 3 using a poem produced the same pattern of results (see Study 5 in the Supplemental Material).

The present research also reveals a novel psychological mechanism by which second-person pronouns engage listeners. Songs with more second-person pronouns were liked more not because "you" words directly addressed the audience as a protagonist or conveyed normative imperatives (possibilities considered in prior research) but because "you" invoked another person in the listener's mind. This supports suggestions that one of music's fundamental functions is to foster social connection (Schäfer et al., 2013).

This mechanism highlights the importance of the situated, or contextual, meaning of language (Watzlawick, Bavelas, & Jackson, 2011). Although pronouns influence perceptions of group belonging (Pennebaker, 2011),

social distance (Fitzsimons & Kay, 2004), and relationship satisfaction (Simmons et al., 2005), their effect may depend on the situation or context in which they are used. Here, being a third-party observer appears to circumvent the usual effect through which second-person pronouns address the audience either individually or as part of a larger group.

Future research could delve deeper into the nature of the relationship between "you" and the protagonist. Other-activation may have stronger effects when it evokes someone the audience has a particularly strong psychological connection to, when it evokes someone who is or was important in the audience's own lives, or when the narrative feels sufficiently "real" (i.e., nonfictional) to encourage the adoption of this perspective. Future work could also consider attitudes toward the other person evoked. Evoking a loved, or even hated, person may be beneficial, but evoking someone who makes you sad or whom you do not care to think about may have different effects. If similar effects are observed for lyrics that activate thoughts of someone, such as an ex-boyfriend, whom the listener has moved on from, for example (e.g., "I'm so glad you're gone"), this would cast doubt on the notion that affiliation motives help to explain the effect.

Because singing about "we" (i.e., using the first-person plural) can potentially include both "you" and "me," one might wonder why songs with "we" did not boost liking. One reason may be that "we" is not used that frequently in song lyrics. First-person plural pronouns were the least frequent pronouns in Studies 1 and 2, representing less than 10% of personal pronouns in each study. Further, they may be less likely to activate thoughts of a specific person in people's lives because "we" can refer to more than just "you and me." It can exclude the first person (i.e., the "royal we"; e.g., "We must eat vegetables, children") or exclude the audience completely ("We [not you] are going to get this done for you"; Inigo-Mora, 2004; Pennebaker, 2011; Wales, 1996). Future work could investigate how the more varied meaning of first-person plural pronouns impacts other-activation and narrative transportation more broadly.

This work contributes to the burgeoning literature on the psychological foundations of culture (Berger & Packard, 2018; Kashima et al., 2019; Schaller & Crandell, 2004). Research on cross-cultural psychology demonstrates the important influence of culture on psychological processes (Markus & Kitayama, 1991), but the reverse is also true: Psychological processes shape the norms and practices that make up collective culture (Kashima et al., 2019). Consequently, when shared across individuals, such processes may act as a selection mechanism, determining which cultural items succeed and which fail.

ORCID iD

Grant Packard [iD] https://orcid.org/0000-0002-8765-1994

Supplemental Material

Additional supporting information can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797620902380

References

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497–529.
Berger, J., & Packard, G. (2018). Are atypical things more popular? *Psychological Science*, *29*, 1178–1184.

Blei, D. M. (2012). Probabilistic topic models. *Communications of the ACM, 55*, 77–84.

Brener, R. (1983). Learning the deictic meaning of third person pronouns. *Journal of Psycholinguistic Research, 12*, 235–262.

Brown, C. S. (1970). The relations between music and literature as a field of study. *Comparative Literature, 22*, 97–107.

Brunyé, T. T., Ditman, T., Mahoney, C. R., Augustyn, J. S., & Taylor, H. A. (2009). When you and I share perspectives: Pronouns modulate perspective taking during narrative comprehension. *Psychological Science, 20*, 27–32.

Chung, C., & Pennebaker, J. (2007). The psychological functions of function words. In K. Fiedler (Ed.), *Frontiers of social psychology: Social communication (pp.* 343–359). New York, NY: Psychology Press.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.

De Graaf, A., Hoeken, H., Sanders, J., & Beentjes, J. W. J. (2012). Identification as a mechanism of narrative persuasion. *Communication Research, 39*, 802–823.

Dolcos, S., & Albarracin, D. (2014). The inner speech of behavioral regulation: Intentions and task performance strengthen when you talk to yourself as a you. *European Journal of Social Psychology, 44*, 636–642.

Enfield, N. J., & Stivers, T. (2007). *Person reference in interaction: Linguistic, cultural, and social perspectives.* Cambridge, England: Cambridge University Press.

Escalas, J. E. (1998). Advertising narratives: What are they and how do they work? In B. B. Stern (Ed.), *Representing consumers: Voices, views, and visions* (pp. 267–289). New York, NY: Routledge.

Escalas, J. E. (2007). Self-referencing and persuasion: Narrative transportation versus analytical elaboration. *Journal of Consumer Research, 33*, 421–429.

Fitzsimons, G. M., & Kay, A. C. (2004). Language and interpersonal cognition: Causal effects of variations in pronoun usage on perceptions of closeness. *Personality and Social Psychology Bulletin, 30*, 547–557.

Frith, S. (1996). *Music and identity: Questions of cultural identity.* Thousand Oaks, CA: SAGE.

Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology, 78*, 708–724.

Green, M. C. (2004). Transportation into narrative worlds: The role of prior knowledge and perceived realism. *Discourse Processes, 38*, 247–266.

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology, 79*, 701–721.

Hargreaves, D. J., & North, A. C. (1999). The functions of music in everyday life: Redefining the social in music psychology. *Psychology of Music, 27*, 71–83.

Hartung, F., Burke, M., Hagoort, P., & Willems, R. M. (2016). Taking perspective: Personal pronouns affect experiential aspects of literary reading. *PLOS ONE, 11*(5), Article 0157285. doi:10.1371/journal.pone.0154732

Hayes, A. F. (2018). *Introduction to mediation, moderation and conditional process analysis: A regression-based approach* (2nd ed.). New York, NY: Guilford Press.

Heckman, J. (1979). Sample selection bias as a specification error. *Econometrica, 47*, 153–161.

Inigo-Mora, I. (2004). On the use of the personal pronoun *we* in communities. *Journal of Language and Politics, 3*, 27–52.

Kacewicz, E., Pennebaker, J. W., Davis, M., Jeon, M., & Graesser, A. C. (2014). Pronoun use reflects standings in social hierarchies. *Journal of Language and Social Psychology, 33*, 125–143.

Kashima, Y., Bain, P. G., & Perfors, A. (2019). The psychology of cultural dynamics. *Annual Review of Psychology, 70*, 499–529.

Kronrod, A., Grinstein, A., & Wathieu, L. (2012). Enjoy! Hedonic consumption and compliance with assertive messages. *Journal of Consumer Research, 39*, 51–61.

Kross, E., Bruehlman-Senecal, E., Park, J., Burson, A., Dougherty, A., Shablack, H., . . . Ayduk, O. (2014). Self-talk as a regulatory mechanism: How you do it matters. *Journal of Personality and Social Psychology, 106*, 304–324.

Lyons, J. (1977). *Semantics 2.* Cambridge, England: Cambridge University Press.

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224–253.

Orvell, A., Kross, E., & Gelman, S. A. (2017). How "you" makes meaning. *Science, 355*, 1299–1302.

Pennebaker, J. W. (2011). *The secret life of pronouns: What our words say about us.* New York, NY: Bloomsbury Press.

Pennebaker, J. W., Boyd, R. L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015.* Retrieved from https://repositories.lib.utexas.edu/bitstream/handle/2152/31333/LIWC2015_LanguageManual.pdf

R Core Team. (2017). *R: A language and environment for statistical computing.* Retrieved from http://www.R-project.org

Schäfer, T., Sedlmeier, P., Städtler, C., & Huron, D. (2013). The psychological functions of music listening. *Frontiers in Psychology, 4*, Article 511. doi:10.3389/fpsyg.2013.00511

Schaller, M., & Crandall, C. S. (2004). *The psychological foundations of culture.* Hillsdale, NJ: Erlbaum.

Simmons, R. A., Gordon, P. C., & Chambless, D. L. (2005). Pronouns in marital interaction: What do "you" and "I" say about marital health? *Psychological Science, 16*, 932–936.

Strange, J. J., & Leung, C. C. (1999). How anecdotal accounts in news and in fiction can influence judgments of a social problem's urgency, causes, and cures. *Personality and Social Psychology Bulletin, 25*, 436–449.

Wales, K. (1996). *Personal pronouns in present-day English.* Cambridge, England: Cambridge University Press.

Watzlawick, P., Bavelas, J. B., & Jackson, D. D. (2011). *Pragmatics of human communication.* New York, NY: W. W. Norton.

Wells, G. L., & Windschitl, P. D. (1999). Stimulus sampling and social psychological experimentation. *Personality and Social Psychological Bulletin, 25*, 1115–1125.

Zell, E., Warriner, A. B., & Albarracín, D. (2012). Splitting of the mind: When the *you* I talk to is me and needs commands. *Social Psychological and Personality Science, 3*, 549–555.