

Individuals' favorite songs' lyrics reflect their attachment style

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Abstract

Recent studies suggest that one's personality relates to their music preferences. Separately, research from an attachment theory perspective has demonstrated that attachment security and insecurity are important relationship-related individual differences. We combined these two lines of inquiry here by investigating whether the lyrics of individuals' favorite songs about relationships reflect their attachment styles and related Big Five personality traits (Study 1; $N_{\text{Participants}} = 469$, $N_{\text{Songs}} = 4853$). Individuals higher in attachment avoidance preferred relationship songs with lyrics expressing an avoidant attachment style, whereas individuals higher in neuroticism preferred relationship songs with lyrics expressing more attachment anxiety. We extended these results in a second study, finding that the lyrics of Western culture's 823 most popular songs from 1946 to 2015 mirrored societal trends of increasing social disengagement (i.e., were increasingly higher in attachment avoidance themes), suggesting that song lyrics impart psychological meaning at the sociocultural level as well. Our data therefore suggests that higher levels of attachment avoidance are reflected in

Statement of relevance: We found that individuals higher in attachment avoidance favored songs about relationships with avoidant lyrical themes. Moreover, we found that Western culture's increasing social disengagement is reflected in increasingly avoidant popular song lyrics across 1946–2015. Social disconnection may therefore be both reflected and amplified by more avoidant lyrical content.

preferred lyrics in relationship songs at both an individual and societal level.

KEYWORDS

attachment style, lyrics, music, personal identity, personality

Research has suggested that personality traits are reliable predictors of music preferences (Rentfrow, 2012; Schäfer & Mehlhorn, 2017). Rentfrow (2012) describes this line of work as motivated by the notion that music can validate and express aspects of individuals' important subjective experiences. One aspect of personality that this research has not yet explored is individual differences in attachment security (e.g., Brennan et al., 1998). Given that attachment security is fundamentally a relationship-centered trait (e.g., Joel et al., 2012), its role might be particularly evident in aspects of music that are explicitly relational, such as lyrics in songs about relationships. In general, lyrics appear to be an underexplored element of the link between personality and music (cf. Qiu et al., 2019). In the current research, we examine the extent to which individual differences in attachment security are associated with attachment-related content in the lyrics of people's favorite songs about relationships.

1 | THE LINK BETWEEN PERSONALITY AND MUSIC

Numerous studies provide evidence that personality traits reliably predict music preferences. For example, a robust finding is that individuals higher in openness to experience tend to report listening to songs that are rich in complex and sophisticated elements (e.g., jazz music; Delsing et al., 2008; Dunn et al., 2012; Rentfrow & Gosling, 2003; Zweigenhaft, 2008; see Schäfer & Mehlhorn, 2017, for a meta-analytic review). That is, individuals who are higher in openness, which subsumes qualities such as intellect and curiosity (Connelly et al., 2014), may be drawn to complex music as a means of exploring and expressing their own complex perspective. In this sense, one might expect individual differences in relationship-related traits to also be tied to individuals' music preferences as a means for validation and expression of personally relevant relationship themes.

2 | INDIVIDUAL DIFFERENCES IN ADULT ATTACHMENT

One individual difference variable that is a key focus of relationship researchers is adult attachment (for a review of attachment theory, see Thompson et al., 2022). Research on individual differences in attachment security has identified two dimensions on which individuals vary in terms of their thoughts, feelings, and behavior around close relationships (Bartholomew & Horowitz, 1991; Fraley et al., 2015; Shaver & Mikulincer, 2002). The first dimension, attachment anxiety, tracks the degree to which a person worries about relationships and fears rejection. Anxiously-attached individuals attempt to regulate their distress by persistently seeking closeness with others and by obtaining care, often through controlling and clinging strategies. They vigilantly monitor cues of abandonment or rejection from close others, become overwhelmed with negative emotions and ruminative thoughts when worried about their

relationships, and have difficulty downregulating their negative emotions. These aspects of anxious attachment (e.g., proneness to depression and vulnerability) reflect an overlap between anxious attachment and neuroticism (Nofle & Shaver, 2006). The second attachment dimension, attachment avoidance, tracks the degree to which a person seeks self-reliance and emotional distance from others and is uncomfortable with closeness. Individuals with higher attachment avoidance are marked by deactivation and suppression of emotional distress and report less intimacy from romantic relationships than those lower in avoidance (Spielmann et al., 2013) as well as less interest in entering romantic relationships (MacDonald & Park, 2022).

Individuals simultaneously high in both anxious and avoidant attachment exhibit features of both styles. Though they desire closeness and worry about others' intentions, they can also become uncomfortable with intimacy and sometimes respond with deactivating and distancing strategies—reflecting their conflicted feelings and thoughts (Park et al., 2019). Thus, these individuals can be expected to display inconsistent cycles of behavior fluctuating between strong needs for closeness and strong fears of rejection. Finally, securely attached individuals report low levels of both attachment anxiety and attachment avoidance. More secure individuals can be expected to demonstrate positive expectations about others' availability in threatening situations, positive views of oneself as loved and valued, and confidence about the benefits of seeking closeness and support from others during distress. More generally, then, securely attached individuals find it easy to get close to others and to depend on them for support.

3 | ADULT ATTACHMENT AND LYRICAL PREFERENCES

To our knowledge, no research has specifically examined the relationship between individual differences in attachment security and music preferences. Although music by itself can be experienced socially, it is arguably music lyrics that most directly have the potential to explore relational themes. Individuals may connect to the lyrics of their favorite songs because lyrics communicate powerful concepts and emotions in music beyond what is achieved by music's sound alone (especially for negative songs; e.g., Ali & Peynircioğlu, 2006; Brattico et al., 2011; Cho & Lee, 2006; Hu et al., 2009; Laurier et al., 2008; Mihalcea & Strapparava, 2012). For instance, when presented with a song intended to express negative emotions, people judge its mood as more intense when accompanied by its lyrics than when hearing the melody alone (e.g., Ali & Peynircioğlu, 2006). The importance of music lyrics is further suggested by the fact that people's memory for their favorite songs' lyrics is so robust that it often remains intact through Alzheimer's related dementia (Cuddy et al., 2012).

So far as we know, only one study has examined the link between personality variables and attraction to qualities in music lyrics. Qiu et al. (2019) found that the Big Five personality characteristics showed many associations with qualities of music lyrics examined through Linguistic Inquiry Word Count analysis (Pennebaker et al., 2001). For example, individuals higher in extraversion tended to nominate songs whose lyrics contained more positive emotion words as their favorites, suggesting that personality traits may indeed be tied to individuals' favorite songs' lyrics. Despite the pioneering importance of the Qiu et al. (2019) study, these researchers did not focus specifically on relational elements of lyrics. Narratives centering on themes such as love and relationship conflict abound in the entertainment media (Hogan, 2003). These social narratives have been argued to draw interest because they can allow audiences to connect

the depicted social narratives to their own lives and to simulate the emotions, thoughts, and behaviors relevant to those narratives (Mar & Oatley, 2008).

Individual differences in attachment security may be particularly useful in understanding the draw towards lyrical content, specifically in songs about relationships. Indeed, relationship songs can play an important role in individuals' lives. For example, couples select particular songs to enhance and maintain intimacy and positive emotions in their relationships, as well as to crystallize shared memories of important relationship events (Harris et al., 2020). Attachment security may therefore be useful for understanding what kinds of lyrical content individuals may prefer in their songs about relationships. In particular, individual differences in attachment security may relate to the sorts of lyrical content that people find both validating and self-expressive. For example, Rain and Mar (2021) reported that individuals higher in attachment avoidance preferred fictional characters who were depicted as higher in attachment avoidance and autonomy and lower in warmth. These appear to be traits that an avoidant person would consider validating.

4 | CURRENT RESEARCH

To examine the link between attachment security and preference for lyrical content, we first conducted an exploratory pilot study for hypothesis generation followed by a preregistered Study 1. In this research, we developed a coding scheme to rate narratives in song lyrics nominated as participants' favorite songs about relationships along dimensions of attachment security and associated these measurements with participants' own attachment styles. Given the importance of distinguishing between attachment style and Big Five personality traits (e.g., anxious attachment and neuroticism, avoidance and agreeableness; e.g., Joel et al., 2012), we also included participants' Big Five personality traits in the analyses.

The pilot study (100 participants, 2304 songs; see Data S1) showed that individuals' attachment styles predicted independent coders' ratings of attachment themes in the lyrics of participants' favorite relationship songs (see Table S1 for full results). The pilot study results suggested that the lyrics in avoidantly-attached individuals' relationship songs contained more avoidant and less secure content, whereas higher levels of anxious attachment were associated with more secure lyrical content. We therefore conducted a preregistered study (Study 1; 469 participants, 10,844 songs), predicting the following based on our pilot study:

1. Participants' higher levels of attachment avoidance will relate to higher attachment avoidance and less attachment security in the lyrics of their favorite relationship songs.
2. Participants' higher levels of anxious attachment will relate to more attachment security in the lyrics of their favorite relationship songs.

We also reasoned that if people's characteristics in close relationships parallel the lyrics of their favorite songs, then the sociocultural characteristics of *groups* of individuals should also parallel the lyrics of their collective favorite songs. Converging evidence suggests that Western culture has become less intimate, more individualistic, and more socially disconnected (e.g., McPherson et al., 2006; U.S. Bureau of the Census, 2008). Further, individuals have reported higher levels of dismissal attachment over time (Konrath et al., 2014) and more recent generations report lower levels of agreeableness (Brandt et al., 2022). Previous research has correspondingly found that popular song lyrics from 1980 to 2007 became more antisocial,

containing fewer social words and more angry and self-focused words (DeWall et al., 2011). However, popular music has also increasingly focused on topics other than relationships during this period (Christenson & Roberts, 1998). Thus, it is unclear whether popular music has become more antisocial or has appeared so as a by-product of a change in focus away from relationships. In Study 2, we therefore instructed independent coders to code the attachment styles of Billboard's most popular general and relationship songs' lyrics from 1946 to 2015 (828 songs) to test whether these changes align with cultural patterns of increasing social disengagement. If the predicted changes are observed in relationship songs specifically, then popular music would appear to have indeed become more antisocial (rather than having exclusively changed in focus away from songs about relationships). Thus, we predicted that:

1. More recent popular music (1990–2015) would contain more avoidant and less secure lyrics than early popular music (1946–1965).
2. Attachment anxiety in lyrical content will differ between these two periods.

We planned to first test for differences in popular music's attachment styles between 1946–1965 and 1990–2015 to maximize any observed associations. We then included the intervening years (i.e., 1970–1985) in additional exploratory analyses. The data for this research were collected in 2017, this research was reviewed by our university internal review board, and we followed all ethical guidelines in conducting this research. We report all measures, manipulations, and exclusions in the studies below.

5 | STUDY 1

In Study 1, we asked participants to separately nominate their overall favorite songs and their favorite songs about relationships specifically, coded the attachment themes in the lyrics of these songs, and then examined the degree of association between the attachment themes identified and participants' self-reported attachment styles. We also examined whether positive emotion, negative emotion, or both positive and negative emotion expressed in the lyrics account for the results observed.

5.1 | Method

5.1.1 | Participants

We recruited 502 participants using Amazon's Mechanical Turk in March 2017 (288 female, 211 male, 3 transgender; $M_{\text{age}} = 34.47$ years, $SD = 11.71$), affording approximately 95% power in a multiple regression with eight predictors (i.e., avoidance, anxiety, their interaction, and the Big Five personality traits) when assuming the average effect size in social and personality psychology ($r = .21$; Richard et al., 2003).

We first informed participants that the study aimed to “understand preferences” and that participation involved completing surveys about themselves. Participants were told that they could choose not to complete the survey without penalty; they consented to participate by clicking a box labeled “I have read and understood the agreement and am ready to participate” on their computer screen.

After agreeing to complete the survey, participants began by reporting 7–15 of their favorite English-language songs (participants who could not think of at least seven songs were asked to exit the study), after which we asked them to list 7–15 of their favorite English-language songs about relationships (allowing redundancy across the two lists). To ensure that participants did not feel restricted to love songs (i.e., secure songs), we noted that relationship songs could “cover any aspect of a relationship (e.g., falling in love, breaking up, etc.).” We also preregistered our plan to exclude participants who did not list at least seven identifiable English-language songs in each song category ($N = 469$ after exclusions, 92% power).

Participants then reported their attachment style (Feeney et al., 1994), Big Five personality traits (John et al., 1991), demographic characteristics (age, race, sex, sexual orientation), relationship history (current relationship status, length of most recent relationship, number of past romantic and sexual relationships), and music-related attitudes and behaviors (i.e., the degree to which they think one's music tastes reflect a person's personality, and their frequency of music listening). We did not include the data regarding participants' race, sexual orientation, relationship history, and music-related attitudes and behaviors in the present analyses (they were collected for comprehensiveness and possible future exploratory analyses).

5.1.2 | Lyric coding

We trained coders to read lyrics of each song and rate the attachment style(s) exhibited on a scale (described below). Parallel analyses of Monte Carlo simulations (Horn, 1965) based on the pilot study lyric coding data indicated retaining four factors to code each song type. However, none of the questionnaire items loaded more than $|.38|$ on the fourth factor, however, which explained only 3% of the total variance; thus, a three-factor model explaining 78% of the variance best described the data. Subsequent exploratory factor analysis with promax rotation specifying three factors produced the following: avoidance (items 1–3), security (items 4–6), and anxiety (items 7–12). Although this three-factor structure did not correspond to the traditional two-factor (anxiety and avoidance) structure from scales of trait attachment style, research on state-based attachment has found these same three factors (Gillath et al., 2009). Because artists likely express their attachment *states* rather than their enduring *traits* in a given song, this three-factor model fits better (empirically and arguably theoretically; see Table 1 for items and loadings; see Table 2 for example lyrics).

Given the pilot study's results, coders were explicitly trained to conceptualize songs using the three-factor attachment style structure (i.e., avoidance, security, and anxiety). They began by holistically judging the narrative expressed about the relationship portrayed in the lyrics (e.g., demanding a partner to leave, completely surrendering to love, pining for a past partner, etc.) without relying on any pre-existing knowledge (e.g., about the artist). Specifically, they inspected the song for its main plot and protagonist to interpret which attachment style(s) it expressed. They then used their informal holistic judgment to inform their rating of the degree to which the 12 items of the Experiences in Close Relationships—Short Form (Wei et al., 2007) applied to the protagonist's experience in the song (see Table 1 for the adapted items). To do so, they considered how strongly the attachment style was expressed in the lyrics' narratives, noting that the lyrics could imply the items even if they did not explicitly address each one. Thus, we trained raters to distinguish explicit lyrics, emotionally intense lyrics, lyrics with strong connotations, straightforward metaphors, and longer passages suggesting a particular attachment style, noting that these all constituted a stronger signal than lyrics lacking these features.

TABLE 1 Adapted version of the experiences in close relationships—Short form (Wei et al., 2007) for determining songs' attachment style

Factor	Item	Factor 1 loading	Factor 2 loading	Factor 3 loading
Avoidance	Pulling back from a partner even though one wants to be close.	.87	.01	.12
	Nervousness about a partner getting too close.	.87	−.01	−.06
	Trying to avoid getting too close to a partner.	.96	.02	−.02
Security	Discussing one's problems and concerns with one's partner (note: must feel like a dialogue with good intentions; a rant or emotional outpour is inadmissible).	−.07	.81	.05
	Turning to one's partner in times of need.	.02	.93	−.14
	Turning to one's partner for many things, including comfort and reassurance.	.05	.89	.08
Anxiety	Worrying/ruminating that a partner will not care as much about one as one cares about him/her (note: suggests desperation).	.01	−.02	.95
	Scaring a partner away with one's desire to be too close.	−.07	.01	.65
	The need for lots of reassurance that one is loved by his/her partner.	−.03	−.17	.83
	Worrying/ruminating about abandonment or rejection.	.03	.01	.95
	The experience that a partner does not want to get as close as one would like.	−.01	.09	.93
	Frustration that a partner is not/wasn't available when one need(s/ed) them.	.05	.10	.87

Note: Factor loadings for contributing items indicated in bold.

Coders made their ratings using a 7-point scale for each of the items (i.e., 1 = *Not at all present*, 2–3 = *Somewhat implied*, 4 = *Moderately implied*, 5–7 = *Explicitly stated or heavily implied*). These ratings were not mutually exclusive: songs could express more than one attachment style (e.g., both avoidance and anxiety). Two to four coders rated each participant's favorite songs and they were assessed for agreement. If their agreement was too low (i.e., $ICC[1, k] < .70$), they resolved the initial disagreement through discussion with the first author to achieve consensus (i.e., all $ICC[1, k]s \geq .70$). Coders only judged the relationship songs because the pilot study showed that participants' favorite relationship songs exclusively reflect their attachment style.

The coders also indicated their familiarity with each song from 1 (*Not at all familiar*) to 7 (*Very familiar*); classified whether each song was about a relationship and, if so, identified the target of the relationship (0 = *Not about relationships*, 1 = *Acquaintance*, 2 = *Friend*, 3 = *Partner*, 4 = *Parent*, 5 = *God*). They coded 4853 songs in total.

To examine whether emotions account for the observed effects, we used the Linguistic Inquiry and Word Count (LIWC; a validated tool for automated text analysis; Tausczik & Pennebaker, 2010) to analyze the degree of positive emotion and negative emotion expressed by the lyrics of each participant's favorite songs about relationships. The LIWC analysis computed

TABLE 2 Examples of song lyrics exhibiting anxious attachment, avoidant attachment, secure attachment, and both anxious and avoidant attachment

Attachment style	Example lyrics
Anxiety	"I heard that you are settled down/That you found a girl and you are married now/I heard that your dreams came true/Guess she gave you things that I did not give to you/...I hate to turn up out of the blue uninvited/But I could not stay away, I could not fight it/I had hoped you'd see my face and that you'd be reminded/That for me it is not over." (Adele, <i>Someone Like You</i>)
Avoidance	"You must understand...that it's only the thrill of boy meeting girl/...You must try to ignore that it means more than that/What's love got to do, got to do with it?/What's love but a second-hand emotion?/What's love got to do, got to do with it?/Who needs a heart when a heart can be broken?" (Tina Turner, <i>What's Love Got to do With It</i>)
Security	"I got flowers in the spring/I got you to wear my ring/And when I'm sad, you are a clown/And if I get scared, you are always around/Do not let them say your hair's too long/'Cause I do not care, with you I cannot go wrong/Then put your little hand in mine/There ain't no hill or mountain we cannot climb." (Sonny & Cher, <i>I Got You Babe</i>)
Anxiety and avoidance	"I hate you, I love you/I hate that I love you/Do not want to, but I cannot put/Nobody else above you/...I do not mean no harm, I just miss you on my arm/Wedding bells were just alarms/Caution tape around my heart." (Gnash [featuring Olivia O'Brien], <i>i hate u, i love u</i>)

two scores for each participant corresponding to the expressed positive and negative emotions across their relationship songs' lyrics, respectively.

5.1.3 | Data analysis

We aggregated the coding data into avoidance, security, and anxiety scores for each participant's favorite general and relationship songs separately, which were simultaneously predicted by participants' own avoidance and anxiety scores, the interaction between their avoidance and anxiety scores, their Big Five personality traits, lyric positive emotion (LIWC), and lyric negative emotion (LIWC) in multivariate regressions respective to each song type.

5.2 | Results

More avoidantly-attached individuals favored relationship songs with more avoidant lyrics, as predicted ($\beta = .15$, $p = .02$; Table 3), and disfavored relationship songs with secure lyrics when their anxious attachment levels were low ($\beta = -.12$, $p = .03$)¹; reciprocally, more anxiously-attached individuals disfavored relationship songs with secure lyrics when their avoidant-attachment levels were low ($\beta = -.21$, $p = .01$). Participants' Big Five personality traits also predicted the attachment styles of their favorite relationship songs: More neurotic people ($\beta = .16$, $p = .01$) favored relationship songs with more anxious lyrics; more open people

TABLE 3 Standardized regression coefficients and T-values from multivariate regressions predicting participants' favorite relationship songs' mean subjectively-coded avoidance, security, and anxiety scores from their own attachment style, big five personality traits, lyric positive emotion (LIWC), and lyric negative emotion (LIWC)

Predictors	Playlist attachment style scores					
	Avoidance		Security		Anxiety	
	β	t	β	t	β	t
Anxiety	.05	0.81	−.10	−1.52	.02	0.34
Avoidance	.15	2.41*	−.01	−0.11	−.02	−0.25
Anxiety × Avoidance	−.01	−0.12	.11	2.62**	−.07	−1.58
Agreeableness	−.04	−0.65	.00	0.06	.04	0.76
Conscientiousness	.05	0.93	.07	1.33	.15	2.71**
Extraversion	.01	0.28	.04	0.77	−.02	−0.34
Neuroticism	.00	0.01	.07	1.23	.16	2.46*
Openness	−.05	−1.06	−.13	−3.02**	.07	1.52
Positive emotion	−.17	−3.75***	.31	7.17***	−.08	−1.71
Negative emotion	.28	6.35***	−.19	−4.53***	.11	2.39*

Note: $N = 469$. Absence of asterisk indicates non-significance (i.e., $p \geq .05$). * $p < .05$, ** $p < .01$, *** $p < .001$.

preferred relationship songs with less secure lyrics ($\beta = -.13$, $p = .003$), and more conscientious people preferred relationship songs with more anxious lyrics ($\beta = .15$, $p = .007$).

Whereas the above analyses demonstrate that participants' attachment styles remain associated with lyric attachment styles when including lyric positive emotion and lyric negative emotion as predictors, they do not test whether lyric emotion relates to participants' attachment style. We therefore analyzed whether participants' attachment avoidance, attachment anxiety, and the interaction between the two related to positive and negative emotions in the lyrics of their favorite relationship songs (we also included Big Five personality traits as predictors in these models for consistency with previous analyses). None of participant attachment anxiety, attachment avoidance, nor the interaction between the two predicted lyric positive or negative emotion (all β s $\leq |.06|$, all t s $\leq |1.27|$, all p s $> .21$).

5.3 | Discussion

In Study 1, we investigated whether individuals' favorite relationship songs' lyrics reflect their attachment styles and related Big Five personality traits. Indeed, more avoidantly-attached individuals liked relationship songs expressing more avoidance and less security. Conversely, more neurotic individuals preferred relationship songs expressing more anxious lyrics. These associations were independent of the degree of positive and negative emotions expressed by the lyrics. Thus, individuals liked music with narratives that matched what may be considered validating and self-expressive themes about relationships. Notably, these effects only emerged when participants listed their favorite songs about relationships and not when they listed their favorite songs in general. This may suggest that people enjoy music that vicariously expresses their

attachment style when specifically seeking music related to their social experiences (e.g., after a breakup). Conversely, individuals' favorite songs overall may reflect various aspects of their identity beyond their attachment style, such as their personality traits, values, and social group memberships (see Rentfrow, 2012, for a review). In Study 2, we extended these findings to investigate whether groups of individuals' favorite songs can reflect their collective sociocultural experiences.

6 | STUDY 2

Music is a cultural vessel and, as such, can reflect and reinforce the identity of artistic subcultures as well as economic and political divides (e.g., Gardikiotis & Baltzis, 2011; Mellander et al., 2018). We coded the attachment narratives of the top songs from 1946 to 2015 to investigate whether they might track changes in the attachment themes expressed in lyrical content in Western culture over that time. Consistent with research suggesting that Western culture has become less intimate, more individualistic, more socially disconnected, and more avoidant (e.g., Konrath et al., 2014; McPherson et al., 2006; U.S. Bureau of the Census, 2008), we predicted that music lyrics have become more avoidant, less secure, and differentially anxious over time.²

6.1 | Method

We collected 828 songs. To achieve sufficient power, we sampled the top 60 songs starting in 1946 (the first year on record) and then from every fifth year from 1950 to 2015 (i.e., 1950, 1955, 1960, etc.). Billboard had not yet standardized the number of songs included in its year-end charts during our first three intervals, yielding fewer songs (i.e., 48 from 1946, 30 from 1950, and 30 from 1955). We excluded five songs that did not contain English lyrics. The final 823 songs afforded 95% power for testing each of our hypotheses in a series of three two-tailed *t*-tests assuming $r_{\text{effect size}} = .21$ and Bonferroni-corrected $\alpha = .017$. Trained coders assessed the degree to which each song's lyrics exhibited an attachment style using the same coding procedures described above (all final $ICC[1, k]s \geq .70$).

6.1.1 | Data analysis

For the preregistered analyses, we compared the attachment scores between recent (1990–2015) versus early popular music (1946–1965) with separate *t*-tests for avoidance, anxiety, and security. For the exploratory analyses, we averaged the songs' avoidance, anxiety, and security scores within each of the 15 time periods (i.e., 1946, and then every 5 years between 1950 and 2015, inclusively), and then regressed the aggregated avoidance, security, and anxiety scores for the top-rated popular general and relationship songs onto their corresponding calendar year.

6.2 | Results

6.2.1 | Preregistered analyses

Recent popular music (1990–2015) contained more avoidant, $t(580.38) = 4.20$, $p < .001$, $r_{\text{effect size}} = .17$, and less secure lyrics, $t(583) = -5.56$, $p < .001$, $r_{\text{effect size}} = -.22$, than did early popular music (1946–1965), as expected, but did not differ in attachment-anxiety, $t(583) = 0.25$, $p = .80$, $r_{\text{effect size}} = .01$ (Table 4).³

Yet, popular music may have appeared to become more avoidantly themed as a by-product of its increased emphasis on topics other than relationships during this period (i.e., less social focus; Christenson & Roberts, 1998). To mitigate this concern, we excluded the general songs from analyses (i.e., restricted analyses to only the relationship songs), finding the same results: Recent top-rated relationship songs exhibited more avoidant, $t(396.24) = 4.51$, $p < .001$, $r_{\text{effect size}} = .22$, less secure, $t(401) = -4.69$, $p < .001$, $r_{\text{effect size}} = -.23$, and similarly anxious lyrics as early top-rated relationship songs, $t(401) = 1.15$, $p = .25$, $r_{\text{effect size}} = .06$.

6.2.2 | Exploratory analyses

Mirroring the comparisons above, attachment avoidance has increased, $\beta = .76$, $t(13) = 4.26$, $p < .001$, attachment security has decreased, $\beta = -.70$, $t(13) = -3.44$, $p < .001$, and attachment anxiety has not changed, $\beta = -.02$, $t(13) = -0.09$, $p = .93$, in song lyrics from 1946 to 2015. Restricting analyses to just the relationship songs yielded similar results: avoidance increased, $\beta = .75$, $t(13) = 4.03$, $p = .001$, security declined, $\beta = -.67$, $t(13) = -3.30$, $p = .006$, and anxiety remained, $\beta = .17$, $t(13) = 0.63$, $p = .54$.

6.3 | Discussion

Study 2's results suggest that the decreasing intimacy, increasing individualism, and decreasing social connection witnessed in Western culture manifests in the increasingly avoidant and decreasingly secure narratives expressed in the lyrics of top-rated popular music from 1946 to 2015 (e.g., Garcia et al., 2012; McPherson et al., 2006; Roberts & Helson, 1997; Twenge &

TABLE 4 Means and standard deviations of early and recent popular Music's mean subjectively-coded avoidance, security, and anxiety scores

Song type	Music era	N	Avoidance		Security		Anxiety	
			M	SD	M	SD	M	SD
All	Early (1946–1965)	228	1.31	0.88	2.86	1.77	2.16	1.38
	Recent (1990–2015)	360	1.71	1.47	2.08	1.59	2.20	1.64
Relationship	Early (1946–1965)	163	1.39	1.00	3.39	1.75	2.58	1.41
	Recent (1990–2015)	241	1.98	1.66	2.56	1.73	2.77	1.72

Foster, 2010). Thus, people's characteristic social perspectives emerge in their favorite songs' lyrics at the individual level (Study 1) and cultural level (Study 2).

7 | GENERAL DISCUSSION

These data suggest that insecure individuals tend to nominate songs that contain lyrical content reflecting themes that match their own styles of attachment insecurity as their favorite songs about relationships, most convincingly in the case of those higher in attachment avoidance. In Study 1 (and the pilot study), we found that avoidant individuals preferred music with more avoidant and less secure lyrics (though avoidance only predicted less secure playlists when anxiety was low in Study 1). Thus, avoidant people preferred relationship songs with narratives congruent with their identity and emotions in relationships.

In Study 2, we observed a parallel pattern at the societal level: We found evidence suggesting that Western culture's diminishing orientation towards social engagement is reflected in the rise of avoidant popular music (and concomitant fall of secure popular music) from 1946 to 2015. This may arise due to several factors. For instance, songwriters may recognize cultural shifts in attachment style and incorporate these changes in their music to connect with their audience. Alternatively, songwriters may partly rise to prominence because their attachment style genuinely aligns with their culture's dominant attachment style. Finally, listeners may gravitate towards songs that match their culture's attachment style (either because they also exhibit that attachment style or because they prefer songs that align with their dominant cultural experience), thus facilitating such songs' popularity. Future work will need to explore which of these or other mechanisms might explain why people seem drawn to lyrics that connect with how they approach relationships.

Finally, we also identified a more tenuous finding in Study 1 suggesting that more neurotic individuals preferred songs that express more attachment anxiety; that is, more neurotic participants appeared to like music that reflected their tendency towards worry and negative affect. It is not clear why only neuroticism played this predictive role (and not anxious attachment), nor why this effect emerged in Study 1 but not in the pilot data. Notably, Qiu et al. (2019) found that individuals higher on neuroticism favored songs with lyrics expressing lower levels of positive emotion. Future research should therefore further investigate how people who experience negative affect in general—in addition to those who experience negative affect specifically about relationships—react differently to songs that remind them of their relationship difficulties.

7.1 | Limitations

Whereas some effects replicated between the pilot study and Study 1, some did not. We have demonstrated strong support that more avoidantly-attached individuals prefer songs with more avoidant lyrics because this effect emerged in both the pilot study and Study 1. There is also some indication that more avoidantly-attached individuals dislike secure songs (as shown in the pilot study), although this effect was only significant in Study 1 when participants' attachment anxiety was low. Finally, we have shown strong evidence that the lyrics of Western culture's most popular songs from 1946–2015 have increasingly expressed avoidance and decreasingly expressed security, replicating and extending previous research.

Conversely, only Study 1 showed that neuroticism predicts liking songs with lyrics expressing anxious attachment, whereas the pilot study did not. Relatedly, it is not clear why the pilot study seemed to indicate that anxious attachment might be associated with a preference for secure lyrics, whereas there was no evidence for this (and, if anything, evidence in the opposite direction) in the more highly powered Study 1. Given that Study 1 had a much larger sample size than the pilot study, it is more likely that the neuroticism effect is reliable and the finding regarding anxious attachment is spurious, but further replications are required. Finally, there were some effects across the pilot study and Study 1 that did not replicate and are not consistent with our theorizing (e.g., openness being associated with disliking secure songs in Study 1). Future research should attempt to further specify how to subjectively code attachment styles in lyrics or use more objective methods as a complement, such as natural language processing.

Moreover, we have not examined the potential consequences of listening to songs of a certain attachment style. For instance, it is unclear whether listening to songs that are congruent with one's attachment style would have an insecurity-reinforcing or an insecurity-alleviating effect. To the extent that favorite songs provide validation and soothing, music may offer a form of safe haven that particularly appeals to individuals high in attachment avoidance because it can be indulged alone. In this way, music and accompanying lyrics may supply a form of emotion regulation that is helpful for short term reduction of negative affect but may simultaneously reinforce avoidant individuals' worldview through exposure to avoidant themes of mistrust, relationship failure, and self-reliance (e.g., Birnie et al., 2009). Further, the process of seeking solace in music may reinforce the independent approach of avoidant individuals and result in their not exploring the potentially stronger rewards of validation through social connection. On the other hand, given the therapeutic benefits of songwriting (Baker, 2015), future work may examine the potential for songwriting or attachment-targeted music listening to help with individuals' interpersonal issues in a way that allows these issues to be brought to the fore and processed more directly. One potentially useful means of examining these issues in future research could be to randomly assign individuals to listen to songs with particular attachment-related content to examine the influence of such exposure.

In addition, we have not investigated how lyrics relate to identity across diverse individuals and contexts. Specifically, some people may wholly ignore song lyrics, prefer instrumental music, or simply not care for music at all. Just as certain individuals better recall and understand the lyrics of their nation's anthem, however, certain individuals may care more about the lyrics of their favorite songs. Even those who do not exhibit a rich understanding of their national anthem may still be stirred by its lyrics during important national events, however. Similar to how national anthems can represent the values of a nation, people may carry personal "anthems" that poignantly narrate their identity, including their experiences in relationships (see Harris et al., 2020, for preliminary evidence for this phenomenon within couples). Furthermore, lyrics about a certain topic, such as those about relationships, may have more impact when that topic is cognitively accessible than when it is not (e.g., hearing a relationship song after a breakup vs. hearing a relationship song while grocery shopping). Clarifying these moderators will help to illuminate how people connect to the stories that music expresses about their identity and relationships. One step towards understanding the intimate role that music lyrics may play in processing relationships may be to examine dyadic effects; namely, the degree to which individuals' partners' music preferences influence their own, and whether factors such as relationship commitment and attachment style moderate this process.

8 | CONCLUSION

In summary, we have extended research on personality and music preferences to individual differences in attachment security. The data suggests that song lyrics reflect individuals' attachment styles, possibly helping them to feel validated in their thoughts and feelings regarding relationships. We hope that these findings will stimulate consideration of the value that lyrics can hold for describing, representing, and potentially influencing individuals' perspectives on and approaches to relationships.

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CONFLICT OF INTEREST

We have no known conflict of interest to disclose.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request at ravin.alaei@mail.utoron.

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ENDNOTES

¹ This association is marginally significant when including agreeableness in the overall model ($\beta = -.12$, $p = .06$), perhaps because avoidance and agreeableness overlap, $r(467) = -.54$, $p < .001$. Indeed, agreeableness by itself negatively predicted preferences for avoidant lyrics ($\beta = -.17$, $p < .001$), and positively predicted preferences for secure lyrics ($\beta = .10$, $p = .03$). Thus, avoidance predicts attachment narratives better than agreeableness when modeling both simultaneously.

² We did not have a specific hypothesis regarding anxious attachment. For one, it could have risen over time, similarly to anxiety and neuroticism more generally (Twenge, 2000). Conversely, rising social disengagement could also reflect a decreasingly anxiously-attached population. We therefore only predicted that there would be evidence of change in anxiety without a directional hypothesis.

³ Degrees of freedom corrected for heteroscedasticity.

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