

# Psychological Constructs in Zayn Malik's Lyrics: A Sentiment Analysis

*Abstract - This project examines the extent to which Zayn Malik's lyrics reflect psychological constructs such as self-determination, emotional resilience, and vulnerability. Using Natural Language Processing (NLP) techniques, including sentiment analysis and topic modeling, we analyze patterns across his discography. The findings highlight key thematic and emotional shifts in his music, offering insights into his artistic evolution and psychological expression.*

## I. INTRODUCTION

Zayn Malik, British-Pakistani singer and songwriter, rose to fame as a member of One Direction before embarking on a solo career in 2015. Since his debut album *Mind of Mine* (2016), Malik has evolved both sonically and lyrically, exploring themes of love, identity, mental health, and personal growth. His subsequent albums—Icarus Falls (2018), *Nobody Is Listening* (2021), and *Room Under The Stairs* (2024)—demonstrate a shift toward more intimate storytelling, blending elements of R&B, soul, country, and alternative pop. This discography provides a rich foundation for analyzing the psychological themes embedded in his lyrics and understanding how his artistic expression has developed over time.

Music has long been recognized as a medium for emotional expression, allowing artists to communicate personal experiences, struggles, and triumphs. Psychological constructs such as self-determination, resilience, and vulnerability are often

reflected in songwriting, influencing listeners' emotional connection to music (Juslin, 2013). Lyrics, in particular, serve as a narrative tool that provides insight into an artist's inner world, offering a lens through which their emotions and perspectives can be understood.

Analyzing an artist's lyrics through Natural Language Processing (NLP) techniques such as sentiment analysis and lexical analysis allows for the quantification of emotional and thematic patterns, providing a structured approach to understanding their psychological journey (Hu et al., 2009). By applying these methods to Zayn Malik's discography, this study seeks to explore how his lyrics reflect key psychological constructs such as self-determination, resilience, and vulnerability, offering a deeper understanding of the relationship between music and emotional expression.

Keeping this in mind, the current project aims to investigate the following question: How do Zayn Malik's lyrics reflect psychological constructs such as self-determination, resilience, and vulnerability over time?

## II. LITERATURE REVIEW

Zayn Malik's lyrics showcase a complex interplay of psychological constructs such as self-determination, resilience, and vulnerability, reflecting his personal journey and growth throughout his career. Through various songs, Malik navigates themes of

agency and personal strength, particularly resonant in works like "Dusk Till Dawn," where he expresses a commitment to another despite challenges, exhibiting self-determination and a belief in perseverance against adversity. This aligns with findings in music psychology, which emphasize the role of songwriting as a form of self-expression that can fulfill psychological needs central to self-determination (Wojdak et al., 2023). Research in self-determination theory (Deci & Ryan, 2000) further supports the idea that individuals seek autonomy and competence in their craft, suggesting that Malik's music serves as a mechanism for achieving personal and artistic autonomy post-One Direction.

Vulnerability is another key aspect present in Malik's lyrics, particularly in songs such as "Let Me." Here, he explores themes of emotional exposure and the complexities of personal relationships, with references to feelings of uncertainty and a desire for connection that resonate with the psychological construct of vulnerability. According to Brown (2012), vulnerability is central to emotional authenticity, and its presence in music strengthens listener-artist connections. Vulnerability in music has been studied as a tool for emotional expression, where artists articulate their emotions to process and connect with listeners; however, the specifics of these findings vary across studies (Mihalcea et al., 2012 ; Schäfer et al., 2013; Schubert, 2013). This connection between emotional expression and psychological well-being is essential to understanding Malik's lyrical approach.

Resilience is illustrated through Malik's evolution as an artist, marked by his departure from One Direction and subsequent solo career (Gregory, 2019; Hansen, 2021; Hansen & Faculty of Humanities, University

of Oslo, 2017). His lyrics often convey a journey through personal trials, showcasing an ability to rise above challenges and maintain hope. This reflects the concept of resilience, where artists use their platforms to convey messages of strength and hope, encouraging listeners who face their own hardships (Pennebaker, 1997; Pond & Leavens, 2023). The encapsulation of personal struggle within his music portrays not only his resilience but also serves to inspire listeners.

Moreover, through figurative language, Malik often enhances the emotional depth of his lyrics. The use of metaphors and imagery in songs like "A Whole New World," where he collaborates with Zhavia Ward, provides layers of meaning that extend beyond literal interpretations, enabling listeners to engage more deeply with the constructs of self, relationships, and emotional experiences (Nursolihat & Kareviati, 2020). This illustrates how lyricism can intertwine with psychological themes, offering a rich canvas for exploring complex human emotions. Additionally, research on semantic processing in music (Hu et al., 2009; Koelsch, 2011) suggests that metaphorical language enhances emotional and cognitive engagement, meaning Malik's use of imagery may deepen listener immersion and connection to his music.

In summary, Zayn Malik's lyrics prominently reflect themes of self-determination, resilience, and vulnerability. His engagement with these psychological constructs underscores his personal artistic journey and provides an emotional refuge for listeners, highlighting music's significant role as a conduit for psychological expression and understanding.

### III. METHODOLOGY

#### A. Data Collection

The dataset for this study consists of lyrics from all four of Zayn Malik’s solo studio albums: *Mind of Mine* (2016), *Icarus Falls* (2018), *Nobody Is Listening* (2021), and *Room Under the Stairs* (2024). The lyrics were collected manually from publicly available sources, primarily Genius and official lyric videos. Each song was labeled according to its respective album, and the dataset was compiled into a structured format suitable for natural language processing (NLP) analysis. This manual approach ensured data accuracy, allowing for a more precise sentiment evaluation across Malik’s discography.

#### B. Data Preprocessing

To prepare the lyrics for analysis, several text-cleaning and standardization steps were applied to minimize noise and improve the accuracy of sentiment detection:

- **Tokenization:** Each song’s lyrics were split into individual words to enable word-level sentiment analysis.
- **Lowercasing:** All words were converted to lowercase to ensure uniformity and prevent duplicate sentiment scoring.
- **Stopword Removal:** Common English stopwords (e.g., the, and, is) were removed, along with filler words specific to music (e.g., ooh, yeah, wanna) that do not contribute to meaningful sentiment.
- **Lemmatization:** Words were reduced to their base forms (e.g., running to run) to standardize variations of the same word.
  - **Punctuation and Special Character Removal:** Non-alphabetical characters were removed to focus solely on meaningful words.

These preprocessing steps ensured that the sentiment analysis reflected the true emotional content of the lyrics rather than syntactic variations.

#### C. Sentiment Analysis

Sentiment analysis is a key NLP technique that quantifies emotional tone in text by classifying words as positive, negative, or neutral. This study employs three well established lexicon-based sentiment analysis methods:

- **AFINN Lexicon:** Assigns numerical sentiment scores to words, with positive words receiving positive values and negative words receiving negative values. The overall sentiment score of a song or album is calculated by summing the scores of all words.
- **Bing Lexicon:** Categorizes words into binary positive and negative classifications, offering a simpler but effective way to assess sentiment trends.
- **NRC Lexicon:** Unlike AFINN and Bing, NRC maps words to eight core emotions (anger, anticipation, disgust, fear, joy, sadness, surprise, trust) in addition to positive and negative sentiments. This lexicon enables a deeper emotional analysis, revealing nuanced emotional themes in each album.

For this study, sentiment scores were aggregated at the album level to track emotional shifts across Malik’s career, providing insights into the psychological themes embedded in his lyrics.

## IV. RESULTS

### A. Sentiment Analysis

The sentiment analysis revealed distinct emotional trends across Zayn Malik's discography. The AFINN lexicon showed that Icarus Falls had the highest overall sentiment score (161), suggesting a more positive tone compared to his other albums. Mind of Mine followed with a score of 64, while Nobody Is Listening (9) and Room Under The Stairs (24) exhibited the lowest overall sentiment scores, indicating a more neutral or slightly negative emotional tone.

**Table 1**  
*AFINN Lexicon*

Album	Sentiment Score
Icarus Falls	161
Mind of Mine	64
Nobody Is Listening	9
Room Under The Stairs	24

*Note.* Sentiment Scores using AFINN Lexicon

In contrast, the Bing lexicon provided a different perspective by breaking down positive and negative word counts. Icarus Falls showed the largest sentiment contrast, with 294 negative words and 206 positive words, resulting in a net score of -88. Similarly, Room Under The Stairs had a net negative score of -75, reinforcing the notion of a darker thematic direction in Zayn's later works. Mind of Mine displayed a more balanced emotional spectrum with 168 negative and 155 positive words (-13 score),

while Nobody Is Listening leaned negative with -25.

**Table 2**  
*Bing Lexicon*

Album	Negative	Positive	Sentiment Score
Icarus Falls	294	206	-88
Mind of Mine	168	155	-13
Nobody Is Listening	98	73	-25
Room Under The Stairs	163	88	-75

*Note.* Sentiment Scores using Bing Lexicon

### B. Emotional Tone and Thematic Insights from NRC Analysis

The NRC sentiment analysis provided a more nuanced breakdown of emotions expressed in Zayn Malik's lyrics. Across all albums, Icarus Falls demonstrated the strongest presence of joy-related words (248) and positive sentiment words (341), aligning with its generally higher AFINN sentiment score. However, it also had 266 negative sentiment words, reflecting emotional complexity within the album. Notably, fear (125) and anger (113) were more frequent in Icarus Falls than in Mind of Mine and Nobody Is Listening, highlighting the album's diverse emotional scope.

Mind of Mine presented a moderately positive outlook, with 139 joy-related words, 204 positive sentiment words, and 161 negative words. Its balance of anticipation (66), trust (88), and sadness (64) suggests a mix of optimism and introspection. Conversely, Nobody Is Listening had lower joy (75) and trust (46) scores, with 103 negative sentiment

words, supporting the interpretation of a more intimate and melancholic album.

Room Under The Stairs showed the highest occurrence of sadness (93) and negative sentiment words (177), reinforcing its darker thematic nature. The album also had relatively high levels of anger (57) and fear (67), which, when combined with its lower trust (48) and joy (88) scores, suggest a more emotionally turbulent lyrical content.

These findings suggest that Zayn's albums exhibit significant emotional variation, with Icarus Falls standing out as the most emotionally diverse, Mind of Mine balancing positivity and introspection, and Room Under The Stairs reflecting a notably somber tone. Nobody Is Listening remains the most subdued, with lower intensity across all emotional categories. This evolution in emotional tone provides insights into Zayn Malik's personal and artistic growth over time.

## V. DISCUSSION

This study examined the emotional sentiment and thematic progression in Zayn Malik's lyrics, revealing notable shifts in his artistic expression and psychological themes over time. The sentiment analysis using the AFINN, Bing, and NRC lexicons suggests an evolving emotional landscape, marked by fluctuating expressions of joy, sadness, fear, and vulnerability. These patterns align with key psychological constructs, including selfdetermination, emotional resilience, and authenticity, illustrating how Malik's lyrical content reflects his personal and artistic journey.

### A. *Emotional Trajectories in Zayn Malik's Music*

The sentiment trends across albums indicate a clear emotional trajectory. The AFINN lexicon, which assigns numerical sentiment scores, reveals that Icarus Falls has the most emotionally charged lyrics, with the highest overall sentiment score (161), suggesting a dynamic interplay of both positive and negative emotions. Conversely, Nobody Is Listening (9) and Room Under the Stairs (24) show substantially lower scores, indicating a more subdued emotional tone.

The Bing lexicon, which categorizes words into strictly positive or negative sentiment, offers a more nuanced view. While Icarus Falls contains a large number of negative words (294), it also has a high count of positive words (206), reflecting lyrical themes of emotional conflict and contrast. This aligns with research suggesting that artists often use stark emotional contrasts to navigate personal struggles and growth (Pennebaker, 1997). In contrast, Room Under the Stairs has a strong negative sentiment balance (-75), suggesting a heavier and more introspective emotional tone.

The NRC lexicon further expands on this by mapping sentiment to eight emotional categories. Icarus Falls exhibits the highest levels of both joy (248) and sadness (115), reinforcing the idea of emotional highs and lows. Mind of Mine displays higher joy (139) and trust (88), reflecting optimism and confidence characteristic of an artist embarking on newfound autonomy. Meanwhile, Nobody Is Listening has the lowest levels of emotional intensity, with muted expressions of both joy and sadness, suggesting a shift toward minimalism and introspection. Room Under the Stairs, however, reveals an increase in sadness (93)

and fear (67), reinforcing themes of vulnerability and emotional distress.

### *B. Psychological Constructs in Lyrics*

The findings from sentiment analysis align with psychological theories that explain how individuals express emotions through creative mediums:

**Self-Determination Theory** (Deci & Ryan, 2000): The positive sentiment in *Mind of Mine* suggests a period of artistic liberation following Malik's departure from *One Direction*. The album's high trust and anticipation scores indicate confidence and creative autonomy, essential elements of self-determination.

**Emotional Resilience** (Fredrickson, 2001): *Icarus Falls* demonstrates resilience through emotional fluctuations, as the album balances joy, sadness, and anticipation. The strong contrasts in sentiment suggest that overcoming personal struggles is a central theme, aligning with research showing that music serves as a tool for emotional regulation and recovery.

**Vulnerability and Emotional Authenticity** (Brown, 2012): *Room Under the Stairs* is the most emotionally melancholic album, with heightened levels of sadness, fear, and negativity. These findings support Brené Brown's (2012) research on vulnerability, which suggests that authentic self-expression through art is a powerful means of emotional catharsis. Malik's increased openness about personal struggles in this album mirrors broader psychological patterns in which artists use their craft to process emotions and connect with audiences on a deeper level.

## VI. CONCLUSION

This study explored the psychological themes of self-determination, resilience, and vulnerability in Zayn Malik's lyrics, highlighting how his emotional expression evolves across his solo career. By applying sentiment analysis and psychological frameworks, we identified patterns that reflect his personal and artistic growth, demonstrating how music serves as a medium for self-expression and emotional processing. Malik's lyrics reveal a journey from optimism and autonomy in *Mind of Mine* to emotional turbulence in *Icarus Falls*, followed by introspection and vulnerability in *Nobody Is Listening* and *Room Under the Stairs*. These findings align with psychological theories on self-expression, and resilience-building through music.

However, this study has several limitations. Starting with sentiment analysis, while useful for quantifying emotional content, lacks the nuance to capture complex lyrical meanings, irony, or context-dependent emotions. Additionally, this analysis focuses solely on lyrics without considering musical elements such as tone, tempo, and instrumentation, which also contribute to emotional impact. Finally, the study examines only one artist's discography, limiting broader generalizability. Future research could incorporate qualitative lyric analysis, musical features, or cross-artist comparisons to deepen understanding of how musicians convey psychological themes through their work. Despite these limitations, this study underscores the psychological depth and emotional resonance in Malik's music.

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