

Research Article

A Computational Sentiment and Emotion Analysis of Kae Bahar's *The Good, the Bad and the Gringo*

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Article Info	Abstract
Article History	This study presented a systematic computational analysis of sentiment and emotion in Kae Bahar's <i>The Good, the Bad and the Gringo</i> . The objective of the study was to identify the emotional tone (valence) of the overall sentiment in the novel, to detect the trajectories of six discrete emotions (anger, fear, sadness, happiness, disgust, and surprise), and to examine the correlation between them. The study adopted a quantitative and qualitative approach and utilized Orange Data Mining v.3.37 software for the text analysis. More specifically, the study made use of SentiArt tool and Pearson Correlation tool, which are incorporated within the software, to address its objectives. The findings demonstrated that the novel, although ends on a positive note, is noticeably oriented towards negative sentiment territory as the life of the main character goes downward recurrently. The study also found that the six discrete emotions have trajectories with different ranges, and that both positive and negative correlations exist between several emotional arcs. The novel's affective structure, therefore, operates as a testament to endurance rather than a surrender to despair. The narrative foregrounds resilience, documenting the strained yet persistent adaptation of human consciousness to unrelenting adversity. The study contributes to the field of digital humanities methodologically as it supports the usefulness of SentiArt tool in computational literary analysis, and theoretically as it provides insights to the field from non-Western narratives. Moreover, the study contributes to the computational analysis of Kurdish literature, a domain that has often been overlooked in prior research.
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1. Introduction

Computational studies of narrative emotion have overwhelmingly concentrated on canonical Western literature. This focus has left a significant void in the understanding of how emotional dynamics are shaped by experiences of oppression and statelessness, gender persecution, forced migration and cultural displacement, and collective historical trauma. Kurdish literature, in particular, presents distinctive

emotional patterns rooted in collective memory and resistance that require culturally informed analytical approaches. The scholarly neglect of these affective narratives is described as a form of "epistemic violence" (Spivak, 1988), as it overlooks vital repositories of cultural memory for dispersed communities. Analyzing the emotive components expressed in novels provides a data-driven survey to examine the hidden purposes, worldviews, and missions of the novelist.

The study highlights a specific representational gap concerning gender-nonconforming protagonists in Kurdish fiction. The analysis of Kae Bahar's novel focuses on the character Marywan, who is declared a "neuter" (Bahar, 2024, p. 10) by religious authority. Marywan faces simultaneous persecution from family, society, and the state, representing a case of intersecting oppressions. The failure of existing analytical frameworks to capture such complex emotional architectures reflects a broader gap in understanding these narratives.

Furthermore, previous computational analyses have frequently treated novels as producing a singular, aggregate emotion arc. This approach is fundamentally challenged by recent findings in computational narratology. Research demonstrated that literary texts contain multiple simultaneous emotional trajectories. For instance, the emotional arc of the narration can be distinct from that of character dialogue. Collapsing these diverse trajectories into a single score overlooks the intricate ways different emotional dimensions might correlate or diverge, thereby obscuring a deeper understanding of narrative structure, characterization, and thematic development.

The research objectives of this study are threefold: first, to computationally detect emotional arcs across *The Good, the Bad and the Gringo*, tracking both overall valence (affective-aesthetic potential) and six discrete emotions (anger, disgust, fear, happiness, sadness, surprise) throughout the narrative progression; second, to examine correlations between these detected emotional arcs using statistical measures such as Pearson correlation coefficients, determining which emotional dimensions co-vary, which diverge, and which operate independently; and third, to interpret these computational findings within the cultural and historical context of Kurdish struggle and Bahar's specific thematic concerns regarding gender persecution, political oppression, and imaginative resistance through cinema. By mapping multiple emotional trajectories, the present research contributes to computational literary studies in general. Besides, it enriches Kurdish literary studies by providing empirical evidence for emotional patterns in fiction, addressing intersecting oppressions of statelessness, cultural persecution, and gender nonconformity.

Therefore, the research aims at answering these questions:

1. What is the valence of sentiment detected in the novel?
2. What trajectories do the six discrete emotions take in the novel?
3. What correlations exist between the novel's embedded emotional arcs?

2. Literature Review

Sentiment and emotion constitute not merely a thematic concern but a fundamental structural element of narrative, shaping reader engagement, immersion potential, and meaning-making processes through distinct emotional arcs that can be computationally traced (Jacobs, 2015; Jacobs, 2017). Their analysis aims to achieve ‘an automated extraction of the emotional content of text by converting it into machine-readable information, such as numbers and discrete labels (e.g., positive vs. negative), which can be then analyzed statistically or visualized via plots and graphs’ (Rebora, 2023, p. 1). Although sentiment analysis and emotion analysis are used interchangeably by several scholars, a distinction is often drawn between them in text mining (Kim and Klinger, 2019a). Both constitute an increasingly growing field within Natural Language Processing (NLP) that uses computational tools for understanding the emotional content and nuances within literary texts (Kim and Klinger, 2019a; Mohammad, 2012). However, sentiment is defined as the positive or negative feeling that underlies an opinion, often expressed as polarity: positive, negative, or neutral (Liu, 2015). The core objective of sentiment analysis is to determine the attitude of a speaker or writer regarding a particular topic, product, or service. Emotion, in contrast, is a more complex concept defined as ‘an integrated feeling state involving physiological changes, motor-preparedness, cognitions about action, and inner experiences that emerge from an appraisal of the self or situation’ (Mayer et al. 2008, p. 508). Emotion analysis, therefore, seeks to identify finer-grained discrete emotions such as joy, anger, fear, and disgust.

Sentiment-Emotion Analysis has significant applications across diverse domains, one of them is literature. In computational literary studies, it is used as a "distant reading" (Moretti, 2000, p. 56) tool to analyze large text corpora, revealing large-scale patterns in narrative structure and genre. A key application is the plotting of a story's "emotional arc" (Reagan et al., 2016), which visualizes the polarity and the fluctuation of emotional valence over the course of the narrative. Research has shown that even stylistically complex modernist novels, often considered "plotless," exhibit discernible emotional structures (Elkins and

Chun, 2019). In an ideal scholarly environment, computational approaches to literary analysis would seamlessly integrate with humanistic interpretation, providing empirical insights into emotional patterns while respecting the cultural specificity and aesthetic complexity of literary works (Elkins and Chun, 2019; Vishnubhotla et al., 2024).

The novel studied has been the subject of just one scholarly investigation. Beyad et al. (2018) employed a descriptive qualitative methodology framed within postcolonial theories, examining it as a born-translated novel that subverts Orientalist stereotypes and offers a nuanced Kurdish representation. However, the analysis remains largely textual and lacks empirical examination of the application of computational analysis of emotions which can provide an in-depth understanding of the motivations, choices, and decisions the characters make in taking certain routes throughout their perilous journey.

Sentiment and emotion analysis has been applied to a wide range of literary studies, on different levels and with various objectives. A rapid review of the literature on sentiment and emotion analysis shows studies which were conducted on the level of a single literary work (Kuivalainen, 2009; Miller, 2014), on subsegments of a text (Mikelin, 2025), on individual characters' dialogues (Jacobs, 2019; Kim and Klinger, 2019b, 2019c; Jacobs and Kinder, 2020; Franta and Silver, 2024), and on whole corpora (Nalisnick and Baird, 2013; Vishnubhotla et al., 2024). These studies aimed at quantifying the traditional qualitative interpretations of literary texts, tracking emotional arcs, investigating the interplay between themes and emotions, comparing between different authors, classifying texts by genre, examining emotional dynamics between characters, and comparing sentiments in literary translations. However, the current literature review is limited to studies addressed sentiment and emotion in a single literary work as this will be consistent with the aim of the present study.

Researchers have used sentiment and emotion analysis to track the emotional arcs in narratives (Hernández-Pérez, et al. 2024; Rossi and Öhman, 2025), aiming at identifying patterns in sentiment distribution (Hernández-Pérez et al. 2024) and providing valuable insights into the emotional impact of the narrative on the reader (Sherstinova, et al. 2023). The primary aim of the work by Öhman et al. (2024) was to introduce 'EmotionArcs', a dataset comprising emotional arcs derived from over 9,000 English novels, in order to understand how the dynamics of emotions represented in text influence a novel's reception and perceived quality. The methodology involved constructing these emotional arcs from the "Chicago Corpus" of 9,089 novels using an emotion intensity lexicon (covering eight emotions) enhanced by word

embeddings fine-tuned for literature, and then rigorously validating the resulting arcs against human annotations and existing sentiment models. The main findings of this study indicate that emotional complexity correlates positively with perceived literary quality.

Furthermore, sentiment analysis was used to compare and contrast the styles of different authors or periods, revealing patterns in their use of language and emotional expression (Li et al., 2024). The purpose of a study by Fiore (2024) was to compare the emotional arcs of Yevgeny Zamyatin's *We* and George Orwell's *1984* using sentiment analysis, focusing on dissimilarities to suggest whether a robust emotional arc is an essential component of a successful novel. The methodology involved applying sentiment analysis, a natural language processing technique, to the English texts of both dystopian novels to construct and compare their normalized emotional arcs, paying specific attention to the emotional highs and lows, or cruxes. The main findings demonstrated that *We* suffers from an *undeveloped emotional arc*, primarily due to its weak narrative voice (diaristic writing by an indoctrinated protagonist) and a resulting emotional trajectory that failed to fluctuate in proportion to foreboding events, sometimes registering them incorrectly. This contrasted sharply with *1984*'s highly developed emotional arc, leading the research to conclude that a strong, fluctuating emotional arc is an essential quality of successful work.

3. Methodology

3.1. Research Design

This research is a 'middle reading'¹ of Bahar's narrative in the sense that it integrates computational approaches to literary analysis (distant reading) and humanistic interpretation (close reading) to investigate sentiment and emotion patterns in the narrative. Thus, the study adopts a mixed method, combining quantitative and qualitative analysis to address its objectives. By computing both valence (sentiment) and discrete emotion arcs across the narrative of Bahar's novel and employing correlation analysis to examine relationships between these emotional trajectories, this research moves beyond aggregated sentiment scores toward a granular understanding of emotional complexity and interdependence. Specifically, the study investigates whether anger and fear arcs correlate due to shared persecution contexts, whether happiness and sadness exhibit negative correlations reflecting emotional alteration, and whether surprise operates independently from other emotional dimensions. These fundamental questions are central to understanding

¹ This term was first introduced by Blevins (2012) and used by Elkins and Chun (2019) in their literary studies.

how the structure of narratives affects experience.

3.2. Material

The material of the present study consists of the text of the novel *The Good, The Bad, and The Gringo* composed by Kae Bahar, a Kurdish novelist living in the UK. It is reasonable to proclaim that the principal inspiration behind the crafting of the novel can be attributed to Bahar's birth and upbringing in Kirkuk and that this assumption is supported by substantial evidence from the novel. In the tumultuous fictional world of the novel that is marked by political confrontation, social stigma, tribal mentality, gender ambiguity, and identity conflict, Marywan's emotionally charged coming-of-age story captures the essence of Kurdish struggle for freedom.

Set in the historically contested city of Kirkuk and the "God forsaken country" (Bahar, 2024, p. 406) of Iraq, the novel inspects the intricate challenges confronted by Kurdish people, who are caught in the midst of constant fight and political instability. The harsh realities of geographic constraints and shifting borders demonstrate how identity and existence are profoundly threatened. Marywan's journey into adulthood, amid political peril and social disgrace, functions as both physical and symbolic. The novel accentuates the profound sense of displacement and adversity experienced by Kurds, highlighting how territorial disputes impose a relentless struggle for self-determination and survival. In the 63 letters which the novel is made up of, Bahar shares vivid daily life animosities faced by Marywan in Kirkuk as well as his continuous endeavors to enjoy the vivacity of the present, deal with the emotional dilemmas and the innocence of adolescence.

Originally published in 2015 as *Letters from a Kurd*, the dramatic narration is not just an autobiography set against the backdrop of the Baath Party's horrendous crimes, political contradictions, patriarchy, sexual harassment (of Marywan), but it is also a staggering quest for hope, love, and sacrifice, and possibly writing a new chapter along the journey.

Marywan's traumatic childhood and his struggles to survive in a twisted society where physical and emotional persecution are rampant encourage him to think of intriguing adventure hoping to obtain freedom. Relying on the power of the imaginative and boundary-transcending world of cinema, Bahar zones in on the possibility of turning plight into art hoping to attract the attention of the global readership to the Kurdish aspirations for an independent Kurdistan.

3.3. Data Analysis

The study utilized Orange Data Mining v.3.37 software to analyze sentiment in the narrative *The Good, the Bad and the Gringo*. The software provides several vectors for sentiment analysis; however, the researchers have selected SentiArt tool designed by Jacobs (2019) specifically for the analysis of sentiment and emotion in literary texts. Firstly, SentiArt, unlike conventional tools, does not rely on predefined emotional dictionaries; it uses algorithms to map semantic and emotional orientation. Secondly, it is multilingual, which makes it applicable to international literature lacking pre-compiled sentiment lexicons. Thirdly, it can compute specific affective values, not only basic "positive/negative" polarity. Fourthly, it can generate emotional arcs for individual characters of a narrative. Finally, it functions well at the micro and macro-levels, enabling researchers to evaluate emotion at sentence-level as well as detecting emotional trajectories of complete novels (Jacobs, 2019). Furthermore, the tool has been empirically validated through multiple studies demonstrating high predictive accuracy for human emotion ratings, successful classification of literary characters' emotional and personality profiles, and effective computation of aesthetic-affective responses to narrative fiction (Jacobs, 2019; Jacobs et al., 2020; Tilmatine et al., 2024).

SentiArt operationalizes discrete emotions by computing similarity scores between words in a text and emotion label words within fastText vector space models trained on massive corpora, thus capturing semantic associations between narrative language and fundamental emotional categories (Jacobs, 2019). This approach enables tracking of how each discrete emotion fluctuates across the narrative, creating emotion-specific arcs whose correlations can reveal whether emotions co-occur (positive correlation), alternate (negative correlation), or operate independently (near-zero correlation).

Before conducting the sentiment analysis, the narrative was divided into a corpus of 63 text files, corresponding to the 63 letters that comprise the narrative. Then, the text files were uploaded onto Orange software for preprocessing and calculating sentiment scores. The preprocessing phase included transformation (lowercase, remove accents, parse html and remove urls), tokenization (Regex pattern `\w+`), and normalization (UDPipe Lemmetizer). A chart was created for each type of sentiment using Line Plot within Orange software. Besides, features statistics analysis was conducted to calculate the distribution, the mean, the mode, the median, the dispersion, the minimum score, and the maximum score of the valence (sentiment) and each of the six discrete emotions. Finally, a Pearson Correlation test was used to examine

the correlation between the emotional trajectories in the narrative.

4. Results and Discussion

4.1. Valence of Sentiment Detected in the Novel

The novel presents a deeply emotional world shaped by anger, fear, sadness, disgust, happiness, and surprise, each of which performs a distinct narrative function across its 63 chapters. Based on a quantitative analysis of the composite sentiment score across the novel's chapters, the narrative demonstrates a persistently negative valence, ranging from a minimum of -0.400 to a maximum of -0.050, with a mean of approximately -0.225 and a mode score of -0.400. These scores propose that the overarching emotional arc of the narrative is most frequently at a moderate negative level of -0.405, but it does rise to less negative levels on occasion, though it never reaches a positive value (see Table 1 and Chart 1). The moderate level of negativity can be ascribed to the constant balance between negative and positive emotions. At the time that anger, fear and sadness work to intensify the negative valence, happy moments interfere to mitigate the severity of the valence.

Table 1. Feature statistics of sentiment and the six emotions in the novel.

Name	Mean	Mode	Median	Dispersion	Min.	Max.	Missing
sentiment	-0.222	-0.405	-0.229	-0.32	-0.405	-0.059	0
anger	0.627	0.422	0.623	0.114	0.422	0.761	0
sadness	0.756	0.642	0.759	0.073	0.642	0.871	0
fear	0.741	0.596	0.739	0.094	0.596	0.929	0
disgust	0.279	0.146	0.281	0.194	0.146	0.388	0
happiness	0.786	0.661	0.792	0.093	0.661	0.989	0
surprise	0.245	0.088	0.244	0.242	0.088	0.35	0

The novel embodies the overall negative sentiment through the oppressive framework of the tyrannical Ba'athist regime, an intolerant society, and a merciless patriarch. In other words, the macro-negative sentiment is heavily driven by environmental tokens of state-sponsored terror and domestic containment. The very beginning of the novel makes this clear as Marywan states:

I don't exist. Officially I am dead. I was hanged a month ago. There was no court case, no judge, no defence. The decision to end my life was taken by the Ugly Arab, the head of Saddam's secret police, in my hometown, Kirkuk. My name, Marywan Rashaba, must be filed alongside thousands of others who have been executed in this country, although I would have been given a false age because, even by the twisted standards of Iraq's

dictatorship, as a sixteen-year-old boy I am still too young to be hanged (Bahar, 2024, p. 7).

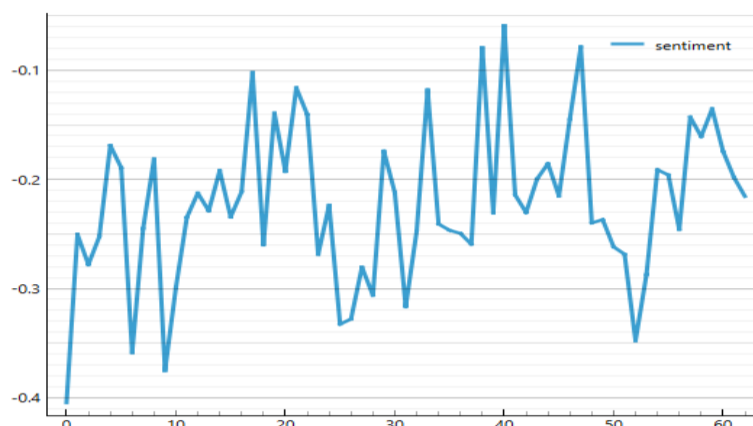


Chart 1. Visualization of sentiment throughout the novel

Another sheer peak of negative sentiment rises in Letter 53 when the intelligence knew about Marywan's letters to Gringo and started interrogating him and torturing him. Moreover, Bahar's use of words such as *tyranny, terror, suffocating, trap, execution, doom, humiliated, desperation, war etc.* contributes to the intensity of the narrative's negative sentiment.

4.2. Trajectories of the Six Discrete Emotions in the Novel

4.2.1. Anger

The statistical analysis for anger indicates a range from 0.422 to 0.761. The mean of 0.627, in conjunction with a modal value of 0.422, signifies that while a substantively elevated level of anger is a consistent feature of the narrative, the emotional state exhibits a pronounced tendency to regress to a moderate baseline of 0.422, from which it periodically escalates into more intense, peak-level expressions (see Table 1 and Chart 2).

Anger emerges as a strong and almost constant emotion. Its scores fluctuate slightly, suggesting that the narrative repeatedly keeps an intense burst of anger while also producing moments of moderate levels. A good example of anger can be found in Rashaba, Marywan's father, who believes God will punish him eternally for having such a cursed child and wife. 'It is your entire fault, stupid woman. In your heart you wished for a girl when you were pregnant with him...girls are all born sinners. You and I will go to hell and will burn in the eternal fire' (Bahar, 2024, p. 167).

Rashaba is almost always angry about his son and his family and shouting at them. Marywan narrates:

We heard Rashaba before we walked into the courtyard. He was shouting and kicking the

door of the gymnasium, brandishing a large kitchen knife in his right hand. 'I will break the door down if you don't open it at once. Trouble, open up!' Rashaba shouted (Bahar, 2024" 73).

Marywan also had moments of anger through his life journey. One scene he got angry is when he fought Kojak, the son of Shawes Dog, and his classmate. He was "furious" that Kojak's team "stayed back" when they saw him so. Another scene is when Zana told them to cross borders to Iran. He visualizes this scene saying, "I sat on the truck floor and put my head in my hands, feeling the anger boiling the blood in my veins" (Bahar, 2024, p. 405).

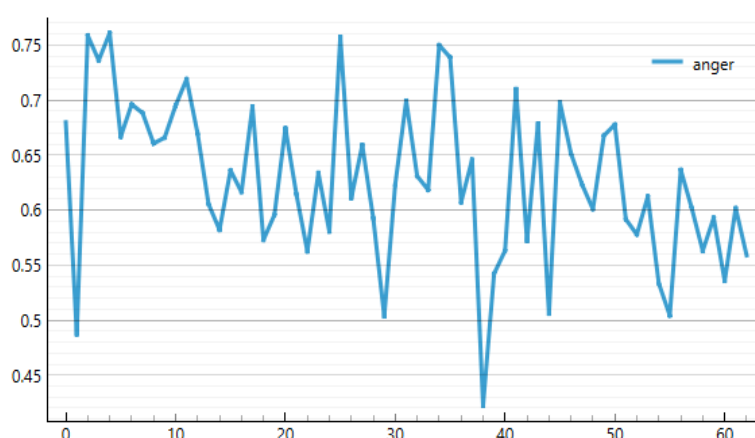


Chart 2. Visualization of anger throughout the novel

4.2.2. Fear

The values for fear in the narrative extend from 0.596 to 0.929. Given a mean score of 0.741 and a mode of 0.596, it is evident that an atmosphere of apprehension is a sustained presence, most commonly occurring at an intensity of 0.596, yet it periodically surges to levels approaching its peak (Table 1 and Chart 3). Fear is the novel's most pervasive negative emotional atmosphere. It remains, like anger, consistently high with limited variation, reflecting the constant presence of political persecution, religious dogma, family surveillance, and social punishment. Rashaba, Marywan's father, embodies this fear through silence about politics, distrust of others, and rigid faith. Rashaba's lips are sealed when people discussed politics. He warns Marywan that the regime has ears everywhere and can eat him in one bite. 'I cannot protect you, nor can anyone else. Do you understand Marywan?' (Bahar, 2024, p. 17). As a Kurd who is marginalized and oppressed, Rashaba treads through life cautiously, fearing political persecution. Although Rashaba's father was executed for political reasons, he is so terrified that he forbids family members to mention his name in his presence, for "that would have meant talking politics." (Bahar, 2024, p. 83). He

clings to his faith and uses it as a shield to protect or rather to hide his ethnic identity.

Marywan inherits this climate of fear, which distorts his sense of self, isolates him from others, and makes him suspicious even of those closest to him. He pronounces his utmost fear triggers in his first letter to Gringo. He fears confronting religious obligations, the disintegration of his gender identity, the disorientation of his social status, and his being a Kurd. Once it is revealed that Marywan is sexually ambiguous, he anticipates his father to cut his throat and to consider him as a cursed child. Moreover, his fear of being a Kurd and that he is not allowed to say Kurdistan or the probability of becoming a spy for the government and a killer haunt his imagination, making him restless, and urging him to lose trust. Although fear shows the highest score at the beginning of the novel, it continues almost steady throughout the whole narrative. This is substantiated by the spread of words like *fear*, *shudder*, *cold*, *knife*, *throat*, *hiding*, *threat*, *kill*, *afraid*, *monster*, *spy*, *cut*, *burn*, *hit*, *shot*. Etc.

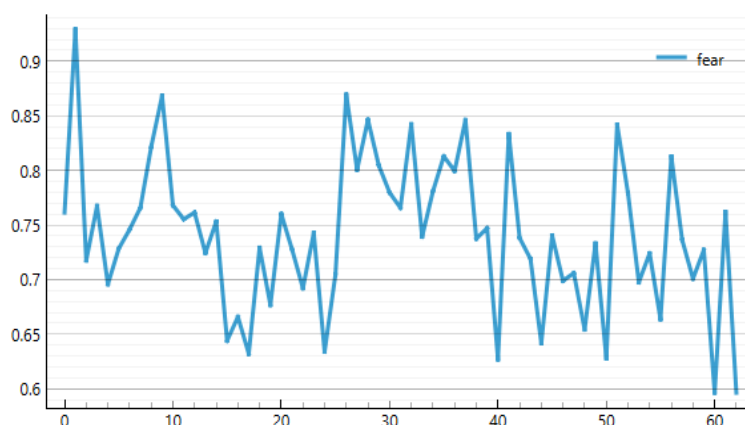


Chart 3. Visualization of fear throughout the novel

Because of his fear, Marywan cannot reveal his love for Aida or else his father would disown him because she is a Christian. In addition, he uses nicknames to disguise the identity of people involved in his life, fearing persecution, imprisonment or even death. Although Marywan adopts nicknames as a means to escape revenge and execution, it emotionally intensifies the fear of being caught and punished. He changes a friend's name into *Popcorn* because he is Yezidi and his uncle's name to *Hercules*.

4.2.3. Sadness

The statistical profile for sadness shows a spectrum from 0.642 to 0.871. The calculated mean of 0.756, compared to the mode value of 0.642, demonstrates that a somber tone is a pervasive and defining element of the narrative. It most commonly persists at a baseline of 0.642, while also building to more profound levels at regular intervals (see Table 1 and Chart 4). Sadness is equally stable and deeply embedded in the

narrative. The emotional tone remains consistently melancholic, shaped by loneliness, social alienation, family disintegration, and the broader suffering produced by totalitarian rule. Marywan's inability to form genuine relationships, his sense of being misunderstood, and the lack of affection in his household all sustain this atmosphere of sorrow and create blocks of text dominated by absolute grief and psychological fragmentation.

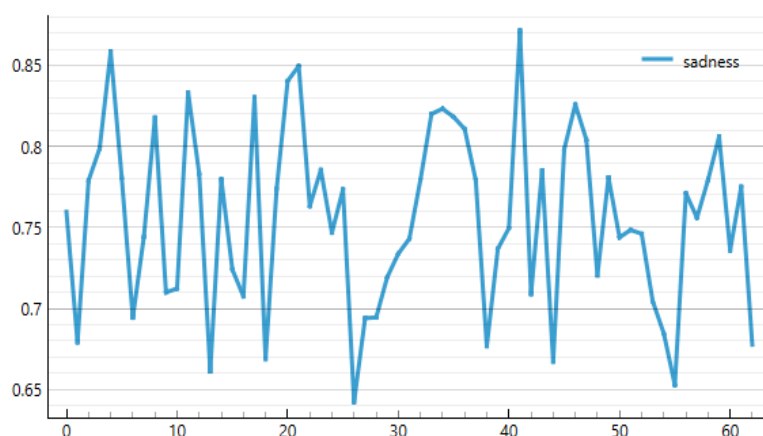


Chart 4. Visualization of sadness throughout the novel

Sadness is marked by lexical item such as *shattered, hollow, cry, grave, mourning, broken, dark, tears, death, etc.* and by complete sentences as the following quotations reveal:

"Yet hanging would have seemed like a blessing, a relief from suffering, an escape from the man who had the power to end my life but then kept me alive only to gratify his disgusting desires" (Bahar, 2024, p. 7).

"I love my mum and feel sorry to have disappointed her right from my birth" (Bahar, 2024, p. 10).

"He was sitting on the side of the pitch singing a melancholy song" (Bahar, 2024, p. 12).

"She wore only black, and she said that she cried day and night" (Bahar, 2024, p. 22).

4.2.4. Disgust

The metric for disgust fluctuates from a minimum of 0.146 to a maximum of 0.388. With a mean of 0.280 and a mode of 0.146, the pattern indicates that the emotion is typically present at a low intensity of 0.146, but the narrative is intermittently interrupted by moderate elevations in this feeling (see Table 1 and Chart 5). Disgust is triggered primarily by moral and physical revulsion toward societal taboos and systemic corruption. Moral revulsion is exemplified by sexual abuse, and the misuse of religious authority by mullah Zoa'Adin. Physical revulsion is embodied by the grotesque entitlement of Ba'athist officials who abuse

power casually. Disgust disrupts the emotional baseline and leaves a lasting impact on Marywan, who is too young to resist or fully understand what is happening to him. Disgust, therefore, functions as a sharp narrative rupture rather than a continuous emotional condition.

Bahar makes use of lexical items charged with the emotion of disgust, such as *rotten, sickening, vile, corrupt, filthy, shameful, rat, dirt, grubby, spat*, etc. He also provides descriptions of incidents that happened to Marywan that evoke disgust:

I live in the company of a rusty military bed, a smelly blanket, a mattress stained with blood and semen, a bucket from which I drink water, another one that I use instead of a toilet, and a broken wooden chair. (Bahar, 2024, p. 7)

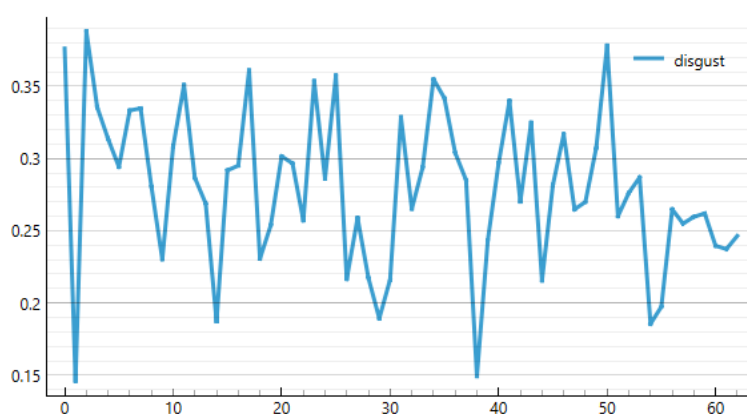


Chart 5. Visualization of disgust throughout the novel

4.2.5. Happiness

The data for the happiness metric extends from a lower bound of 0.661 to an upper bound of 0.989. The central tendency, indicated by a mean of 0.786 and a mode of 0.661, shows that happy moments in the novel have the highest mean, mode and median, and a low dispersion (Table 1 and Chart 6). This suggests that happiness is therefore not absent, and going side by side with anger, fear and sadness, as the dominant emotions. (see Table 1 and Chart 6). Despite the novel's darkness, it contains moments of joy, humor, love, and hope. Marywan's relationship with Sunshine and Aida, his interest in cinema and language, his letters to *Gringo*, and his experiences of survival and reunion offer brief emotional relief.

I opened my eyes. I was in my Private Viewing Room, where my friends and I could be safe, and the best place I could have wished to be at that moment; in my magic world, in my beloved cinema (Bahar, 2024, p. 417).

Some of the lexical items which reflect the happy currents are *magic, light, screen, hero, America, dream, flight, salvation, love, good, Sunshine, Happiness, Peaceful, smile, wedding, joy, free, fly*, etc.

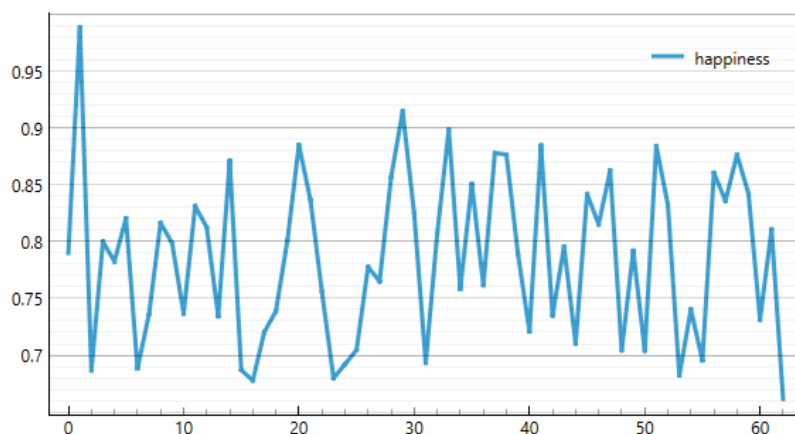


Chart 6. Visualization of happiness throughout the novel

4.2.6. Surprise

The analysis of the surprise metric illustrates its values span from a minimum of 0.088 to a maximum of 0.350. With a mean of 0.245 and a mode of 0.088 (Table 1 and Chart 7), the statistical results signify that the narrative's default state is one of minimal surprises, yet this baseline is routinely superseded by moderate, transient spikes. This pattern, characterized by a high degree of volatility, positions surprise as a key driver of sudden narrative shifts and revelations, whose impact is derived from its stark contrast against a backdrop of emotional predictability.

After work, in the afternoon, we went for a walk in the desert as the shadows lengthened and the sun became an intensely orange ball which bounced just above the horizon. We were silent for a moment, before Rabbit asked which film I had seen on the day I spoke to Aida. I did not answer him directly, but instead asked, 'Do you have any news of Shawes?' This puzzled Rabbit. He looked into my eyes, perhaps for the first time that day. 'Why?' (Bahar, 2024, p. 143).

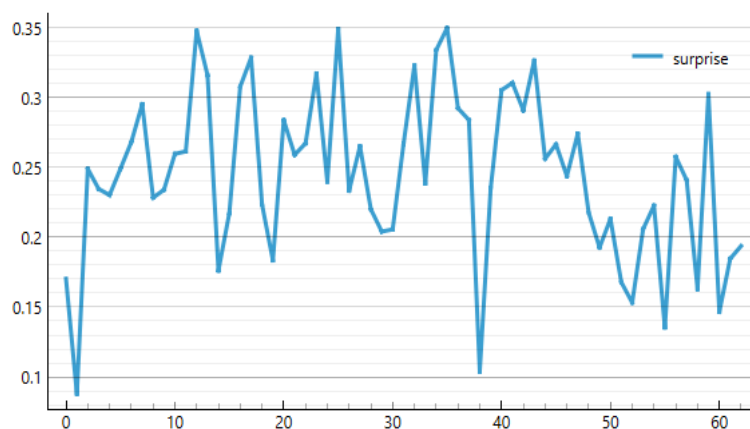


Chart 7. Visualization of surprise throughout the novel

On the one hand, by exploring taboo topics and depicting characters that are flawed and defective,

the narrative orients readers to emotionally invest in conditions where characters are oppressed physically and psychologically. On the other hand, by displaying the glaring fires of Babagurgur oilfields, Bahar explores optimism as fire symbolizes hope. This dichotomy reflects the inner conflicts that are imposed on Kurds and their relentless strife for sovereignty which makes the story irresistible to follow.

Overall, the novel is structured around a dense emotional field dominated by fear, sadness, anger, and happiness while disgust appears in severe episodes and surprise provide brief but meaningful interruptions. These emotions are not merely personal responses; they are tied to political oppression, ethnic marginalization, sexual violence, and cultural suppression under dictatorship. The result is a narrative of trauma, resistance, and fragile hope.

4.3. Correlations Between the Novel's Embedded Emotional Arcs

To interpret the correlation coefficient values, the researchers utilized the stratifications suggested by Schober et al., (2018), as shown in Table 2.

Table 2. Correlation Coefficient values interpretation (Adapted from Schober et al. (2018, p. 1765))

Absolute Magnitude of the Observed Correlation Coefficient	Interpretation
0.00-0.10	Negligible correlation
0.10-0.39	Weak correlation
0.40-0.69	Moderate correlation
0.70-0.89	Strong correlation
0.90-1.00	Very strong correlation

Several stratifications (with different cutoff points) have been previously published.

The results in Table 3 indicate that there was a weak positive correlation between anger and fear, sadness and sentiment, happiness and sentiment, sadness and surprise; and a weak negative correlation between anger and happiness, disgust and fear, disgust and sentiment, disgust and happiness, anger and sentiment. Moreover, there was a moderate negative correlation between fear and sentiment, whereas there was a moderate positive correlation between disgust and sadness, disgust and surprise, anger and surprise, anger and sadness, and fear and happiness. There was a strong positive correlation only between anger and disgust.

The emotional arc correlation values from the novel's Pearson analysis revealed distinct patterns of affective co-occurrence. The strongest positive correlation existed between anger and disgust (0.829), indicating a tightly coupled dyad. Conversely, fear and surprise showed negligible linkage (0.009),

representing divergent narrative trajectories. Furthermore, fear exhibited a moderate negative relationship with overall sentiment (-0.421). These metrics illustrate the complex structural interplay of emotions within the narrative's psychological landscape.

Table 3. Output of Pearson Correlation test of sentiment and emotions in the novel

No.	Emotional arcs		Correlation value
1	anger	disgust	0.829
2	fear	happiness	0.622
3	anger	sadness	0.572
4	anger	surprise	0.57
5	disgust	surprise	0.57
6	disgust	sadness	0.568
7	fear	sentiment	-0.421
8	sadness	surprise	0.388
9	anger	sentiment	-0.35
10	disgust	happiness	-0.345
11	happiness	sadness	0.341
12	sadness	sentiment	0.307
13	disgust	sentiment	-0.238
14	happiness	surprise	-0.236
15	happiness	sentiment	0.23
16	disgust	fear	-0.179
17	anger	happiness	-0.143
18	anger	fear	0.125
19	fear	sadness	0.049
20	fear	surprise	0.009
21	sentiment	surprise	0.006

Rashaba constantly tortures Marywan physically, whips him with a piece of hose, burns him on the top of his wrist with a red, hot knife by pressing it into his skin, and bashes his “head nearly knocking” (Bahar, 2024, p. 211) him out. His life is full of “injustice, fear, uncertainty, and pain,” (Bahar, 2024, p. 216). Besides, the murdering of his two uncles, the amputation of his close friend’s leg, Rabbit, the rape of his beloved, Sunshine, and other disgusting incidents ignited anger inside Marywan.

Although Marywan describes himself as a ‘broken scarecrow’ (Bahar, 2024, p. 232) living in a fearful city as a ‘cursed person’ (Bahar, 2024, p. 324) surrounded by Abu Ali’s men in uniforms, police, militia, Special Forces, and Mukhabarat and that he suspects everyone and thinks he is being followed and could be taken at any moment, a glimpse into the ‘ever-burning flames of Babagurgur in the middle of the oil fields’ (Bahar, 2024, p. 249) revitalizes freedom. These correlations where volatile anger and fear

counterpoint resilient and happiness underscore the dynamic pulse of the novel. The story's never-ending fluctuations reveals a wave-like movement in sentiments. Marywan's journey swings between states of anxiety and hope, conflict and a constant endeavor to achieve peace and recognition.

Building upon the established dyad of anger-disgusting and the dissociated fear-surprise, further analysis reveals a significant inverse relationship between the fear arc and overall narrative sentiment (-0.421). This position fear as a primary counter-sentiment driver, whereas other negative emotions like sadness show a positive, albeit weaker, correlation with sentiment (0.307), suggesting a more nuanced, possibly cathartic, narrative role distinct from simple antagonism.

5. Conclusion

Whereas the paper demonstrated that persistent narrative emotional volatility makes a defining contribution to psychological tension, the emotional data which is oscillating between suppressed baseline effects and acute volatile peaks serves a mimetic function, mirroring Marywan's physical scars and psychological wound. Mean and mode values reveal sustained emotional patterns shaped by character dynamics, plot shifts, and critical events: happiness, sadness, anger, and fear show repeated peaks and occasional spikes, while negative sentiment reflects cute yet volatile undercurrents that structure the narrative's tension. Additionally, surprise and disgust appear with lower means and modes, producing brief but meaningful fluctuations that punctuate key scenes and heighten the story's emotional volatility. This pervasive negativity resists interpretation as mere nihilism or meaninglessness, functioning instead as a form of critical realism. The research drew on recognizing the relationship between analyzing linguistic dimensions of the text and the emotional undercurrents of characters and the narrative voice to validate the implications of sentiments in shaping memories, thoughts, actions, decisions, attitudes, and experiences, and Marywan's personal profile. His constant strife to survive in a world that is dominated by unforgiving social rules and cruel political policies resists being confined to any one-dimensional analysis.

Analysis of sentiments offered a more nuanced foreground underscoring the fluctuation of various emotions that helped shape the content of the novel. From its portentous and despairing opening lines to its violent, bloody climax and overwhelming resolution, the narrative plunges readers into a realm of relentless strife to escape being killed, stigmatized, and ostracized, leaving a lasting impression on those who experience emotional abuse, physical exploitation, moral decline and mental distress. The novel is a tale of resilience against authoritarianism that sought to eradicate heritage, suppress identity, and erase dreams of

sovereignty. However, as one tyrant falls, another rises, using control with the same unsympathetic hands, drawing out the conceded truth that persecution is never perpetual. The Kurdish struggle is not merely a tale of suffering but a testament to the will to survive and flourish similar to Marywan's unwavering spirit. Similarly, and amid war and bigotry, Marywan is still passionate about going to the cinema, is not submissive, and defies social restrictions imposed upon him, and refuses to die for nothing. His story is one of hope carved out in hardship, a reminder that life's complications are not meant to break him but to mark his path with lessons of endurance, courage, and unity. Similar to the unbending mountains Kurds call home, Marywan stands scarred emotionally and injured physically yet proud, persecuted yet unbowed waiting for the day when existence and identity is no longer deferred but preferably and hopefully recognized. The novel serves as a warning about the corrupting influence of authoritarianism and the extremes to which politicians could subjugate people emotionally and physically to hold on to power. Kurdish people, scattered across nations and deprived of a homeland, endured massacres and cultural erasure. Marywan's journey mirrors theirs and echoes their history. *The Good, the Bad and the Gringo* portrays a world where tension and melancholy dominate, although positive emotional relief always interrupts mitigating the severity of negativeness, underscoring a narrative of unresolved hardship and emotional fragility. To read Marywan's adventure is to feel the pain of persecution, to walk through the serrated corridors of an outcast, and to witness the burden of a person who fought for centuries to exist.

Despite its robust findings, the current study is not without limitations. The study analyzed one Kurdish novel, which makes the results ungeneralizable to Kurdish literature. Another study may conduct a sentiment and emotion analysis on a collection of Kurdish novels to pinpoint emotional currents generalizable to Kurdish literature. Moreover, the study focused on detecting emotional arcs and trajectories in the novel rather than performing a literary analysis within the framework of literary criticism theories. Thus, a suggested study might be done addressing this objective. Another study could trace the emotional trajectories in the narrative for each character individually.

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