
RESEARCH ARTICLE

From the Perspectives of Attitude System: A Corpus-based Study of *The Time Machine*

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ABSTRACT

H.G.Wells' *The Time Machine* is a famous scientific fiction, but it is rich in theme. It might be regarded as a political fable or a dystopia as well as one of the first works of science fiction. Since the publication of this novel, studies on *The Time Machine* have mainly focused on the aspects of its genre and narrative art, and only a few studies were conducted from the linguistic perspective. Through a corpus-based method, this paper focuses on how Wells expresses his concerns about social class division and the degradation of human society in *The Time Machine*. Under the guidance of Appraisal Theory, Attitude resources that are related to Wells will be classified and analyzed with some appropriate examples. The findings show that Wells employs more positive Attitude resources to glorify the civilized human society represented by the Eloi and express his concern about the degradation of human civilization. This research discusses Wells attitude in *The Time Machine*, which provides an alternative perspective on the analysis of this novel and proves the practicability of the Attitude System in the analysis of literature works.

KEYWORDS

Attitude System; *The Time Machine*; corpus-based method

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1. Introduction

The Time Machine is a science fiction novel published by the famous British novelist H.G.Wells in 1895. It is not just one of the first works of science fiction but can also be read as a political fable or a dystopia. The work tells the time traveller who invented the machine that can gallop in time latitude in the past and future at will. When he took the machine to the year 802701 A.D., he was presented with a strange and fearful scene in front of him. Humanity was divided into two races: the Eloi and the Morlock. Through the scientific imagination of "time travel," Wells expresses his thoughts on various issues such as technological progress, class relations, human evolution and social structure. Through a corpus-based method and the Attitude System from Appraisal Theory, this paper explores how Wells expresses his concerns about social class division and the degradation of human society in *The Time Machine*.

2 Appraisal Theory and Attitude System

Appraisal Theory that can be placed in the interpersonal system within the Systemic Functional Grammar was developed by Martin and White and their colleagues in the 1990s and 2000s (Martin & White, 2005; White, 2015). A group of researchers, including Martin, launched a literacy project which was involved in the Disadvantaged Schools Program's "Write it Right" between 1991 and 1994. Articles *English Text: system and structure* (Martin, 1992) and *Reading positions/positioning readers: judgment in English* (Martin, 1995) by Martin became an initial exploration of the foundation of the Appraisal Theory. Later in 2000, *Beyond Exchange: Appraisal Systems in English* (Martin, 2000), which was written by Martin, marked the formal birth of the appraisal theory system. Then, Peter White (White, 2001) published the article *Appraisal: An Overview*, which provided a further explanation of Appraisal Theory. Thereafter, Martin and White (2005) jointly published the book *The Language of Evaluation: Appraisal in English*, in which they elaborated on the form of Appraisal Theory.

Appraisal Theory, according to Martin and White (2005), is divided into three sub-categories: Attitude, Engagement, and Graduation, with Attitude serving as the core of the appraisal system. The attitude System is one of the three sub-systems

corresponding to the three sub-categories, while Attitude is relevant to our emotional reactions, the judgement of behavior and evaluation of things. In other words, Attitude takes language resources as a tool to explain one's perceptions of behaviors, texts, and phenomena. The attitude system can be divided into three sub-systems which are conventionally referred to as emotions, ethics and aesthetics: appreciation, judgment, and affect.

According to Marting and Rose(2007), appreciation belongs to the category of aesthetics, and there is a distinction between positive and negative, direct and indirect appreciation towards things. There are three parts of the appreciation system: reaction, composition, and valuation. Judgment refers to the positive or negative evaluation of human behavior by an institutional system of norms. Social norms related to judgment are: rules and regulations, less precisely defined social expectations, and value systems. Social esteem and social sanction are the two most common categories of judgments. Judgments of social esteem involve the evaluation of a person's dignity as enhanced or diminished by the society in which he or she lives, with tendencies toward both praise and criticism. The judgment of social sanction involves a statement, i.e., certain rules or regulations coded explicitly or implicitly by culture. Thus, it is related to legitimacy and morality and has both tendencies toward praise and condemnation. Judgement of social esteem contains three aspects: normality, capacity, and tenacity, while social sanction includes two kinds of Judgment which are veracity and propriety. Affect refers to emotional reactions and dispositions, usually realized by psychological processes, and can be positive or negative. Emotions of Affect were divided into three major sets: un/happiness, in/security, and dis/satisfaction.

Some studies on Appraisal Theory are mostly limited to the lexical level, i.e., they focus more on the emotional and evaluative meanings expressed by the evaluation words (Martin & White, 2005; Ochs & Schiefflen, 1989). There are also researchers focusing on structures at the grammatical level (Hunston & Sinclair, 2000). Francis (1995), Lemka (1998) and Groom (2005) have all explored the appraisal meaning of the pattern "it V-link adj. that". In addition, Liu (2009) summarizes 8 colligations to investigate the affect's structural potential.

3. Method

This paper builds a micro corpus of 52,345 tokens and 45,601 words with the text from *The Time Machine* and selects the British National Corpus as a reference corpus. Based on this corpus, the positiveness and negativeness of words and patterns used are analyzed to identify and confirm the attitudinal resources in this novel.

First of all, using the online corpus tool Sketch Engine to get a frequency list and a keywords list. Generally, the basic theme of the novel will be discovered by analyzing the most frequent words and keywords.

Then, tagging the text by UCREL Semantic Analysis System (USAS) and according to the Tagset classifying the semantic field of words which describe the Eloi and the Morlock (or the Upper-world and the Under-world). The semantic recognition of USAS is broadly based on the *Longman Lexicon of Contemporary English* (Mc Arthur 1981). The annotation of each lexical unit has one or more semantic tags, which are divided into first-order and second-order annotations. The main factors that affect the ranking of tags are part of speech, word frequency, context, and neighboring words. There are 21 first-level semantic domains inside the system, and each semantic domain includes several sub-domains.

Furthermore, selecting the adjectives tagged by Emotion Label or Psychological Actions, States and Process Label as the node words to search for their colligations. All the factors above attribute to calculating the three sub-categories of the Attitude System and illustrate the general features of their distribution and frequency.

4. Results and discussion

4.1 Theme analysis

Word frequency statistics is one of the basic tools of corpus research methods. In this study, the high-frequency words in *The Time Machine* are analyzed with the help of Sketch Engine, and the data are organized as shown in Figure 1. According to Figure 1, except for pronouns, the word "time" is the most frequent content word in the novel. It highlights the theme of this novel as time travel.

Figure 1

Word	Frequency	Word	Frequency	Word	Frequency	Word	Frequency	Word	Frequency
1 .	3,016	11 "	662	21 for	329	31 –	195	41 ?	151
2 the	2,955	12 that	646	22 me	287	32 they	176	42 so	148
3 .	2,284	13 had	568	23 but	272	33 you	168	43 all	146
4 of	1,506	14 it	559	24 time	232	34 him	167	44 their	145
5 and	1,481	15 he	469	25 her	224	35 one	166	45 then	140
6 i	1,317	16 my	455	26 this	218	36 have	156	46 which	138
7 a	1,155	17 as	404	27 on	214	37 there	155	47 be	135
8 to	1,109	18 his	399	28 not	213	38 could	155	48 is	134
9 in	758	19 with	336	29 were	199	39 by	152	49 an	130
10 was	753	20 at	334	30 from	197	40 into	152	50 no	126

Keywords are words with a particular word frequency when compared to a reference corpus. Keywords give academics a suitable starting point for furthering their qualitative interpretation of a language phenomenon. (Qian, 2010) Keywords are not necessarily the most commonly used words in the text. A keyword analysis is mainly used for comparison between corpora, which is essentially a frequency comparison and can be effective in discovering the linguistic features of a corpus. This study uses keyword analysis to reveal the thematic features of *The Time Machine*. In this study, the British National corpus was used as the reference corpus, and Sketch Engine was used to generate a list of keywords (see Figure 2). Words such as weena, morlocks, eloi, under-world and upper-world are in the forefront of the keyword list, showing the scenes Wells tries to present, which is a polarized society in the future age.

Figure 2

Word	Word	Word	Word	Word
1 weena	11 hill-side	21 hillock	31 good-bye	41 to-night
2 morlocks	12 neighborhood	22 hither	32 to-morrow	42 to-day
3 filby	13 whitechapel	23 thruppence	33 marie	43 therewith
4 morlock	14 upper-world	24 time-dimension	34 queer	44 porcelain
5 sphinx	15 incontinently	25 presently	35 jeannette	45 hanbury
6 camphor	16 whore	26 winslow	36 blackness	46 cupola
7 under-world	17 smoking-room	27 darkling	37 futurity	47 ruinous
8 eloi	18 pedestal	28 air-tight	38 lever	48 clamber
9 coachman	19 thither	29 traveller	39 indescribably	49 mantel
10 harrington	20 favorite	30 thanks	40 andrew	50 keller

4.2 Attitudinal analysis

With the help of the corpus tool AntConc, the three sub-categories of the Attitude System and the general features of their distribution and frequency are calculated and illustrated. According to Table 1, there are 1259 attitude appraisal words relevant to the Eloi and the Morlock in the novel. In terms of the distribution of attitude resources, the affect category has the most words, and the judgement category is the least frequent, accounting for only 10.64% of the words. This may be because *The Time Machine* is a novel telling a story rather than a biography, and the text contains a great deal of internal monologue that indicates the main character's emotions and does not comment on the characters in a straightforward way.

Table 1 Distribution of Attitude Resources

	Affect	Judgement	Appreciation	Total
Number	719	134	406	1259
Percentage	57.10%	10.64%	32.25%	100%

According to Table 2, as far as the polarity distribution of attitude resources is concerned, the percentage of positive words almost equals that of negative words, showing that the author's attitude is both optimistic and pessimistic. On the one hand, Wells compliments the noble human civilization. On the other hand, for fear of an alienated industrial society coming, Wells expresses his disgust through the protagonist.

Table 2 Distribution of Positive and Negative Attitude Resources

	Polarity	
	positive	negative
Number	642	617
Percentage	50.21%	49.79%

The following three sections will analyze the specific use of each of the affect resources, appreciation resources, and judgement resources in the text.

4.2.1 Analysis of affect resources

Affect is a positive or negative evaluation and an emotional response (White 2015). It refers to the complex feelings that humans are born with in the mind. Specifically, Affect shows the interpretation of a person's emotional reactions to behaviors, processes and phenomena, and the way a person emotionally disposes of people, things or states of affairs can be inferred from emotional resources. In *The Time Machine*, the protagonist confronts the Eloi with a positive feeling in most conditions.

Example 1: *"Indeed, there was something in these pretty little people that inspired confidence—a graceful gentleness, a certain child-like ease."*

Here "pretty" and "little" shows these Eloi are petite and cute in the protagonists' mind and give him a very relaxing and pleasant aesthetic feeling. The protagonist appreciates them.

Example 2: *"...I associated them in some indefinite way with the white animal I had startled in my first passionate search for the Time Machine. But Weena was a pleasant substitute."*

Weena is the solace of the protagonist in such a foreign land; as long as she is around, even the most important time machine can be temporarily forgotten. The protagonist is deeply affected by the wonderfulness of this little girl.

Example 3: *"They were the only tears, except my own, I ever saw in that Golden Age. When I saw them, I ceased abruptly to trouble about the Morlocks and was only concerned in banishing these signs of the human inheritance from Weena's eyes. And very soon, she was smiling and clapping her hands while I solemnly burned a match."*

Even Weena's tears are even wonderful, as if it was the product of the Golden Age. The childlike purity of being curious just about a match easily elicit the protagonist's response.

Example 4: *"The delicate little people must have heard me hammering in gusty outbreaks a mile away on either hand, but nothing came of it."*

The meaning of the word "delicate" is more positive because such delicacy arises protagonist's sympathy rather than contempt.

Most of the appreciation towards the Eloi does not represent the love for any individual of them but shows the longing for the elegance, nobility and gentleness behind it, the best aspect of human civilization. Such is just what Wells tries to glorify.

4.2.2 Analysis of judgement resources

The judgment concerns the positive and negative assessment of human behaviors by a series of normative principles. But the positive and negative resources cannot be classified only by the grammatical meaning, and the context in which they are located is also an important factor.

Example 5: *"What so natural, then, as to assume that it was in this artificial Under-world that such work as was necessary to the comfort of the daylight race was done?"*

Example 6: *"Apparently, as time went on, the feeding of the Under-world, however it was effected, had become disjointed."*

Example 7: *"Twice I fancied I saw a solitary white, ape-like creature running rather quickly up the hill, and once near the ruins I saw a leash of them carrying some dark body."*

The protagonist deems the Morlock race and the Under-world as an isolated and alienated society. In fact, such judgment involves Wells' worry: with the rapid development of industry, whether human society will degenerate like the Morlock race. In the author's mind, an "ape-like creature" is not "human" anymore, but he still makes pessimistic predictions about the future of humans.

4.2.3 Analysis of appreciation resources

Related to aesthetic qualities, Appreciation concerns the objects, artifacts, texts, states of affairs, which covers three sub-categories: reaction, composition and valuation. (White, 2015).

Example 8: *"...these creatures were called—I could imagine that the modification of the human type was even far more profound than among the 'Eloi,' the beautiful race that I already knew. "*

Example 9: *"However great their intellectual degradation, the Eloi had kept too much of the human form not to claim my sympathy, and to make me perforce a sharer in their degradation and their Fear."*

Example 10: *"But the day was growing late, and I had come upon the sight of the place after a long and tiring circuit; so I resolved to hold over the adventure for the following day, and I returned to the welcome and the caresses of little Weena ."*

Example 11: *"Then the tall pinnacles of the Palace of Green Porcelain and the polished gleam of its walls came back to my memory; and in the evening, taking Weena like a child upon my shoulder, I went up the hills towards the southwest."*

Example 12: *"And I longed very much to kill a Morlock or so. "*

Example 13: *"Two or three Morlocks came blundering into me, and I drove them off with blows of my fists, trembling as I did so."*

Still, all the patience, all the sympathy and all the positive feelings of the protagonist are devoted to the kind and civilized Eloi. On the contrary, his hatred for the Morlock has reached the point of wishing they were dead.

5. Conclusion

5.1 Major Findings

With both general and detailed analyses of the text in *The Time Machine*, findings can be drawn as follows:

Firstly, through the analysis of Attitude resources in *The Time Machine*, it is not difficult to find that the Attitude resources in this novel are very diverse. Affect, judgement and appreciation resources are all employed to show Wells' attitude. It can be known from the statistic that affect resources occupy 57.10%, taking the highest percentage in the whole Attitude resources and the judgement category is the least frequent, accounting for only 10.64% of the words. The data shows that Wells' attitude is expressed more by affections rather than direct judgement.

Secondly, although the distribution of positive Attitude resources almost equals that of negative Attitude resources, from the analysis of concrete examples, it can be implied that Wells shows a more positive attitude towards the Eloi and the human civilization it represents while he uses more negative Attitude resources to express his hatred for an alienated industrial society just as the Morlock shows.

5.2 Limitations and implications

From the analysis above, it can be known that the employment of the Attitude system within the Appraisal Theory can demonstrate Wells' attitude in *The Time Machine*. Appraisal Theory has been widely applied in many fields, such as news, political speech, English teaching and translation, while the applications in literary works are relatively infrequent. Thus, the application of the Attitude System within Appraisal Theory into the analysis of the author's attitude in a novel testifies to the feasibility and practicability of Appraisal Theory on a wider scale.

As for the limitations, due to the length of the novel and time limitation, only some proper examples are illustrated in this study. And compared with other genres, the Attitude resources are relatively difficult to define, so the statistical analysis may not be comprehensive, which means that the sample may need to be broadened on this topic in the future study.

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