

A Corpus-based Narratological Study of the Dystopian Novel *Oryx and Crake*

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Abstract

Corpus narratology is a study that applies corpus methods to analyze narrative text form, structure and narrative effects. By employing the corpus software AntConc 3.5.7, the author uses the concordance and word list functions to explore the narrative perspective and the characterization of *Oryx and Crake*, the dystopian novel by the Queen of Canadian Literature Margaret Atwood. The purpose of this study is to carry out quantitative analysis and qualitative research on *Oryx and Crake*, through the method of corpus to analyze Margaret Atwood's narrative flexibility, and to provide a new perspective to appreciate narrative arts and understand dystopian literary works for people.

Keywords

Corpus Narratology, AntConc 3.5.7, *Oryx and Crake*, Narrative Flexibility.

1. Introduction

1.1. Section Headings

Margaret Atwood's novel *Oryx and Crake* describes the survival experience of Snowman, the only human survivor after the disaster. With amazing imagination, the writer describes the shocking doomsday scenes in the future world which are not far away from us: floating debris everywhere, wastes polluted by chemical raw materials and consumption garbage, and always be on guard against the attack of genetically modified pigeons and wolvogs. With the cool style of black humor, the work presents a deafening dystopian world to the people, thus winning a special position in the treasure house of human spirit reflecting civilization.

Since the emergence of *Oryx and Crake*, all kinds of related articles have been written by groups of scholars all around the world. Brooks Bouson in his essay *It's Game Over Forever: Atwood's Satiric Vision of a Bioengineered Posthuman Future in Oryx and Crake* [1], emphasizes that if the gap between science development and human beings is getting larger and larger, serious consequences may lead to side effects. In paper *Margaret Atwood's Oryx and Crake: The Terror of the Therapeutic* [2], Dunning argues that actually Atwood proposes a warning to people in the novel: if humanity does not control their behavior, the dark tomorrow will wait for human beings. Karlsson Paola's *How Human are the Crakers: A Study about Human Identity in Margaret Atwood's Oryx and Crake* [3] focuses on the theme of humanity, and explores the significance of human action not only in the novel, but in reality. *Pigeons, Rakunks and Crakers: Margaret Atwood's Oryx and Crake and Genetically Engineered Animals in a Hybrid World* [4] by Jay Sanderson underlines the alienation of human and nature caused by technological domination, and reveals the theme of cultural crisis in modern society. Research on *Oryx and Crake* comes a bit late in China. Yang Lixin in the paper *A Masterpieces of Dystopia---On Margaret Atwood's New Fiction Oryx and Crake* [5] is a good example to talk about the dystopian idea of the novel. Some scholars pay attention to the aspect of ecology and environmental protection. *Ecological Consciousness in Oryx and Crake* [6] proposes that application of science and technology should not be insisted at the expense of the stability and

unity of ecological balance. Only in a harmonious environment can all these newly invented high-tech gadgets be meaningful and effective. Besides, Yuan Jing explores a new topic about ecofeminist and humanist consciousness in *An Analysis of Oryx and Crake in the View of Ecofeminism* [7].

All in all, the studies about this novel cover different kinds of topics, such as the dystopian theme, humanism, ecocriticism, feminism and so on. While this paper aims to analyze the narrative flexibility of *Oryx and Crake* based on the corpus software in order to provide a new perspective to appreciate and understand dystopian literary works for people.

1.2. A Review of Corpus Narratology

Narratology is the theory of narrative behavior and narrative text, which is about the form and structure of narrative behavior and narrative effect. Corpus narratology is the research of analyzing the form and structure of narrative text and narrative effect by using corpus method, including narrative perspective, narrative structure, the shaping of the characters and narrative process [8].

David Herman is the initiator and leader of the post classical narratology, and has a high academic reputation and important influence in the current field of narratology. As the backbone of Ohio narrative school in the United States, Herman has been advocating the interdisciplinary approach of narratology in recent years, and has made outstanding achievements in the fields of cognitive narratology, social narratology, graphic narratology and corpus narratology. As far as corpus narratology is concerned, Herman has mainly done three aspects of work: first, to explain the methodological basis of corpus narratology; second, to demonstrate the practical operation model of corpus narratology; third, to summarize and prospect the research methods of corpus narratology [9]. According to Michaela Mahlberg [10], corpus stylistics builds a bridge between linguistics and literary studies, while for Michael Toolan [11], corpus stylistics builds a bridge between linguistics and narratology. However, different from Herman's general corpus (containing multiple text types) study, Toolan's research mainly relies mainly on specialized corpus (20th century short stories). "How does the text guide the reader" is the main problem that Toolan pays attention to. He tried to answer by looking for textual clues. By using the methods of corpus analysis and literary linguistics, Toolan hopes to reveal how the written narration guides readers to make judgments such as suspense, surprise, blank, mystery, tension, fuzziness, or even incoherence. Both Herman and Toolan mainly rely on the corpus-based method in the study of corpus narratology, that is, to draw up the hypothesis first, and then look for evidence from the corpus to verify whether the hypothesis is true.

In 2011, Shang Biwu, a Chinese scholar published initiative research on corpus narratology in the *Journal of PLA University of Foreign Languages in China* [12]. In this paper, Shang Biwu first introduces the background and preconditions of corpus narratology, and then reviews two kinds of pioneering corpus narratology studies abroad, namely, David Herman's study of motion events in the mode of corpus-based approach, and Michael Toolan's study of narrative progression in short stories from the perspective of corpus stylistics. Finally, the prospect of corpus narratology is prospected, and some suggestions on its future research tasks and directions are put forward. Subsequently, a lot of studies on corpus narratology have emerged in China, such as *A Corpus-based Narratological Study of the Female Images in Mo Yan's Novelettes* [13], *A Corpus-based Study on the Theme of Life in Frog from the Perspective of Cognitive Narratology* [14], *A Corpus-based Study on the Narrative Progression of A Mercy* [15] and so on.

2. A Corpus-based Narratological Study of the Dystopian Novel *Oryx and Crake*

2.1. The Data Collection

Since the 1980s, with the continuous development of computer technology, corpus-based research has achieved fruitful achievements in the field of literary studies. The usage of the corpus can make more accurate statistics of the material in the novel. Based on the corpus of *Oryx and Crake*, this paper selects the retrieval software AntConc 3.5.7 to analyze the narrative flexibility of the novel. AntConc is a multi-platform corpus analysis toolkit based on Microsoft Windows operating system developed by Laurence Anthony Laboratory of Waseda University, which can be used to carry out corpus linguistic research and data-driven learning [16]. It has a simple interface and convenient operation, and all the functions of the Word Smith are basically realized. The main functions include concordance, clusters, collocates, word list, keyword list and so on.

Compared with other Atwood's novels, the narration of *Oryx and Crake* is full of exclusiveness and flexibility. First of all, in this novel, Atwood combines different narrative focalizations with narrative time, place and event, and adopts unreliable narration to prolong the comprehension process of the readers and to pursue the more profound effect: after the unreliable narration, the more believable truth is revealed [17]. Besides, in this novel, Margaret Atwood invites readers to pay attention to the writing process and the use of language. The fragmentary features are manifested clearly in the scattered structure of the postmodern text --- the messy structure as well as the discontinuous and illogical plot. Readers need to use their imagination to construct a complete story with these fragments. The open ending of this novel also reflects the uncertainty of its narration. Then the frequent occurrence of Free Indirect Discourse in the novel can not only help readers realize the author's writing purpose, but also reveal the narrative angles related to skills and the value judgment. What's more, readers can find many intertextual factors in *Oryx and Crake*, such as *The Life and Strange Surprising Adventures of Robinson Crusoe*, *Gulliver's Travels*, *The Catcher in the Rye*, *Huckleberry*, *Benjamin Franklin's Autobiography*. On the one hand, the intertextuality of the novel increases the weight of history; on the other hand, it adds optimistic light to the gloomy and apocalyptic narrative tone. Finally, characters are indispensable narrative elements in novels, and characterization is an important aspect of the narrative art of novels. Atwood successfully uses the stream of consciousness technique to present the inner world of characters. This technique enables readers' thoughts to flow with the stream of the character's consciousness. The creation of buffoons once again proves Atwood's superb level of characterization. Atwood's description of the two main characters, Snowman and Crake, shows the charm of buffoons: they not only bring laughter to readers, but also cause readers to think about practical problems.

While in this research, AntConc was manipulated chiefly for word list and concordance to analyze *Oryx and Crake's* narrative flexibility in the aspects of narrative perspective and the characterization.

2.2. Processing and Analysis of Data

2.2.1. The Analysis of Narrative Perspective with Word List

The corpus-based narrative perspective focuses on the analysis of the application trend of personal pronouns and verbs in narrative works to investigate the narrative perspective adopted by the works. Narrative perspective, also known as narrative focalization, refers to the specific angle of observation and narration of story content in narrative language. Narrative perspective is generally divided into external perspective and internal perspective. External perspective mainly includes omniscient perspective and selective omniscient perspective. The omniscient perspective means that the narrator narrates as a bystander, who can observe

events from any angle, and can also spy upon the inner activities of the characters. Generally speaking, the third person is used. Although the perspective of selective omniscience adopts the third person, it gives up the omnipresent freedom of the third person focusing on describing the psychological activities of the main characters. The internal perspective generally adopts the first person, and the narrator is also the role in the novel. The narrator can not only participate in the practice, but also describe and evaluate the readers. People can use corpus method to analyze the personal pronouns which appear frequently in a specific work to determine whether the narrative perspective of the work is external or internal. People can also examine whether the narrative perspective is omniscient or selective omniscient by analyzing the collocation of personal pronouns and verbs.

Although Atwood quoted Jonathan Swift by saying that she would like to tell her story in the most straightforward manner, it will be mistaken to assume that readers will not enjoy the usual narrative flexibility typical of Atwood's fiction writing. The 70 high-frequency words in *Oryx and Crake* are drawn as table 1 by word list. There are three protagonist in the novel (two males and one female) --- Snowman-the-Jimmy, Crake and Oryx. According to the observation of personal pronouns in Table 1, he appears 3005 times with the highest frequency, and they and his appear 1256 times and 1086 times respectively. It can be seen that Oryx and Crake mainly use the third person to narrate the whole story. In other words, the narrative perspective of the novel is external focalization. Besides, he refers to one of the main characters: Snowman, that is, Jimmy. Therefore, this novel takes the male protagonist as the description object.

Table 1. List of 70 Words in Top Frequency (word=W; frequency=F)

	W	F		W	F		W	F		W	F
1	the	5222	19	but	707	37	up	458	55	about	259
2	he	3005	20	crake	694	38	like	453	56	by	259
3	a	2715	21	she	670	39	out	451	57	an	255
4	and	2354	22	for	652	40	not	446	58	now	246
5	to	2283	23	be	626	41	so	442	59	time	238
6	of	2187	24	him	625	42	one	433	60	are	235
7	it	1687	25	there	583	43	no	424	61	more	232
8	was	1567	26	at	558	44	been	409	62	too	229
9	in	1498	27	or	553	45	this	390	63	when	224
10	they	1256	28	them	550	46	from	376	64	oryx	222
11	his	1086	29	were	549	47	all	374	65	do	219
12	that	1084	30	what	546	48	then	357	66	into	209
13	you	844	31	as	537	49	their	341	67	himself	208
14	jimmy	819	32	have	537	50	if	339	68	because	207
15	on	771	33	her	517	51	could	326	69	who	205
16	said	771	34	would	511	52	some	294	70	get	189
17	had	768	35	i	503	53	can	287			
18	with	728	36	is	482	54	snowman	263			

What's more, Atwood has made another successful narrative achievement in telling a story taking place in the future, yet linked with the present in many ways. As for the following table, it is very easy to find that the past tense and the present tense cross each other, and the past tenses such as was and said account for the majority part. The plot of the novel is composed of two parallel narrative lines: one is done in the present tense to trace Snowman's journey back

to the debris of Crake's former hi-tech palace, in search of food and his past; the other is done in the past tense to put up a vision bit by bit about how the world reached such a bleak and desolate destiny. The words said and had appeared 771 and 768 times respectively, which proves that there are many dialogues in the novel. Personal pronouns gradually infiltrate into the works in various obvious ways, closely connecting the characters with what they think and say. As a sensitive artist, Atwood pursues the direct relationship between the author and the object, between the object and the reader. Said and had realize the conversion of narrative perspective, which makes the narrator's voice switch between the narrator and different characters, thus pouring out the complicated people and things through the characters' hearts, reflecting the changeable psychology and thoughts of the characters. Therefore, the selective omniscient perspective has been used in *Oryx and Crake*.

2.2.2. The Analysis of Characterization with Concordance

The corpus-based study of characterization usually takes nouns or pronouns representing characters as retrieval objects. By analyzing the collocations of these words, according to whether these collocations contain adjectives that describe the characteristics of characters, or verbs, nouns or adverbs related to the action, speech, appearance and environment of the characters, people can determine whether the characterization method is direct or indirect, and whether the characters created are flat or round. The direct method refers to the use of adjectives and abstract nouns to describe the main characteristics of characters. The indirect method refers to the multi-dimensional description of characters, including their actions, speech, appearance and environment, as well as the description based on the relationship between figures to portray the characters. The flat character refers to the symbolic meaning that the thought and action of a certain character will not change greatly in each stage of the development of the story. While the round character refers to a person with multi-faceted and complex psychological activities, similar to people in real life.

The character image is an important factor in literary works and the main part of artistic image formation. Characters are indispensable in specific narrative novels, and people can't imagine a novel without characters. Many novelists and theorists in the 20th century believe that the characters in the narrative text have their own logic. Perhaps, at the beginning, a character actually imitates the author himself, but once the character enters the narrative plot, his or her personality will be dominated by an internal logic that follows the development of the plot, which is often not restricted by the author. As Forster said, "Since the novelist himself is a person, he and his character also have a kind of affinity." [18]

Concordance can help people search for a specific keyword and examine the context in which that keyword is located. In this way, people can view the context when things happen and the language in which the author describes the characters, so that readers can understand the work better. In *Oryx and Crake*, the creation of buffoons proves Atwood's superb level of characterization. Buffoons can be generally divided into two categories. One is ugly in image, but good in heart; lively and humorous in character, and deeply loved by the audience. Their aesthetic character is not ugly, but beautiful in essence. The other can be clearly classified as ugly. The aesthetic character of these characters is generally evil and ugly. There are two buffoons in the novel, one of which is Snowman-the-Jimmy. Here are some of the index lines extracted from the character Snowman-the-Jimmy, retrieved using The AntConc software.

"Thought Jimmy: he thought he could see the animals looking at him reproachfully out of their burning eyes, suffering animals --- was his fault, because he'd done nothing to rescue them."

"Jimmy felt he'd disappointed her, he'd failed her in some crucial way. He'd never understood what was required of him. If only he could have one more chance to make her happy."

"Jimmy had developed a strangely tender feeling towards such words, as if they were children abandoned in the woods and it was his duty to rescue them." [19]

Jimmy is a typical buffoon in this novel. He is a small potato ruled by the courtyard. He is cheerful, lively and interesting. He likes to imitate and improvise. At the same time, he has a rich imagination and has strong sympathy for all things in the world. Therefore, his appearance brings laughter to readers. In the first index line, Jimmy saw the corpses of cattle, sheep and pigs burning in the fire, and he could not help but feel sad and remorse: it was his own incompetence that made these animals miserable. Through the red flames, Jimmy seemed to see the poor eyes of those animals. How he hoped he could save them. In the second index line, readers can also feel that his mother's departure also makes him deeply sad. From these simple descriptions, people can feel the kindness and sensitivity of Jimmy. His words and deeds move the readers deeply.

In addition, the last index line shows that Jimmy is firmly guarding human values. Jimmy tries his best to protect the old words because these old words represent humanistic value. He can't bear to lose the old words, which means that he doesn't want to lose humanistic value. Language, along with the ability to use tools, defines human beings by distinguishing them from animals. Language ability is so important that human civilization would not be possible without it. From these behaviors, people can see that Jimmy firmly defends humanistic value and rebels against society with the supremacy of science and technology. Therefore, readers can regard him as a humorous, interesting, kind-hearted buffoon who sticks to humanism. According to the classification, Jimmy should belong to the first type of buffoon. His aesthetic character is beauty, not ugliness, and is a buffoon image that readers like.

Another buffoon image in the novel is Crake. Crake is a typical science and technology elite. He was born in a family without his parents' care. His father died in pursuit of justice, while his mother and stepfather indirectly caused his father's death. The environment determines his character and attitude towards society: hatred and despair. The index line "Crake had grown up in walled spaces, and then he had come one. He had shut things out" [19] highlights the extreme alienation and alienation between Crake and the world.

Besides, the index line "Crake says you can't. No feathers for you. Now piss off" [19] proves that Crake doesn't believe in God or nature. On the contrary, he wants to be a God-like figure. His single-sided drive to change the world according to his own will pushes him to venture into every aspect of human life. Crake's blindness in pursuing scientific redesigning of human life lies in his neglect of a very important component in what a human being is: emotion. His ideas are absolutely rational, yet totally inhuman. Therefore, his products, Children of Crake lack the necessary knowledge for survival in a natural environment. The ignorance of the cloned people is the reflection of Crake's desire for being a God-like figure, who does not endow his creatures with knowledge. In ordinary people's eyes, piss is a dirty word. Yet with the Crakers, piss isn't something they'd find insulting, because they rely on the pissing activity to protect themselves from dangerous animals. So instead of feeling embarrassed by talking about piss, they ask "What is piss off?" [19]

In order to manipulate those natural persons living in the world outside of the Compound, Crake designed a drug to monitor and interfere with their health conditions. His invention is entitled The BlyssPluss Pill. The index line "Such a pill, Crake said, would confer large-scale benefits" [19] exposes that Crake has a hidden scheme: to use this pill as a carrier of secret virus, which would be used to trigger diseases when required to create market demand for medicine developed by Crake's company. Unfortunately, the pill led to the destruction of himself and the whole human race.

All in all, through the index lines, people can realize that the two buffoons, Jimmy and Crake, created by Atwood in the novel *Oryx and Crake*, bring laughter to readers on the one hand, and add relaxed elements to serious topics in the ironic dramatic atmosphere; on the other hand, Atwood's superb skills are shown in characterization. The characters created by Atwood are round figures full of complex psychological activities. And through the indirect description of

the characters from their speech actions, the characters are as natural as though they were living.

3. Conclusion

Corpus narratology not only opens up a new field of narrative research, but also provides a new way of thinking and methods for narrative research. By using the corpus software AntConc 3.5.7, this paper uses the quantitative method to analyze the narrative perspective and characterization of *Oryx and Crake*, which proves Atwood's superb skills in narrative flexibility. Corpus narratology analysis can not replace people's subjective appreciation of the text from the perspective of literature itself, but they complement each other. Corpus narratology can provide evidence for people's subjective appreciation, and quantitative methods such as list and statistics can be used to analyze the text to make a more rational interpretation. In a word, the corpus narratology based research method is effective and possible in revealing the explicit and implicit contents of literary works.

In this study, there are some unavoidable limitations. First of all, corpus narratology is a new field for the author of this thesis; moreover, the case of the analysis of combining the study of corpus narratology with *Oryx and Crake* is rare, so this study is at an early stage, and the narrative analysis in this paper may not be comprehensive enough. At the same time, the corpus statistics of this research have not been effectively used. In addition, due to time and space constraints, this paper only adopts narrative perspectives and characterization to analyze narrative flexibility. Other more detailed aspects, such as: the functions of clusters, collocates, keyword list are not discussed in the paper. Illustrative analysis is not comprehensive enough. On the whole, there is still room to be improved.

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