

<https://doi.org/10.70731/h72kgv46>

A Critique of Animal Science Knowledge Production in *We are All Completely Beside Ourselves*

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KEYWORDS

We Are All Completely Beside Ourselves;
Science Knowledge
Production;
Situated Knowledge;
Animal

ABSTRACT

Animals who can not independently voice their own conditions are put into a representational strategy dominated by human scientists. However, situated in anthropocentric ideologies, the scientists are usually not faithful narrators of animal stories, but ventriloquists for the animal's other status. As a novel exploring an experiment in which a human and a chimpanzee are raised up together, *We are All Completely Beside Ourselves* puts this situated process of animal science knowledge production under scrutiny: Conducted against the anthropocentric background, the experiment inevitably shows a tendency to emphasize the human-animal binary opposition and the animals' other status in the world. Disappointed by this phenomenon, the human girl who has grown up with a chimpanzee and believes in human-animal affinity, Rosemary, chooses to reject the logocentrism and human-animal distinctions propagated by scientists, and to disseminate her own knowledge of human-animal similarity, love and mutual-respect. However, since Rosemary's experience can not be reproduced in the reality, the novel's nihilist tendency to deny all the scientific achievements is dangerous. The scientist's role as a spokesman for animals and nature is still irreplaceable in reality, and a compromise should be reached between the dogmatic scientism criticized and the radical disbeliever to science advocated by the novel.

INTRODUCTION

We are All Completely Beside Ourselves is a highly inspiring yet underestimated novel published by American bestselling writer Karen Joy Fowler in 2013. As a novel winning British Book Awards, the Faulkner Award and shortlisted for the Man Booker Prize, it delves deeply into the animal issue in the posthuman era and provides profound insights to it. There have been studies that pay attention to the boundary issues between humans and animals in this novel, highlighting the unpleasant consequences brought by this boundary to the

main character (Calarco, 2014), and this study will focus on an essential factor in constructing human-animal boundary: animal science knowledge production: This novel imagines a cognitive experiment in which a human girl, Rosemary and a female chimpanzee, Fern are raised up together as a pair of twins by Rosemary's scientist father "to compare and contrast developing abilities, linguistic and otherwise (Fowler, 2013)" between human and chimpanzees. The experiment in the novel puts the process of animal science knowledge production under scrutiny, and on this basis, questions

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about the truthfulness of human-animal binary opposition as well as the solidness of boundary are raised: Is the established truth of animal inferiority really truthful and the nature-culture binary opposition natural? Can scientific studies be independent of the ideologies prevalent in non-scientific situations? The answers given by the novel is absolutely no.

All kinds of knowledge, no matter how independent and objective as they seem to be, are produced in situation, or in a definite social milieu, not in vacuum (Mannheim, 1936). That is a conclusion that has already been supported by Karl Mannheim early in the 1930s. In the 1980s, American theorist Donna J. Haraway introduced this concept of “situated knowledge” into literary criticism to support arguments of posthumanist animal studies and on this basis to blur the boundary between human and animals, culture and nature as well as science and fiction. She audaciously claims a special relationship between nature and colonized spots (Haraway, 2004), and uses Spivak’s much-debated postcolonialist term “subaltern” to describe the muteness and otherness of the animal in a world dominated by human voice (Haraway, 2008): the animal other can not speak and the nature can not self-evidently reveal its laws, so they are put into a representational strategy dominated by human beings, especially animal scientists. Therefore the scientist, as a preacher of animal science knowledge and the medium for the public to learn about the nature, is seen as the perfect spokesman for nature. However, the spokesmen are not all the time objective, their judgement, conclusion, even the selection and processing of raw information, are restricted by anthropocentric situations. On this basis the scientists become advocates of human-animal binary opposition and ventriloquists for “the other” (Haraway, 2004). The knowledge they have produced not only does no good for the animals to be truly understood by the public, but on the contrary aggravates the institutional oppression of animals in a human-dominated world. In the novel *We are All Completely Beside Ourselves*, the author uses the eyes and mouth of Rosemary to sharply criticize the representational paradigm in animal science knowledge production: As a twin sister of a chimpanzee, a daughter of animal scientist and a student in college, Rosemary detects the influence of anthropocentrism to animal science studies and, instead of blindly believing in the human-animal binary opposition propagated by modern science, she tries to disseminate her knowledge of human-animal affinity, love and mutual respect, which comes from her personal experience to cope with her chimpanzee sister Fern, forming a resisting power to the institutionalized anthropocentric knowledge. Through Rosemary’s thought and action Fowler offers an imaginary path for human to overthrow the scientific mechanism of oppression to the other, but Rosemary’s story can hardly be replicated in reality. Disbelief to scientific knowledge in reality will merely put the animal other into another abyss of unknowability. To truly un-

derstand animals and forge a better future for human and animal alike, the proper method is to improve the ethical scrutiny for scientific knowledge production, rather than completely deny the function of scientific achievements in people’s realization of nature.

SCIENTIFIC KNOWLEDGE SITUATED IN ANTHROPOCENTRISM

In the novel, Rosemary’s father as a scientist continually studies on chimpanzee’s cognitive abilities and behavior. He is not a unkind person who deliberately ignores animals’ rights, but in comparison with his daughter, who grows up with a chimpanzee and is designed to signify human’s pure affinity to animals in the novel, he is still inevitably influenced by the anthropocentric tradition of human world and becomes an unintentional supporter of animal inferiority and the definite boundary between human and animal. His study is based on an anthropocentric conclusion drawn by former researchers and he has no sensitivity, ambition or energy to overthrow the anthropocentric tradition, so at the very beginning, his study has already been carried on in an anthropocentric situation. He asks chimpanzee Fern to learn human’s language rather than try to let human understand Fern’s language, and when Rosemary’s brother Lowell raises questions about this issue, he criticizes that “Lowell was confusing language with communication”, arguing “we still didn’t know for sure that Fern was even capable of learning a language, but we did know for sure that she didn’t have one of her own.” (Fowler, 2013), but when it comes to the essential distinction between human language and animal communication, he does not offer a definite answer. This “animals have no language” assumption actually can be seen as an expression of “Anthropological Machine of Humanism” proposed by Giorgio Agamben. Human scientists, especially linguists, have invented Anthropological Machine to dehumanize animals, and the core elements of this exclusionary strategy is language: traditionally the passage from animal to man is not believed to be produced by biological and natural difference, but is presupposed by the so-called identifying characteristic of the human: language (Agamben, 2004). However, the difference between animal communication and human language is rarely discussed. On this basis, Agamben comes to the conclusion that human and animal distinction is “a historical production” (Agamben, 2004), and so does Rosemary in *We are All Completely Beside Ourselves*. By emphasizing “the specific way each particular organism experiences the world (Fowler, 2013)”, she silently revolts against her father’s propaganda of human-animal binary opposition in the heart.

The anthropocentric situation also prevents Rosemary’s Father from selecting really important information in observing Rosemary and Fern’s interaction. In Rosemary and Fern’s early childhood, when Rosemary

still could not speak English, they once invented an idoglossia, a secret language of grunts and gestures. This was a valuable phenomenon worth studying, but Rosemary's father chose to ignore it and refused to write it up, because he believes that this evidence "thin, unscientific, and, frankly whimsical (Fowler, 2013)". Under similar circumstances, when Fern expresses her love to Rosemary with her unique arrangement of red poker chip, the father again regards it as "nothing useful" (Fowler, 2013). The father's judgement actually comes from his deep-rooted anthropocentric preconception of "animals have no language", which causes him to deny Fern's unique way to express, neglect many precious possibilities and finally drives him into a bottleneck of research.

Moreover, in the process of concluding results of some minor experiments and analyzing phenomenon in his paper, Rosemary's father also shows a tendency to reach a conclusion which is more suitable to accommodate anthropocentric expectations. For example, He designs an experiment in which Rosemary and Fern are asked to watch a demonstration on how to get food out of a puzzle box and then to get the food out by themselves, and in the experiment, the behavior of Rosemary and Fern are different: Rosemary reproduces every steps shown in the demonstration regardless of its necessity, but Fern chooses to skip the unnecessary steps to go straight to the treat by her own way. This experimental result can show that a chimpanzee can detect the misleading directions and is thoughtful enough to solve the problem independently, but in his paper, the father ignores the chimpanzee's sufficiency and thoughtfulness, and spares no efforts to argue that the human baby's slavishly imitative behavior is more superior (Fowler, 2013). The anthropocentric situation of father's researches has prevented it from getting a truly objective conclusion, and the publishing of its conclusion again strengthens the established prejudice towards animals in return.

When Lowell and Rosemary discuss their father's failure as a scientist, their opinion is sharp and profound: "Dad was always saying that we were all animals, but when he dealt with Fern, he didn't start from that place of congruence... It would have been more scientifically rigorous to start with an assumption of similarity. (Fowler, 2013)". "Similarity" here means blurring the boundary between Rosemary and Fern, and between human and animals, and on this basis to respect the animals as an equal existence with human beings. Only by admitting similarity can scientists be good spokesmen to objectively represent the animal for the public and to help to build an atmosphere in which human and animals coexist harmoniously, but unfortunately, influenced by anthropocentric situations, most scientists fail to do so, including Lowell and Rosemary's father. Having become instruments of anthropocentric ideologies, they are not even conducting researches objectively, but merely finding supports for their estab-

lished prejudice of human-animal binary opposition, and it is through their "researching" processes that the oppressing and exploiting mechanism to animals is built and strengthened.

ROSEMARY'S SUBJUGATED KNOWLEDGE TO ANIMALS

Having known her father's anthropocentric tendency in scientific research, Rosemary becomes disappointed to the legitimacy of the scientific knowledge and the so-called rational thinking propagated by modern science: "The Socratic method makes me want to bite someone. (Fowler, 2013)" This anti-logocentric standpoint makes her reject modern science and animal scientists as spokesmen for animals and nature, and view herself as a more appropriate person to represent them: As Fern's human twin sister who has lived with her since birth, Rosemary can naturally understand Fern and the habits of other chimpanzees, and has a deeper understanding to the similarity and affinity between human and animals. "By the time I turned three, I was already serving as Fern's translator (Fowler, 2013)." However, in the world in which anthropocentrism is emphasized to justify human's exploitation to the animal and the nature, her voices are inevitably subjugated by the mainstream.

In Rosemary's childhood, her understanding of chimpanzees' similarity with human has been always refuted by their father, who tends to speak "at much greater length" to advocate human-animal binary opposition; when Rosemary enters school, her situation becomes worse and talking about her own understanding about chimpanzees and human-animal relationship is almost impossible. Because of her experience of growing up with a chimpanzee, she bears many chimpanzee-like features in her habits and behaviors, which makes her unacceptable in her classmates. She is bullied and is called as "monkey girl". To get rid of the "monkey girl" nickname and integrate into the crowd, she has to mute herself on the topic of chimpanzees and other animals. In the astronomy class of the college, when everyone is amused by the chimpanzee who is sent to the space and who is "grinning from ear to ear in their helmets", Rosemary feel an urge to tell the rest of her class that this chimp is far from being happy, because chimpanzees grin like that only when they're frightened, but she fails to summon her courage to do so (Fowler, 2013). To revolt against the dominated knowledge risks getting oneself alienated and isolated, and that's too much for an individual to suffer.

Finally, Rosemary becomes brave enough to demonstrate her own opinions and argue for animal rights. After knowing more animals' sufferings in a human-dominated world, she decides to write her radical complaint to anthropocentrism into her final examination papers of the "Religion and Violence" class, driven by "an attempt to get them out of my head and into some-

one else's". In consequence, her is denied by Dr. Sosa, the professor of the class. By criticizing the paper's deviation from religion, the professor asks Rosemary to change a topic and threatens to flunk her, but Rosemary refutes him by arguing "science could be a sort of religion for some people. (Fowler, 2013)" This opinion actually comes from Rosemary's deep understanding of the huge impact of anthropocentric scientific knowledge to the human mind: Modern animal science, which is based on anthropocentric situations, constructs human-animal binary opposition in a seemingly objective and "scientific" way, and prepares the ground for the other anthropocentric knowledge by influencing the public and scientists of the next generation. In this process an anthropocentric conclusion is expressed in the form of "scientific knowledge", and then turned into "common sense", and then becomes manipulative, dogmatic religion. No one dares to re-evaluate it or overthrow it; when their personal knowledge can not fit the mainstream, their voices are subjugated, and they have to change themselves instead of the world. That is how human domination is legitimized and the animals' "other" status is institutionalized. In arguing her personal knowledge about science and animal in her paper, Rosemary bravely questions the objectiveness of animal science knowledge production as well as the legitimacy of the science's representation to animals, and makes herself a more reliable spokesman for human-animal equality and animals' rights.

In the end of the novel, Rosemary serves as a teacher in a kindergarten, and on this position, she begins to try to makes her students accept her personal knowledge about chimpanzees and animals: not knowledge about superiority and inferiority, not about boundary and distinction, but about similarity, mutual respect, and "the love of the Other" (Le Guin, 1987) . She teaches the child the habits and sign language of chimpanzees, asks them to use "proper chimp etiquette", and make "friendly chimp faces" to greet the chimpanzees in the Center for Primate Communication (Fowler, 2013), in which every human kindergartners of Rosemary can understand the affinity between human and animals and imagine a shared future with chimpanzees together. With her courage and efforts, Rosemary successfully envisions a possibility to reject the scientific yet anthropocentric way of animal knowledge production, and to use her instinctive understanding and her personal experience of growing up with the chimpanzees, to disseminate the knowledge of human-animal affinity in resistance to anthropocentrism. She has become a much more appropriate person to speak for the animals and the nature in human community than the scientific researchers.

SHOULD SCIENTISTS SPEAK FOR THE ANIMALS?

In the novel *We are All Completely Beside Ourselves*, Fowler points out the anthropocentric situation of animal science knowledge production, denies the objectiveness of the scientists' representation of nature and animals, and on this basis questions the legitimacy of human-animal binary opposition. Scientists represented by Rosemary's father are ventriloquists for "the other", instruments of anthropocentric ideologies, rather than faithful recorder of animal abilities and brilliant discoverer of natural wonder. They have lost their credit in representing nature and speaks for the animals to the public. Under this circumstance, Fowler invents Mary to use her personal experience of growing up with a chimpanzee to interpret animals, and puts her on the position of the proper spokesman of animals. This arrangement of plot solves the credibility crisis of animal science in a very heartwarming yet non-replicable way. In reality, almost no one can be really raised up as a twin with a chimpanzee or other wildlife. Most people's understanding to nature and animals still have to come from scientific education. Therefore, the status of animal scientists as the animals' spokesmen is almost irreplaceable. In reality, the novel's nihilist attitude to science will greatly expend the gap between human and the animal other, which is even harmful to the harmony between human and nature.

Therefore, a good compromise should be reached between the dogmatic scientism and the radical disbeliever of science represented by the novel. The real appropriate measure to speak for the animal other, is to improve the animal scientific knowledge production, rather than to simply abandon it. Back to the "animal subaltern" concept mentioned before, even when Spivak herself discusses the concept of colonized "subaltern" who can not speak, she still admits that there is still method like voting, negotiation to envision "the symbolic circuit of the mobilizing of subalternity into hegemony (Spivak, 1999)". Other scholars like Watson also points out that the subaltern concept which emphasizes the absolute muteness of colonized people may risks "conflating the temporarily unknown with the permanently unknowable (Watson, 2014)". Here, completely denying the function of science of representing the animal other will also cause the same problem: Nowadays scientific researches about animal cognition and behavior are still at their starting stage. To completely deny them may obliterate the hope of "let subaltern speak" that brought by scientific development in the future, which will brought the animal into the abyss of absolute unknowability, and aggravate the fracture between humanity and nature. Therefore, the proper methods is not to reject the role of scientists as the spokesmen for animals in the human world, but to emphasize the ethical code of objectiveness in scientific

knowledge production, and to encourage public criticism concerning scientific research.

CONCLUSION

At a time witnessing prominent ecological crises, living in harmony with animals and forging a shared future for human and non-human species alike have become an increasingly important issue. However, deep-rooted ideologies of human-animal binary opposition justifies human's exploitation over the animal and prevents human from truly sympathizing the sufferings of the animal other. Modern animal science's representational strategy to the animal, as well as its animal knowledge production situated in anthropocentrism, is the greatest accomplice to this institutionalized oppression. In *We are All Completely Beside Ourselves*, a novel depicting a cognitive experiment in which a human girl and a baby chimpanzee are raised up together as a pair of twins, this process of knowledge production is scrutinized: the human girl, Rosemary's father as a representative of scientists, always carries on his study in the anthropocentric situation and unintentionally finds support for his preconception of human-animal binary opposition. At the very beginning of research, his basis has already be built on the anthropocentric conclusions made by former scientists; in the process of selecting information, he usually ignores the brilliant expressive behavior of the chimpanzee, and regards them as "nothing useful"; when analysing experimental results in his paper, he still tends to emphasize the superiority of human ability to accommodate the outer anthropocentric expectations. His study is neither objective or successful and makes her own daughter disappointed to the logocentrism in scientific research. Having questioned the legitimacy of scientists' status as representatives of nature and spokesmen of animals, Rosemary choose to speak for the animals' rights by herself. Although at the beginning she is isolated and her personal knowledge is subjugated by the anthropocentric mainstream, with her effort and bravery, she finally becomes a teacher in the kindergarten to disseminate the knowledge of human-animal affinity to the children, which means she has turned into a more reliable spokesman than scientists, who are merely ventriloquists of the animal other. Rosemary's story is a heart-warming solution for the credibility crisis of animal science in the literary world. However, her experience can not be replicated in the reality. In real world, the public's understanding to animals still comes from scientific education and the status of animal scientists as the animals' spokesmen is almost irreplaceable. To emphasize the ethical code of objectiveness in scientific knowledge production, and to encourage public criticism concerning scientific research are appropriate methods to speak for the animals, rather than simply deny the achievements of scientific researches. To avoid putting

the animal other into the abyss of unknowability, the scientists should be and must be the spokesmen of animals.

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