

Bridging the gap between science and the humanities: A study of Wang Jinkang's universe-themed science fiction

Cultures of Science
2023, Vol. 6(4) 346–352
© The Author(s) 2023
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/20966083231217835
journals.sagepub.com/home/cul



Xiang Li

National Academy of Innovation Strategy, China

Abstract

This paper discusses several of Wang Jinkang's science-fiction works on the subject of the universe, such as *With Me*, *Escape from the Mother Universe*, *Heavenly Father and Earthly Mother* and *Cosmic Crystal Egg*. Based on an analysis of these works and Wang's creative writing trajectory, the paper summarizes the distinctive features of such universe-themed works: scientific rationality, fairy-tale-style plot setting, human–God duality and rational humanistic compassion. It concludes that Wang's works have not only crossed the gap between science and the humanities but also built a bridge between the two. Finally, this paper suggests that science-fiction writers provide a unique perspective for the reader by building a bridge between science and the humanities.

Keywords

Science fiction, science for the good, science and the humanities, science communication, values in science, Wang Jinkang

1. Introduction

Wang Jinkang's science-fiction works cover a wide range of natural science subjects, and most of them follow a particular pattern: delving deeply into science, dissecting science and then reflecting on science. Such features are most visible in Wang's universe-themed works published in recent years, including *With Me* (Wang, 2011a) and the subsequent trilogy *Escape from the Mother Universe* (Wang, 2013), *Heavenly Father and Earthly Mother* (Wang, 2016) and *Cosmic Crystal Egg* (Wang, 2019). According to Zhao (2013), *With Me* is the last book of the second stage of 'self-transcendence' in Wang's science-fiction creation. However, the creation

of the trilogy suggests that *With Me* is more like the opening book of the third stage of 'philosophical science fiction and core science fiction'.

The works of the third stage all include a large amount of scientific language, and the depiction and analysis of cosmic phenomena strongly resemble those in works of popular science. On the one hand, this has to do with the nature of universe-themed science fiction: for the story to play out, it must begin by representing extraterrestrial matters using

Corresponding author:

Xiang Li, National Academy of Innovation Strategy, 3 Yuyuantan South Road, Haidian District, Beijing 100038, China.
Email: talentbel@126.com



the language of the Earth, so as to set the stage for the story's twists and turns; on the other hand, it also shows the evolution of Wang's science-fiction creations, from their exploration of scientific themes to their philosophical discussion of ultimate questions, such as the future of humankind and the destiny of the Earth. The cosmic theme happens to provide the right space for such discussions, at the right time. A comparative analysis of these works offers accidental food for thought (Wang, 2020a). If science-fiction literature is an effective medium for improving the relationship between science and the humanities, and if a bridge connecting the two sides can be built through the creation of science fiction, then Wang's universe-themed works illustrate his effort to navigate between the two sides.

2. Hard science fiction: From absolute rationality to scientism

Science fiction is not an absolutely homogeneous collection but a fuzzy set (Wang, 2011b). However, since it is classified as a special category in literature, there must be some commonality in science-fiction works. Wang Jinkang has made extensive comments on 'core science fiction' and attempted, with much caution, to establish the qualitative attributes of science fiction as a literary category. He has even offered an explanation of its rationality compared with the term 'hard science fiction'. However, readers may feel that the terms 'hard' or 'hardcore' science fiction reflect the idiom of science-fiction fans and players, while 'core science fiction' seems more in line with scholarly parlance. Wang's assessment of his *Escape from the Mother Universe* clearly reveals the hardcore colour of the language used in the novel. For example, he says that 'as far as the core of science is concerned, it is totally artificial', and many scientific elements 'are completely constructed by the author'. Another example is: 'This science fiction is relatively hard. Once the two basic settings are accepted, the secondary science fiction concepts are nothing but reasonable logical extrapolation' (Wang, 2020b: 162).

Using the 'core' concept to describe the hardcore features of science fiction entails, of course, a highly abstract and condensed summary. To achieve such attributes through literary writing, authors need to

use scientific language in the storytelling and to construct a knowledge framework and storyline that cannot be rebuffed by scientists and technicians. Therefore, science-fiction works can be supported by formally reasonable extrapolations based on hard science. In the case of Wang's universe-themed science fiction, such hardcore features are manifested in the detailed knowledge of physics and the prolific use of scientific language in the works. These features provide the works with rational thinking by using language that can be understood by general readers. They form an important foundation of science-fiction literature and are basic elements of science-fiction works before moving on to higher stages, such as philosophical sublimation and ultimate reflection. The fundamentals here apply to the category of science-fiction literature as a whole, but that does not imply that science fiction without hardcore attributes is not good. Wang's masterful use of scientific language not only lays the foundation for the development of science-fiction literature in China but also provides a model for writings in this particular category.

The use of scientific language in science fiction requires that the writer speak like a scientist rather than inviting the scientist to speak. A reasonable storyline with rigorous logic is also an essential element of science-fiction literature. Numerous philosophical propositions on the theme of the universe provide rich inspiration for these writings, and the writer no longer needs to concentrate on the materialistic description of experiments and data. In the process of storyline blending, Wang pays much attention to the balance between logic and imagination in his writing and repeatedly examines the scientific rationality in the unfolding of the plot, loyally observing the principle of 'speaking like a scientist'. Whether it is the extinction of humankind, the loss of intelligence or the fall of the Earth, they are all consistent with the evolution of science and so cannot be proven false by scientists and technicians. Such a text, which is nothing like a science textbook or work of popular science, has thus acquired the advanced function of transmitting scientific ideas and the spirit of science. However, if rationality were to give way to absolutist assertion and claims of higher value, it would be only half a step away from scientism.

Wang's high regard for scientific rationality has not restricted his humanistic perspective whatsoever.

In several works on the theme of the universe, Wang repeatedly refers to the human alienation caused by science and technology, shares his concerns about the future of humanity's scientific and technological civilization, and inquires into ultimate questions such as the choice between good and evil. For example, in *Heavenly Father and Earthly Mother*, the descendants of the G planet, who have mastered humankind's scientific and technological heritage but lack humanistic education, have pursued a brutal genocide against their human ancestors on Earth. And in *With Me*, with the help of the God's eye, the conviction that good acts produce evil results while evil acts are rewarded with good results is taken to unprecedented heights. The portrayal of these results based on highly rational extrapolation shows that, when we go further into the scientific position, we inevitably reflect on the limitations of science. This is also a kind of return to a humanistic position. However, such reflections prompted by the scientific position are different from the concerns in the humanistic position. While such reflections may be of value, they do not progress along with the spiral expansion of science and technology. Even looking beyond functionalism, such reflections are still simply humanistic in form, because they imply the hope of a return to the humanities while still being confined within the camp of science instead of looking at scientific and technological civilization from the humanistic side. Therefore, despite promptings to cross over to the humanistic side, it seems impossible after all to escape the gravitational force of the scientific field, which compels a continual return to science.

3. Fairy-tale-style plot setting: Being reader-friendly and striving for simplicity

In our highly advanced scientific and technological civilization, the development of science and technology can easily determine the fate of humanity. This is the consensus of all who now live in this industrialized context. This raises the question of whether there is a type of depiction that can encompass everyone on planet Earth and all life forms in the universe. Movie series such as *Alien* and *Resident Evil* have revealed the possible future of humanity by providing single-

case descriptions of how the technology-induced alienation of humans could spread across the globe or the universe like a virus. *Blade Runner* and *Ghost in the Shell*, however, attempt to present an overarching view of human destiny in this technologically advanced civilization with epic-style panoramic descriptions. Wang, in contrast, adopts a fairy-tale-style plot setting: leading scientists are the protagonists, while the scientific community, tasked with important social functions, and its peripheral members play a supplementary role, and the rest of the humanity retreats into the background. Through the design of a smooth and vivid storyline, many detailed subplots are not needed, and readers are connected to the universe by associating themselves with humanity's journey of space exploration. Replacing the loaded scientific language with a simple storyline, Wang creates a more light-hearted reading experience for the reader. Whereas single-case description is characteristically well organized, and panoramic depiction has a powerful impact, the fairy-tale-style plot setting is typified by its ingenuity. While readers trace the main storyline of science and technology and human destiny, the key players come subtly to the fore, thus removing the interference of other complex subplots. Through the artistic use of scientific language, Wang presents readers with the simple, clean pictures typical of fairy tales. This is consistent with his often-expressed view that science fiction, as a form of literature, should be fun to read. His empathy with readers and his wish to engage them are clearly evident in his universe-themed science-fiction works.

If the simplicity of the narrative style is a manifestation of superior writing skills, the minimalist orientation expressed through the characters in the novel is a deeper manifestation of the author's own view of science, nature and even the universe. In Wang's universe-themed works, whenever humanity's pursuit of science has come to a dead end, the creed of simplicity always acts as a lighthouse, showing a ray of enlightenment to human prophets in the darkness and leading them towards a new horizon through their own persistent endeavour and reflection. This is what happened to Chu Tianle in *Escape from the Mother Universe*, Nier in *Heavenly Father and Earthly Mother*, and Ji Xingdou in *Cosmic Crystal Egg*, thus creating a common thread in all these works. There

is no denying that the natural aesthetic principle of minimalism has provided many guidelines for science. Throughout his life, Albert Einstein praised this concept highly and incorporated minimalism to a great extent in his thought experiments. Although Wang avoids the use of mathematical formulas as much as possible in his works, his strong personal aesthetic interest in science and nature is discernible. Therefore, the fairy-tale-style plot setting and the celebration of simplicity complement each other well in Wang's works and, at the same time, affirm his commitment to cracking the hard shell of science and handing the sweet fruits to the readers. Compared with a purely abstract discussion of scientific ideas and the scientific spirit, Wang's method of directly communicating his own understanding of scientific ideas and the scientific spirit is more attractive.

Just as not all technological advances in the age of science bring greater human well-being, so the principles of reader-friendly storytelling and minimalism also bring challenging side-effects.

First, while simpler subplots help to highlight the main theme of technological progress, the weakening of humanity as a whole is clearly a scientific form of condensation and generalization. What kind of humanistic compassion is it when the (near) extinction of the human race is described simply in terms of regret, hatred, reflection and bewilderment, without mentioning the 'pain'? Such 'simplicity' may be a reasonable approach but lacks the human touch. For instance, the depiction of humanity's abandonment of individual consciousness in *Cosmic Crystal Egg* may be considered mild, and the description of the extermination of the human race by alien invaders from the G planet may not be so striking as it is presented in the form of memories; however, the process of human extinction depicted in *Heavenly Father and Earthly Mother* is overly condensed, with scenes of bloodshed and sadness that are even less effective than the metaphorical portrayal of the chimpanzee society in the book. In an absolutely rational environment of technological advances, perhaps human beings really do not have the time and opportunity to shed tears.

Second, Wang's historical perspective imparts much complexity to his writings. For example, in *With Me*, he has not evaded the interaction between 'God' and the complicated human society but has patiently installed many earthly incarnations for

God. However, observing the future from the past requires returning not only to different points in time but also to different spaces and perspectives. For example, in *Heavenly Father and Earthly Mother*, Chu Guifu, who is poorly educated, carelessly removes some parts of human knowledge, leading to the formation of the ideology of science over culture in the minds of the human descendants on the G planet. Finally, they return to Earth and exterminate the human race. Although this historical result is logically reasonable, it is somewhat hasty to make such a cause-effect conclusion. In terms of the ultimate goal of connecting science with the humanities, such a leap from the scientific position to the humanistic position in Wang's works occurs in the blink of an eye and lacks the mounting tension of a step-by-step crossover. The approach of scientific simplification is precisely the result of the missing human touch in storytelling.

4. Duality thinking: People who become God, and God who steps down from the altar

Of all the ultimate questions in science-fiction literature, 'God' is one of the most insurmountable. There are several reasons. First, at the cognitive level, science fiction aims to explore the unknown in a scientific way or even move beyond scientific research in the real world to pursue unknown possibilities in the spiritual world. God, which is an unknowable setting by design, fits perfectly with this condition. For cosmic themes in particular, God is the most handy concept to use in exploring and shaping uncharted territories outside Earth. Second, at the practical level, the progress of science and technology has given humankind more tools for changing nature and equipped people with powers that their ancestors would have seen as divine. This is a very practical step on the path leading to the realm of God. Third, science originating in the Western world has long transformed itself from being a servant of God into a productive tool for humanity. However, the connection with God is still an inherent element that science cannot abandon. From Copernicus to Einstein, the process of scientific discovery has been depicted as persistent reflection and questioning of God.

In Wang's universe-themed science fiction, we can see a dialectical unity of the above-mentioned reasons from his portrayal of and attitude towards God. By constructing a relationship between science and God, he offers a down-to-earth answer to the ultimate question about God. Wang's attitude is very clear: since powerful science can communicate with God, why not use science to remake God? Such a God could transition from the mysterious realm of the unknowable into a touchable human form—regardless of how far the hand needs to reach in order to touch it. In short, the road of science may lead eventually to God. If at first it does not, another way may be tried. The ultimate goal of science would thus be to bring humanity into the realm of God, enabling people to become God themselves. The process by which science and technology may achieve this is represented in the construction of basic concepts in *Escape from the Mother Universe*, the fleeting appearance of God in *Heavenly Father and Earthly Mother* and the positive depiction of humanity's collective consciousness in *Cosmic Crystal Egg*.

Since there is a pathway for humanity to become God, then pulling God away from the altar is reasonable. In *With Me*, Wang (2012) makes the boldest presupposition: God is here with us on Earth. The human incarnation of God is discussed at length by Harari (2017) in his *Homo Deus: A Brief History of Tomorrow*. The secularisation of God is another side of the discussion, represented in *Twenty-One Lessons for the 21st Century* (Harari, 2018). Wang's approach to God is similar to Harari's: by remaking God with physics, he not only extols scientific and technological civilization but also pulls God out of the temple and into the 100,000-year history of human existence. This anthropomorphization of God shows readers how God has intervened in the evolution of human civilization. This ingenious design skilfully promotes secular ideas while avoiding conflict with the numerous Gods depicted in various cultures around the world. In terms of the background of Wang's universe-themed works, human beings can freely navigate the universe after acquiring divine powers, while God is a product with the Earth being the reference frame.

In the universe constructed by Wang, the humans who have transformed themselves into God and the God who has stepped down from the altar could

always get together for a glass of wine. This not only gives the story a happy ending but also gives humans and God their rightful places in the scientific system. The overall logical consistency of the situation is very firm. The main theme of *With Me* is particularly relevant: God is with me, and good and evil are with me. But if God were not a humanoid creature with the shape of an octopus, would it still be possible for God to obtain the quality of good and evil that humans could understand? Is it that only our manifest kin can be 'with me', while other Gods are simply invisible to us? Defining God as something unknowable is a widely shared convention, as is the mission of science to explore the unknown world, but the distance between the unknown and the unknowable cannot be calculated by science. Furthermore, according to Wang's deduction, after humans have transformed into God and acquired divine powers, their reverence for God will naturally transform into a reflection on and control of their own infinite power. Humanity's self-reflection on the power of science and technology can be seen everywhere in Wang's writings, even before people become God themselves. But if science is not the only path to God, can the reverence for God achieved through other paths still be equated with reflection on science and technology? A secularized God could facilitate the creation of science fictions. However, the biggest problem with this visualization is that it would be difficult for science fictions to pursue the ultimate question of divinity. What is achieved may seem like an empty shell that carries all sorts of supernatural phenomena with no compelling import or effect. Science may lead humans to God, but only to the God of Science, and there seems to be no room for other Gods. The humanistic compassion that ought to be realized by bridging science and the humanities would end up being the 'divine' compassion of the God of Science.

5. Rational humanistic compassion: There is always light at the end of the tunnel

When science leads humans to the altar of God and closes the gap between humanity and the

unknowable, it also has to carry the fate of humanity on its shoulders. However, when the advanced civilization that formerly identified good and evil for us on the basis of divinely ordained precepts is reduced to equivalence with us, as if sitting across the table and joining us in a toast, humanity will have to count on itself alone to choose between good and evil. Fortunately, Wang has not defined science simply as a force for good based on the postulated divinity of science, but instead shows readers the sad reality that science may well be a force for evil. This is true even if the story is staged in the broader universe. Furthermore, Wang's depiction of internecine wars and racial conflicts is distilled from factual episodes in the history of our world, in contrast to completely fictional scenarios such as those of Liu Cixin, who depicts imaginary plights and choices of humanity in an extreme environment. Therefore, science, which can serve as a vehicle for good and evil, naturally carries greater weight in Wang's works. However, despite endless questioning from the perspective of science and despite the strong sense that science is heartless and the universe unrighteous, Wang reserves space for humanistic compassion in the rational, probabilistic, physical framework, so that, whenever humanity seems to have reached a dead end, a way through can be found. In Wang's conception, the product of science is never Frankenstein's distorted creation but a wealth of experience in the right direction. To use Wang's own expression, even a shithole of evilness can breed flowers of goodness. Rethinking science in a scientific way, tinkering with its edifice while leaving its foundation untouched, and matching cautious pessimism with a positive attitude show Wang's careful thinking and underscore his rational humanistic compassion as well. What technology brings should be an elevation, not expansion, of civilization (Han, 2019). This belief is implicit in science-fiction literature globally. The elevation of human civilization is not only in line with the historical progress of science and technology but is also the highest promise that science and technology can make to humanity.

Can technology, as a synonym for civilization in our age, truly elevate itself to a higher level? Perhaps even the most optimistic view sees technology as no more than an enabler conducive to a higher

civilization, but unable to follow humanity into the temple of that higher condition. This accords with the perspective offered in *Cosmic Crystal Egg*: for those who have made their way into the interior of the crystal egg, technology is like a cicada moult—something necessary but of temporary value that is transcended. Just as the traditional agrarian civilization cannot counter the increasing concentration of inhabitants, so the hydraulic civilization cannot make people go wherever it is deemed necessary, even though such means of survival are the prerequisite for humanity to step into the technological and industrial civilization. Therefore, if science is to be thoroughly contemplated, its own standpoint and methodology could be powerful tools to that end but would pose the dilemma of reflexivity in self-reflection. For example, because the writing on human extinction in *Heavenly Father and Earthly Mother* takes the form of a generalized narrative, it is unable to convey with due power the fear and despair experienced by individuals in the face of slaughter. As a result, both the reflection on science and the compassion for humanity become something looked at from the top of science. Other examples are Chu Wenji on Earth and Chu Guifu on the G planet, who are able to keep humanity alive only after accepting time bubbles from the divine incarnations of their former tribesmen. Since they have no choice but to accept the gift, the continuation of the human race is seen as a favour bestowed by this more advanced group of tribesmen, and the technology received from them naturally becomes a valuable asset that ought to be kept. Although the givers are incarnated as God, they are still essentially a human elite with the power to control the fate of other peoples. The bridge thus built is a one-way slope from science to the humanities, and it is difficult, if not impossible, for people to linger.

6. Conclusion

Wang Jinkang categorizes his science-fiction works into two types: one is 'hard' or 'core' science fiction, in which science is the 'bone', and the focus is on presenting novel and credible plots; the other is 'soft' or 'non-core' science fiction, in which science is the 'skin' enwrapping the humanistic content (Wang, 2020b). In fact, it is difficult to

draw a clear line between hard and soft, core and non-core in Wang's science fiction on the subject of the universe. In particular, as the works of core science fiction are imbued with strong humanistic tones, the original hardcore stories acquire a scientific skin enfolded humanistic content. This is one reason why Wang himself has classed *Escape from the Mother Universe* as both hard and soft. When the scientific core and the humanistic content are truly fused, it is impossible to judge the genre of a work in terms of the proportions of the hard and the soft. While scientific rigour and a humanistic position are both important, their organic fusion is a higher requirement for science-fiction literature. This requires patient bridge-building between science and the humanities instead of whimsical observation.

From a humanistic perspective, it can be seen that organic humanistic compassion requires a change of scientific position and a leap from a predominantly rational culture to an emotional one. Otherwise, the scientific backlash against humanity depicted in science fiction of the past will inevitably happen in the future. On the other hand, from a scientific perspective, the rationality of science is a necessary tool for rethinking science and for self-reflection, because science is the highest achievement of civilization at its current stage, so the idea of tearing down the edifice of science and rebuilding it on the ruins does not truly show compassion for the fate of humanity. In connecting science and the humanities, Wang successfully crosses from one side to the other and freely navigates between the two positions in search of a better course for the practice of science and the fate of humanity. Like a messenger, he draws the attention of people on both sides to the world on the other side. However, for readers who are eager to know and understand science better and for practitioners who are exploring the ultimate future of science, crossing to the other side is only the first step in connecting science and the humanities. Eventually, it is still the mission of science-fiction literature to build a bridge between the two sides on which people can pass over and linger, opening channels of communication between science and the humanities and providing a unique perspective for reflection and observation.

Declaration of conflicting interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

References

- Han YJ (2019) On the construction of the ecology of contemporary Chinese science fiction. *Novel Review* 3: 29 (in Chinese).
- Harari YN (2017) *Homo Deus: A Brief History of Tomorrow*. Translated by Lin HJ. Beijing: CITIC Press Group (in Chinese).
- Harari YN (2018) *Twenty-One Lessons for the 21st Century*. Translated by Lin HJ. Beijing: CITIC Press Group (in Chinese).
- Wang JK (2011a) *With Me*. Chongqing: Chongqing Publishing Group (in Chinese).
- Wang JK (2011b) Informal discussions about core science fiction. *Studies on Science Popularization* 6(3): 70–72 (in Chinese).
- Wang JK (2013) *Escape from the Mother Universe*. Chengdu: Sichuan Science and Technology Press (in Chinese).
- Wang JK (2016) *Heavenly Father and Earthly Mother*. Chengdu: Sichuan Science and Technology Press (in Chinese).
- Wang JK (2019) *Cosmic Crystal Egg*. Chengdu: Sichuan Science and Technology Press (in Chinese).
- Wang JK (2020a) *Accidental Gains of Hard Workers*. Beijing: Science Popularization Press (in Chinese).
- Wang JK (2020b) The 'soft' and 'hard' aspects in *Escape from the Mother Universe*. In: *Accidental Gains of Hard Workers*. Beijing: Science Popularization Press, p. 162 (in Chinese).
- Wang WY (2012) Biological coexistence circle and the nature of humanity: Reflections on *With Me*. *Science and Technology Review* 16: 80 (in Chinese).
- Zhao HH (2013) Wang Jinkang: The sage of Chinese science fiction. *Studies on Science Popularization* 8(1): 65–73 (in Chinese).

Author biography

Xiang Li is an associate research fellow at the National Academy of Innovation Strategy, CAST. His research interests are science museums, science culture, and art and science.