

Science Fiction Shapes the Future #1



RIPPLE ENGLISH

In the 21st century, science fiction is _____ the most important _____ in the arts. We are living a time _____ truly understand how fast the world is changing. The radical _____ of society is _____ progress of science and technology. Developments in AI and robotics are increasingly changing both our _____ and _____ lives. _____ and evolutionary psychology are _____ our _____ human nature. _____ and genetic engineering may _____ replace the _____ concepts of the universe and life.

However, the majority of the _____ don't read technical books and science _____ on the latest technologies. Instead, they watch movies like _____ and *Avatar*, and read _____ such as *The Three-Body Problem*. _____, science fiction plays a _____ in shaping how most people understand things such as artificial intelligence, _____, and climate change. Science fiction has created our dreams _____ for the future, _____ insights into human nature and society, and _____ for potential challenges for humanity. What can we _____ science fiction?

In the 21st century, science fiction is perhaps the most important genre in the arts. We are living a time where none of us truly understand how fast the world is changing. The radical transformation of society is attributed to the exponential progress of science and technology. Developments in AI and robotics are increasingly changing both our private and professional lives. Neuroscience and evolutionary psychology are shattering our illusion about human nature. Quantum mechanics and genetic engineering may totally replace the traditional concepts of the universe and life.

However, the majority of the population don't read technical books and science journals on the latest technologies. Instead, they watch movies like *Matrix* and *Avatar*, and read novels such as *The Three-Body Problem*. Consequently, science fiction plays a key role in shaping how most people understand things such as artificial intelligence, bioengineering, and climate change. Science fiction has created our dreams and ideals for the future, provided insights into human nature and society, and sounded the alarm for potential challenges for humanity. What can we learn from science fiction?

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| genre | ジャンル | evolutionary psychology | 進化心理学 |
| radical | 抜本的な | shatter | 粉碎する |
| attribute | ～のせいにする | quantum mechanics | 量子力学 |
| exponential | 加速度的な、指数関数的な | genetic engineering | 遺伝子工学 |
| neuroscience | 神経科学 | consequently | その結果 |

Perhaps no other movie in recent years has provided as much _____ to _____ and technologists as *Iron Man* in 2008. Tony Stark is a _____ and tech genius, _____ fights _____ with a high-tech flying _____ he invented by himself. He has his own personal _____ AI named J.A.R.V.I.S. _____ in the workshop or on battlefields, J.A.R.V.I.S. talks _____ with Stark with a _____, dry, and _____ sense of _____. Stark can _____ inventions to his AI, _____ can team up on their design and construction. This cool and sophisticated _____ of AI stimulated the _____ in this field. As of 2023, the latest machine learning algorithms _____ problem-solving capabilities equivalent to J.A.R.V.I.S. _____ AIs including ChatGPT are only one step _____ communicating like J.A.R.V.I.S. Speech recognition and _____ - _____ - _____ have also improved _____ in recent years. 15 years after *Iron Man*, we already have individual technologies _____ Stark's AI. Similarly, _____ the popularity of *the Jurassic Park* series, there was a growing interest among the public for _____ DNA research, leading the media to focus _____ this field. As a result, more researchers _____ this _____ and research _____ increased. Progress and invention are _____ by our excitement and curiosity, and these powerful emotions have often been _____ by inspiring fictions.

Perhaps no other movie in recent years has provided as much inspiration to entrepreneurs and technologists as *Iron Man* in 2008. Tony Stark is a billionaire and tech genius, and he fights villains with a high-tech flying suit of armor he invented by himself. He has his own personal assistant AI named J.A.R.V.I.S. Whether it is in the workshop or on battlefields, J.A.R.V.I.S. talks naturally with Stark with a witty, dry, and sarcastic sense of humor. Stark can describe potential inventions to his AI, and then they can team up on their design and construction. This cool and sophisticated depiction of AI stimulated the development in this field. As of 2023, the latest machine learning algorithms possess problem-solving capabilities equivalent to J.A.R.V.I.S. Text generative AIs including ChatGPT are only one step away from communicating like J.A.R.V.I.S. Speech recognition and text-to-speech software have also improved dramatically in recent years. 15 years after *Iron Man*, we already have individual technologies required for Stark's AI. Similarly, with the popularity of *the Jurassic Park* series, there was a growing interest among the public for ancient DNA research, leading the media to focus more on this field. As a result, more researchers entered this realm and research funding increased. Progress and invention are fueled by our excitement and curiosity, and these powerful emotions have often been provoked by inspiring fictions.

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| entrepreneur | 起業家 | depiction | 描写、叙述 |
| villain | 悪役 | stimulate | 刺激する |
| workshop | 作業場 | equivalent | 同等の |
| witty | 機知に富んだ、軽妙な | realm | 領域、分野 |
| sarcastic | 皮肉な | provoke | 誘発する |



The 21st Century may be the last _____ live as Homo Sapiens. It doesn't mean that we would _____ survive, _____ we _____ into something different. *Childhood's End* in 1952 by Arthur C. Clarke, _____ a masterpiece in the history of science fiction, _____ the transformation of humanity.

Humankind is _____ single individuals _____ a concrete identity. At the end of the story, however, newly-born children _____ to be the individuals, and _____ the Overmind, a vast _____ intelligence. They _____ personality, becoming part of a single group _____. In other words, humanity evolves into a collective intelligence, where all individuals share their minds.

Does this _____ ridiculous and _____? Today, humanity has already begun to behave as a single unified mind. When we choose a restaurant, we _____ by millions of other anonymous individuals. When we buy something on Amazon or look for a video on Youtube, we follow suggestions by _____ that _____ billions of other users. When a significant _____ for humanity, _____ and _____ immediately _____ on social media and people around the world _____ a consensus on the issue. People want to be part of the data flow; they _____ and share everything about their lives, and make choices based on _____ data from billions of other people.

_____ technologies like Brain-Computer _____ are _____ practical use and enable our brains to directly connect to the Internet, the unification of humanity _____ a species will be _____ accomplished. Did the author foresee this trend _____ 1952?

The 21st Century may be the last era where we live as Homo Sapiens. It doesn't mean that we would fail to survive, but rather we may evolve into something different. *Childhood's End* in 1952 by Arthur C. Clarke, renowned as a masterpiece in the history of science fiction, depicts the transformation of humanity.

Humankind is composed of single individuals with a concrete identity. At the end of the story, however, newly-born children cease to be the individuals, and merge into the Overmind, a vast cosmic intelligence. They abandon their separated personality, becoming part of a single group consciousness. In other words, humanity evolves into a collective intelligence, where all individuals share their minds.

Does this sound ridiculous and outlandish? Today, humanity has already begun to behave as a single unified mind. When we choose a restaurant, we refer to reviews by millions of other anonymous individuals. When we buy something on Amazon or look for a video on Youtube, we follow suggestions by algorithms that learn from billions of other users. When a significant event occurs for humanity, numerous opinions and interpretations immediately emerge on social media and people around the world quickly form a consensus on the issue. People want to be part of the data flow; they record and share everything about their lives, and make choices based on these data from billions of other people.

Once technologies like Brain-Computer Interfaces are put into practical use and enable our brains to directly connect to the Internet, the unification of humanity as a species will be virtually accomplished. Did the author foresee this trend back in 1952?

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| renowned | 著名な、名声のある | anonymous | 匿名の |
| compose | ～を構成する | numerous | 多数の |
| cease | やめる、終える | emerge | 現れる、台頭する |
| abandon | 放棄する | virtually | 実質的に、事実上 |
| consciousness | 意識、自覚 | foresee | 予見する |
| outlandish | 奇妙な、意味不明な | | |



Disney has built its dominance by retelling one _____ different movies. In _____ Disney films, the heroes _____ challenges, but they _____ by finding their true self, following their hearts and making their own decisions. However, in 2015, the same studio _____ a movie that _____ this _____. *Inside Out* tells the story of an 11-year-old girl, Riley, who _____ Minnesota to San Francisco _____ family. _____, it is a _____ happy-ending story that depicts how she overcomes difficulties adjusting to her new life. But actually it is a _____ no free will based on the latest neuroscience. Unlike Elsa in *Frozen* or Rapunzel in *Tangled*, Riley never discovers her true self, _____ she make any free choices. Riley is in fact a huge robot controlled by various characters in _____ brain. The movie _____ biochemical mechanisms of the human brain as a _____ cartoon characters, such as the yellow and cheerful *Joy*, the blue and gloomy *Sadness*, and so on. They watch over Riley's life on a huge screen in her brain's _____ and control all of her _____, decisions, and behaviors by _____ and _____. _____ the _____ movie, you will never find any single authentic self that integrates and _____ Riley's identity. Rather, you will learn that her _____ - _____ depends on the effective _____ of neurological mechanisms that _____ various emotions. When *Joy* took a _____ and *Sadness* pressed the button, Riley was able to _____ her _____ to her _____. Similarly, when you want to hug your family, it is not a reflection of your free choice, but because of the _____ like oxytocin. *Inside Out* became a _____ around the world, perhaps because _____ its neurological _____ in a happy-ending taste. Most people don't want to hear the message that we are just biochemical algorithms.

Disney has built its dominance by retelling one myth through different movies. In countless Disney films, the heroes face challenges, but they eventually triumph by finding their true self, following their hearts and making their own decisions. However, in 2015, the same studio released a movie that brutally shattered this myth. *Inside Out* tells the story of an 11-year-old girl, Riley, who moves from Minnesota to San Francisco with her family. Officially, it is a comedic happy-ending story that depicts how she overcomes difficulties adjusting to her new life. But actually it is a suggestion that there is no free will based on the latest neuroscience. Unlike Elsa in *Frozen* or Rapunzel in *Tangled*, Riley never discovers her true self, nor does she make any free choices. Riley is in fact a huge robot controlled by various characters in her brain. The movie personifies biochemical mechanisms of the human brain as a set of cartoon characters, such as the yellow and cheerful *Joy*, the blue and gloomy *Sadness*, and so on. They watch over Riley's life on a huge screen in her brain's headquarters and control all of her moods, decisions, and behaviors by manipulating buttons and levers. Throughout the whole movie, you will never find any single authentic self that integrates and determines Riley's identity. Rather, you will learn that her well-being depends on the effective interaction of neurological mechanisms that prompt various emotions. When *Joy* took a step back and *Sadness* pressed the button, Riley was able to confide her sorrow to her parents. Similarly, when you want to hug your family, it is not a reflection of your free choice, but because of the action of hormones like oxytocin. *Inside Out* became a blockbuster around the world, perhaps because it wrapped its neurological implications in a happy-ending taste. Most people don't want to hear the message that we are just biochemical algorithms.

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| dominance | 優勢、独占、支配 | manipulate | 操作する |
| triumph | 勝利を収める | authentic | 本物の、正真正銘の |
| free will | 自由意志 | neurological | 神経系の |
| personify | 擬人化する | confide | 打ち明ける |
| biochemical | 生化学の | blockbuster | 大ヒット作 |
| headquarters | 本部、総司令部 | implication | 示唆、含意 |



There is a famous _____ that _____, “the road to hell is _____ good intentions,” and our _____ towards a dystopian future will indeed follow this _____. Numerous science-fiction _____ potential dystopia, including *1984* by George Orwell. Many of these societies are obviously _____, and ordinary people often struggle against _____ by _____. But that is not likely to happen in reality. Much more likely to happen is that people voluntarily _____ a _____ world. Our _____ to dystopia consists of a lot of steps, _____ quite beneficial and attractive. But _____ we _____ the entire staircase, we realize that it was the way to dystopia.

The Circle in 2013 _____ ordinary citizens who are _____ proceeding towards surveillance society. A big _____ company named The Circle _____ a social media platform, and the company _____ people to share everything about their lives in exchange for convenience and _____. Users share their private _____ a better reaction _____ other users. They _____ their biometric data, such as their _____ levels, for better healthcare services. The citizens gradually _____ surveillance _____ around the world, believing that transparency will reduce crimes and make society safer. Some people _____ such radical transparency, but they _____ come under suspicion _____ something to hide. _____, people gradually and voluntarily step into a controlled society without any dictator or the _____. Today, Humanity is already on the way towards such a surveillance society. We are happy to _____ our personal data in exchange for _____ information, free email services, social _____, and funny cat videos. The early 16th century political philosopher Niccoló Machiavelli said that we should “learn the way to hell in order to _____.” As depicted in *The Circle*, the journey towards dystopia will not look horrifying, but rather _____.

There is a famous saying that goes, “the road to hell is paved with good intentions,” and our path towards a dystopian future will indeed follow this quote. Numerous science-fiction writers have depicted potential dystopia, including *1984* by George Orwell. Many of these societies are obviously frightening, and ordinary people often struggle against suppression by the authorities. But that is not likely to happen in reality. Much more likely to happen is that people voluntarily move towards a nightmarish world. Our path to dystopia consists of a lot of steps, each of which looks quite beneficial and attractive. But once we have walked up through the entire staircase, we realize that it was the way to dystopia. *The Circle* in 2013 portrays ordinary citizens who are willingly proceeding towards surveillance society. A big tech company named The Circle runs a social media platform, and the company asks people to share everything about their lives in exchange for convenience and entertainment. Users share their private lives to get a better reaction from other users. They give away their biometric data, such as their blood pressure levels, for better healthcare services. The citizens gradually accept surveillance cameras around the world, believing that transparency will reduce crimes and make society safer. Some people oppose such radical transparency, but they in turn come under suspicion that they must have something to hide. Consequently, people gradually and voluntarily step into a controlled society without any dictator or the secret police. Today, Humanity is already on the way towards such a surveillance society. We are happy to give up our personal data in exchange for quick information, free email services, social approval, and funny cat videos. The early 16th century political philosopher Niccoló Machiavelli said that we should “learn the way to hell in order to flee from it.” As depicted in *The Circle*, the journey towards dystopia will not look horrifying, but rather irresistibly captivating.

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| pave | 舗装する | portray | 表現する、描く |
| dystopia | ディストピア (理想郷の逆) | surveillance | 監視、見張り |
| suppression | 抑圧 | transparency | 透明性 |
| authority | 権力、当局 | suspicion | 疑惑 |
| voluntarily | 自発的に、自ら進んで | flee | 逃れる |
| nightmarish | 悪夢のような | irresistible | たまらなく魅力的な |
| staircase | 階段 | captivating | 魅力的な |