# Heads Short Guide

## Heads by Greg Bear

BOOKRAGS

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# Overview

Heads is a bizarre ride through highconcept technology, eerie Gothic scientific experiments, and political intrigue. The novel's narrator is Mickey Sandoval, who at twenty years of age was put in charge of a research project at the Ice Pit, located in the middle of the Sandoval family's lunar territories. The events he recounts occur when he is twenty-three and still learning how to take on challenging tasks and see them through to a resolution favorable to him and his family business. Although most of the action is generated by the scientific projects of his sister Rho and her husband William, the novel is Mickey's story. He tells of being reshaped in the crucible of the Ice Pit into the man who would someday become the leader of the Sandoval "multiple."

# About the Author

Greg Bear was born on August 20, 1951, in San Diego, California. He grew up in many different locales, however; his father was in the navy, and the family lived in Japan and the Philippines as well as on naval bases on the Gulf Coast, the East Coast, and the West Coast of the United States.

>Bear's childhood experiences in different cultures may account for the sensitivity to different cultures in his fiction (for example, in Dinosaur Summer). Moving about frequently is hard on friendships, and Bear's passion for reading may have its origin in the lonely hours he spent by himself when he was young. Today he is an eclectic reader of science and history as well as fiction.

His ambition to be a writer seems to have begun early, perhaps when he was eight years old. By the time he was a teenager he was writing in hopes of publication and did sell a short story to Famous Science Fiction when he was fifteen. As many young writers discover, publishing his work was difficult, and it was not until he was in his twenties that he had his second professional publication. His work caught fire in his early twenties, however, and he attracted critical attention as one of science fiction's most promising young talents. In the years since, Bear has retained the respect of critics with his taut narratives and imaginative settings.

This does not mean that his career has been easy; short stories do not earn much money, and most authors must write several novels before they can hope to earn enough in royalties to support themselves.

Bear worked as a journalist in southern California in the 1970s and early 1980s. His first marriage ended, but he remarried in 1983, this time to Astrid Anderson, the daughter of the author Poul Anderson. They have a son, Erik, and a daughter, Alexandra.

His work is highly admired by his fellow writers, and he has served in various posts for the Science Fiction Writers of America, including president from 1988 to 1990. That body has given Bear its Nebula Award three times: for best novella (Hard/ought) in 1983; for best novelette (Blood Music) in 1983; and for best short story ("Tangents") in 1986. The World Science Fiction Convention has twice given Bear its annual award, the Hugo: for best novelette (Blood Music) in 1984, and for best short story ("Tangents") in 1987.

"Through reading science fiction, I became interested in other forms of literature, in astronomy and the sciences, in history and philosophy," Bear says in the preface to his short story collection The Wind from a Burning Woman (1983). The importance of science to his own development may be why Bear often addresses the interests of young adults in his fiction.

# Setting

The events of Heads are set on the moon about two centuries in the future. It is inhabited by two million people, all allied with one of more than fifty families, called "multiples." The major action takes place in the Ice Pit, "a volcanic burp in the Moon's ancient past, a natural bubble almost ninety metres wide that had once been filled with the aqueous seep of a nearby ice fall." The ice has long since been mined for water for the inhabitants of the moon, and the Ice Pit is used mostly for an unprofitable farm and the experiments of William Pierce, who is trying to reduce the temperature of some copper to absolute zero. He is an in-law of the Sandoval family, the multiple that owns the Ice Pit, and his work is funded partly to keep his wife happy, partly to give the novel's narrator Mickey a job, and partly in hopes of marketing the ability to freeze something to absolute zero for industrial applications. Most of the activities of the moon's multiples are motivated by the earning of money, and the relationships of the moon's organizations are largely governed by issues of commercial fair play.

# Social Sensitivity

The society of the multiples is borrowed from history; many cultures have gone through periods when great families divided society among themselves and people needed to ally themselves with one family or another if they hoped to survive. Italy during the Renaissance, China during the Three Kingdoms era, medieval Japan, and California when it was a part of Mexico are examples. The culture of the moon in Heads closely resembles that of Florence, Italy, during the Renaissance, when the dominant commercial families and the government focused on maintaining the community's economic prosperity. Scientific research on the moon is justified primarily by its potential to enhance a family's business; the only greater claim on family money is that of blood relations. William, who is not a blood relation, receives research money mostly because of the pleading of Rho and Mickey, Sandovals by birth, and Mickey receives his position of authority at too young an age, he admits, because he is a Sandoval by blood.

The elaborate society of multiples is well worked out, with superfamilies having legal status as Lunar Binding Multiples. The "binding" part is important: it is what allows William, originally an outsider, to be part of the Sandoval multiple. He has bound himself to the multiple, joining those who are not Sandoval-born but who serve the family. His marriage to a Sandoval is therefore important not only as a matter of love, of which there is plenty, but as a matter of economic and social success. Without being bound, William would not qualify for the support he receives.

Bear does a fine job of showing how economic interests could combine to create a balanced society in which cooperation and competition coexist. It is particularly interesting to see how the checks and balances of the social system could be worked out in a constitution, and how such a constitution would need to be revised as the culture matures.

Of concern to many readers will be the handling of religion in Heads. The Logologists are treated as a demonic force, a hateful organization determined to control governments. Although Thomas and Mickey express regrets about Fiona Task-Felder's suicide, she is for most of her time in the novel a cruel manipulator of people who is willing to destroy lives so that she and her religion may have their way. The bombing of the research laboratory at the Ice Pit makes her at least an accessory to murder, even if she herself does not actually order the attack. Otherwise, the Logologists are remote people, a vague group of managers on earth who give orders to their minions on the moon. Their motives are never good.

The founder of Logology, Kimon David Thierry, is irredeemably evil. He is shown to have lied about his revelations and to not have believed a word of his own pronouncements. Thierry "had been petty, a philanderer, a malicious prosecutor of those who had fallen from his grace," Mickey writes.

"He had written ridiculous laws to govern the lives of his followers. He had been cruel and intemperate." Even in the moments before his death, Thierry is ordering someone

to squeeze a new member of the religion harder, to press her into contributing more money, and to find others to give him more money. His dying thoughts are fearful, because "he feared going to the hell he had been taught about in Sunday school."

Mickey elaborates: Thierry "feared another level of lie, created by past liars to punish their enemies and justify their own petty existences." This assertion paints over the religious beliefs of many readers with a broad brush, and it is typical of the tone in which religion is presented throughout Heads. Mickey says that he became a cynical man during the events he recounts, and the sour attitude toward religions of any kind may represent his reaction to the evils done to his loved ones by the Logologists. It also may reflect a sourness toward human nature: he takes pains to point out that Logology's decline was the result of "legend" rather than fact, implying that legends mean more to people than the truth.

# Literary Qualities

Heads would be a good example to use in studying the craft of the novel. Its construction is plain, straightforward, and undisguised. Bear begins with a paragraph that not only states the themes of the novel but tantalizingly foreshadows the mysteries to be revealed: The great silvery refrigerators four storeys tall hanging motionless in the dark void of the Ice Pit; the force disorder pumps with their constant sucking soundlessness; the dissolving ghost of my sister, Rho; and William Pierce's expression when he faced his lifetime goal, in the Quiet.

These are compelling images that promise exotic places and strange events. The refrigerators, the void, the disorder pumps, the dissolving ghost, and the Quiet each evoke questions that readers may want answered. The questions are answered bit by bit throughout the novel, the suspense building, until the Quiet itself is revealed. Tension is also created in the narrative as Mickey moves toward the answers after first overcoming the obstacles thrown in his way.

If the presentation of religion as government is tired stuff for science fiction, its use is technically sound and could be replaced with other social groups or political entities. (Poul Anderson's Harvest of Stars [1993] offers an example of how the technique would appear in another form.) There is not much of a story if all runs smoothly; Mickey and the Sandoval multiple need to meet resistance in order to have the conflict that will generate the action of the narrative.

The Logologists fill the role well: their desire to control others conflicts with the Sandoval multiple's desire to pursue its economic interests freely. Bear introduces a layer of sophistication in his creation of the Logologists by having them represent the opposite of what they seem to want. Their desire for order results in disorder. More than a plot device, the Logologists thus help to define the themes of the novel.

The pacing of the narrative is established in the first paragraph, and any reader so inclined could refer back to that paragraph while reading the novel and note how each vivid, mysterious image appears later in the narrative, each appearance representing a significant development in the plot.

These images are also important to the themes of the novel and therefore stand out as Mickey encounters each. In the climax of the novel, plot, themes, and images all come together, with the refrigerators finding or der only in their destruction, the order of absolute zero resulting in unpredictable chaos, and Rho and William disappearing with the heads into the Quiet. This makes for a satisfying read.

# Themes and Characters

Mickey Sandoval, the narrator of Heads, is blunt about the novel's themes. He says, "Order and cold, heat and politics. The imposition of wrong order: anger, fear, death, suicide and destruction." This is a succinct statement of the themes of this tale of scientific adventure, all of which are played out with Shakespearean grandeur.

The notion of "wrong order" is a notably interesting theme. The reader might expect that order would always be good, a positive force in opposition to disorder, or chaos, a negative or bad force. Instead, Heads calls attention to different kinds of order, implying that there are differences between them and that disorder may sometimes be good.

The Logologists carry the burden of "wrong order" in Heads. Their name implies logic, an orderly way of looking at the universe.

In fact, they want order to be their order.

They strive to achieve control of government on earth, the moon, and Mars, and in so doing they circumscribe the freedoms of others. Their conflict with Mickey and the Sandoval multiple is as much about control of the lives of the inhabitants of the moon as about protecting Logology from the revelations that may come from the frozen head of the founder, Thierry.

The kind of order that the Logologists would destroy is that of free association.

This is worked out at two levels in the novel. One level is the association of multiples with one another for business and scientific reasons. The Cailetet, Nernst, and Onnes multiples vote in favor of continued research on the heads and against fifty-one other multiples probably because they wish to participate in the research. Their right to participate if they wish is embodied in the Lunar Binding Multiples Agreement, a constitution agreed upon by the moon's multiples. This, the narrative implies, is "good order" because it helps competing interests to coexist.

The order theme is worked out on the other level, that of the individual human, with much greater complexity than is required at the broader level of the family multiples. The "good order" of the moon's society allows individuals to cooperate economically. For instance, it enables scientists from the Cailetet multiple to work on the Sandoval multiple's research project. It also allows for upward social mobility, as exemplified by William Pierce, who comes from a poor family but becomes head of a challenging Sandoval research project by the time he is thirty-two, even if he does have to put up with twenty-year-old Mickey's handling of the finances. On this personal level, people and their multiples may keep certain secrets, but they may also share them.

One clear outcome of the "wrong order" represented by the Logologists is a prohibition on sharing information; Rho, for instance, may not share her work with other Heads 147 scientists. In the "wrong order," the government may demand any secrets it wants, but it

may forbid any sharing of secrets outside of its control. On the two levels of "good order," there is room for social growth, perhaps by an agreement to modify the constitution to meet changing economic and technological realities, and for personal growth, as exemplified by Rho and her associates from other multiples and by William in his pursuit of a scientific dream. The research seems to expand their minds, broadening their outlook on life.

Under the "wrong order" of Logology, there would be at best stagnation. Society would not meet the needs of its people.

Such a careful working out of a social theme could make a novel a didactic bore, but Bear knows how to tell a good story, one that will hold the reader's attention from beginning to end. Heads is a gripping nail-biter of a yarn. The excitement is in the "anger, fear, death, suicide and destruction" that Mickey promises in the first paragraph. These ideas are worked out in the characters.

Principal among these is Mickey Sandoval. For him, Heads is a coming-of-age story.

He says that, when William Pierce's project began, "I found myself assigned to a position far above what my age and experience deserved; the new station's chief financial manager and requisitions officer." The events take place three years later, when Mickey is twenty-three, and he still feels the weight of his duties. He must somehow meet William's needs while satisfying the Sandoval multiple that there is hope for a good return on its investment in his brother-in-law's research. He is successful in part because the multiple is not only a business alliance but a family-like organization; he and his sister, as Sandovals, have influence because they are of the family, and William has earned his chance to pursue his research project because of his years of dedicated, valuable service to other Sandoval projects. Thus, Mickey is part of a complex social world in which the economic numbers are mixed with the emotions of love, loyalty, and gratitude.

That he feels out of his depth yet wishes to prove himself worthy of trust seems natural for Mickey, whose interest in liberal arts has no economic value to other members of his family. When he accepts an appointment to meet with Fiona Task-Felder, president of the ruling council, Mickey admits that he thought he could outwit her; instead, she manipulates him into an insupportable position. He becomes angry. Later, he says, "I turned my gaze to the president's dais, to Fiona Task-Felder, feeling for the first time a flash of real hatred. I date my present self to that moment; it was as if I had been reborn, more cynical, more calculating, sharper, no longer young." He marks this as his moment of coming of age, but it is a suspect moment. His actions afterward do not reflect a growth in maturity; becoming a cynical political battler is not necessarily a matter of maturity. Instead, we see Mickey's real growth in later moments, rather than here when he imagines that he is developing a more wary and careful view of his world.

It is his increasing thoughtfulness that suggests where his true growth occurs. For instance, he becomes angry at his mentor, Thomas, because he "had turned me into a weapon and I had been effective and that hurt." Mickey shows here an ability to make

distinctions in his anger, to recognize how he himself is a part of how the anger has been engendered. He also broadens his view of Fiona Task-Felder, someone whose callous manipulation of others would seem to leave her open to very little sympathy: "To harm one's fellows, even one's enemies, harms you, takes away some essential element from your self-respect and self-image." Perhaps he overphilosophizes here, but he is a young man trying to sort out a truth about himself—that he feels diminished by diminishing others. This seems to be a by-product of the "wrong order": honorable people may become cruel in their efforts to defend themselves.

Mickey survives his fear of the unknown and of death, the death of his beloved sister and her husband, his guilt over helping to drive Fiona Task-Felder to suicide, and the destruction of years of work. His true coming of age may take place during the climax, when the bombing of the laboratory contributes to the chaos of William's experiment. For a minute or so, Mickey shares the thoughts of 410 people—the heads—plus Rho and William: "I began to fill with sensations, remembrances not my own." More than in his dealings with the Logologists, he learns about the nature of evil; he feels diminished by Thierry's vile thoughts. But he emerges from the Quiet as someone who has become tough and who has tested the limits of his endurance. His toughness is tempered by his thoughtfulness: "The truth is less vigorous a prosecutor than legend," he notes as he describes the decline of Logology. He also learns that "the sorrow never dies," yet he endures. This is the man who becomes director of Sandoval BM.

# Topics for Discussion

1. Why is Mickey unhappy with what he did to Fiona Task-Felder?

2. Why is political control by a religion seen as dangerous?

3. Why do the characters in Heads take so long to realize why the Logologists might object to the study of the memories within frozen heads?

4. Why would the existence of Thierry's head worry the leaders of Logology?

Why not welcome the return of their religion's founder?

5. "I turned my gaze to the president's dais, to Fiona Task-Felder, feeling for the first time a flash of real hatred. I date my present self to that moment," says Mickey. What does he mean by this? How does this moment affect his subsequent actions?

6. Heads is partly a story of Mickey's coming of age, yet he does not seem to welcome the new wisdom he acquires in making a significant leap in maturity. What about it is unwelcome? Why is it unwelcome?

7. Thomas Sandoval-Rice tells Mickey that making big mistakes is part of learning to make good decisions. By the novel's end, has Mickey come to understand this? Has he made peace with his big mistakes?

8. Why would a much older Mickey, who has children of his own and is far removed from his days with William and Rho, want to have his body placed in the Quiet after his death?

Heads 151 9. What happened in the Quiet? Is anyone alive there?

10. What qualities of good leadership has Mickey developed by the end of Heads?

11. What motivates William's drive to create an absolute zero environment?

12. What is the significance of Mickey telling Thomas to call him "Mickey," not "Micko"?

# Ideas for Reports and Papers

1. Mickey remarks, "The centre cannot hold." This is a quotation from a wellknown poem. What is the poem? Who wrote it? What is meant by "the centre cannot hold"? How does it apply to Heads?

2. "He feared another level of lie," Mickey remarks of Thierry. Why does Bear attack religions in general rather than simply focusing on the one religion of Logology? Are there other works of Bear's that contain similar views? Is it possible to distinguish between a character's views—which are the stuff of fiction—and those of the author himself?

3. Mickey is given a job that seems common and important in our own time: "the new station's chief financial manager and requisitions officer." What does a financial manager do? What does a requisitions officer do? How would these jobs be important to the Ice Pit, which employs farmers, engineers, and scientific researchers?

4. "QL postulates that achievement of absolute zero within a significant sample of matter will result in a new state of matter." Is this hypothesis based on science? What do physicists predict about the nature of matter at absolute zero?

5. What are the laws of thermodynamics, and how are they applied in Heads?

6. How and where does Bear use foreshadowing to generate suspense in Heads?

7. Explain the concept of "space-time."

How does it apply to the events in Heads? What is its importance?

8. William declares that "we're approaching some key event that sends signals back in time, affecting our experiment now." What aspect of modern physics predicts this event? When does it happen? How does it work? (This is a tough topic. You might begin by looking up "antimesons" and "tachyons," subatomic particles often borrowed from the science of physics by science fiction for stories about time travel.)

9. What are Kelvin degrees? How does science use them? What is zero Kelvin?

Who was Kelvin, and why is the Kelvin measuring system for temperatures named after him?

10. What are "superconducting electromagnets"? How would they function in William's experiments?

# For Further Reference

Clute, John. "Greg Bear." In The Encyclopedia of Science Fiction. Edited by John Clute, Peter Nicholls, et al. New York: St. Martin's/Griffin, 1995, pp. 99-100. An overview of Bear's career, emphasizing the relationship of his writings to the period in which they were written, mostly in the 1980s.

Heads 153 Easton, Tom. Review. Analog Science Fiction and Fact 112, 1-2 (January 1992): 310-11.

Easton is unimpressed by Heads.

Natke, Nora Jane. Review. School Library Journal 38, 4 (April 1992): 163. Natke expresses mild approval for Heads.

Perlberg, Marilyn A. "Greg Bear." Beacham's Encyclopedia of Popular Fiction. Edited by Kirk H. Beetz. Osprey, FL: Beacham Publishing, 1996, pp. 114-17. Perlberg summarizes Bear's life, career, and critical reception and provides a heavily annotated bibliography of resources for learning more about him.

Publishers Weekly 238, 32 (July 25, 1991): 4041. A not particularly informative but favorable review of Heads.

# Related Titles

Heads is a novel in the Frankenstein tradition: a cautionary tale about people meddling with God's powers. In the early 1800s, while staying in the home of Lord Byron in Switzerland, Mary Shelley had a dream that she shared with Byron and other guests during a parlor game in which each person told a scary story. Inspired by a dream in which a monstrous being pulled aside her bed curtains and looked at her while she slept, Shelley created a story of a frightful being who is brought to life in a scientific experiment. This story became the novel Frankenstein: or The Modern Prometheus. The subtitle refers to the Greek god who brought fire to humanity against the wishes of Zeus, symbolic in Shelley's tale of Frankenstein, who usurps God's power to create life.

The novel has been a powerful influence on literature ever since its publication, and in science fiction its idea that science oversteps its bounds when it takes on the powers of the Almighty without concern for the consequences has been worked and reworked. In Heads, Bear presents the idea of bringing the dead to life, echoing Frankenstein's use of body parts taken from corpses in an interesting way.

The heads themselves do not necessarily come to life; instead, their memories, their most private thoughts, are retrieved. This is an intrusion into privacy that previously only God could make. As with Shelley's monster, bringing the long-dead to life has terrible consequences: if Frankenstein's monster was hideous and terrifying, the thoughts of Thierry's head are appallingly evil and terrifying in their consequences, not only for the followers of his bogus religion but for Mickey, who involuntarily shares those thoughts. Mickey mentions that he has lost memories of his own, as if the monsters unleashed by William and Rho put them to death—reminiscent of the monster of Frankenstein killing parts of his creator's life.

Just as Shelley made vivid use of an important social issue of her day—the fear that science had grown out of control— so Bear deftly touches on similar concerns of his own era. For instance, his story Blood Music (1983) features a Frankenstein-like scientist who does not think through the implications of his work, much as Frankenstein fails to do. Neither scientist is emotionally prepared for the results of his achievement, and stupid reactions to it put the larger community at mortal risk.

Blood Music focuses on the social issue of microbiology, the mysterious world of gene splicing, "magic bullets" that target diseases, making people immune to disease. In Heads, Bear works on the social problem of scientific intrusion into personal lives—the perception that science is laying every life open and accessible to anyone for any purpose, and that there may be no escape from intrusions into even the most private aspects of life. In Heads, even death, that most private event, becomes open to science as Rho retrieves Thierry's dying thoughts.

This issue of privacy is tied to another Frankenstein issue: interference with God's power of creation. In Shelley's novel, such interference is Frankenstein's creation of life; in Heads, it is the creation of matter—in fact, a remaking of the start of the universe.

William manages to create a new state of matter in which the laws of the universe are jumbled and remade. When he drops the temperature of copper below absolute zero, he violates the laws of thermodynamics and takes to himself the power of physical creation. The result of his work is a mad place where time is no longer linear, where matter is shredded, and where Mickey sees himself and Rho shedding layers off of themselves until they are ghostlike and can pass their arms through one another and William. As in Frankenstein, the scientists create catastrophe by failing to foresee the consequences of their actions. Like Frankenstein, William and Rho immerse themselves so deeply in the process of discovery that they become enamored of it.

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**Beacham's Encyclopedia of Popular Fiction**

Editor
Kirk H. Beetz, Ph.D.

Cover Design
Amanda Mott

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Library of Congress Cataloging-in-Publication Data Beacham's Encyclopedia of Popular Fiction

Includes bibliographical references and index

Summary: A multi-volume compilation of analytical essays on and study activities for the works of authors of popular fiction. Includes biography data, publishing history, and resources for the author of each analyzed work.

ISBN 0-933833-41-5 (Volumes 1-3, Biography Series)
ISBN 0-933833-42-3 (Volumes 1-8, Analyses Series)
ISBN 0-933833-38-5 (Entire set, 11 volumes)

1. Popular literature□Bio-bibliography. 2. Fiction□19th century□Bio-bibliography. 3. Fiction□20th century□Bio-bibliography. I. Beetz, Kirk H., 1952-

Z6514.P7B43 1996[PN56.P55]809.3□dc20 96-20771 CIP



Printed in the United States of America First Printing, November 1996