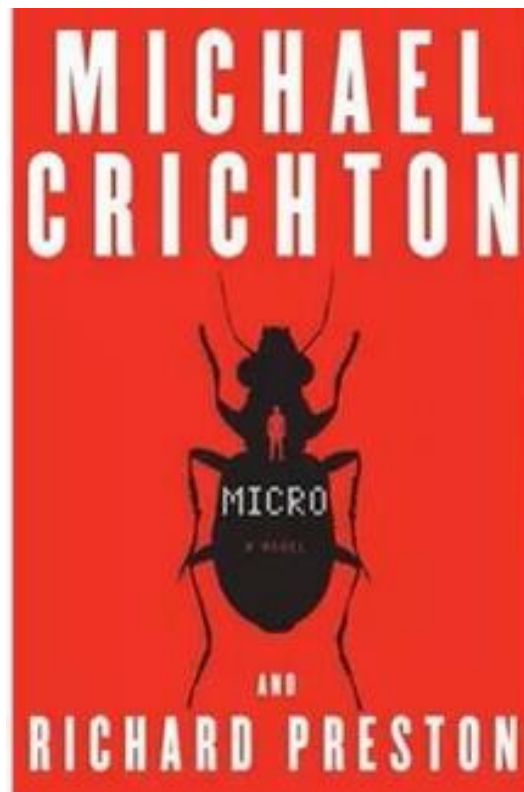


Book Discussion Guide for *Micro* by Michael Crichton (and Richard Preston)

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January 20, 2021



Introduction

Michael Crichton died from lymphoma in 2008 before he completed this novel, *Micro* (Crichton and Preston, 2011). The publisher, HarperCollins, brought in Richard Preston, an internationally acclaimed author, to complete the novel (*Michael Crichton*, 2021). Some readers feel that as a result the book is a bit uneven in style. Nevertheless, the book has the same suspenseful, intelligent use of science and technology typical of Crichton's work. So, hold onto your seat, you're in for a suspenseful ride through a micro world with villains, mysterious events, imaginative, cutting edge technologies in the form of bots (robots, in this book on the micro scale), and MacGyver-type protagonists, using their knowledge and creative use of meager resources to survive.

Micro focuses on both the not well-known – especially plants and the biologically active molecules they make which may lead to new drugs – and the very small, such as insects, spiders, fungi, and other organisms. The book weaves a suspenseful tale of the world at the level of organisms that are best seen under a microscope, which offers great challenges to the protagonists both to understand the mysteries and, for those who enter the micro-world, to survive, adjusting to differences in natural forces at the micro scale and interactions with creatures that were small and inconspicuous and who now loom large.

The story involves the technological developments in bots and their application in pharmaceutical technologies of Nanigen MicroTechnologies, a secretive company based in Hawaii with international investors from the pharmaceutical world. Nanigen is in need of more researchers and so they offer graduate students from a variety of scientific disciplines the possibility to start their careers in the Nanigen labs. The story follows 7 graduate students from a Harvard lab in Massachusetts who come to Hawaii to consider working for Nanigen. The student

personalities are a bit like those of the *Big Bang Theory* TV show, with a sinister plot thrown in. The suspense starts rolling as the brother of one of the graduate students, a physicist working for Nanigen, is murdered by the CFO of Nanigen.

Discussion Starters

1. What was your reaction to the book? Was the book plot believable? Was this based on real science or projected science?
2. Entomology – insects and other microorganisms – have a central role in the book. How are these creatures presented? Does this portrayal heighten suspense? Does it encourage curiosity?
3. How are the graduate students who have research directly or indirectly relating to insects portrayed? Is there a relationship from the personalities and focus of the students to the professional scientists in the book?
4. What concerns or attitudes about science and technology are presented? What roles do business and governments play in the scientific endeavor and technologies that result from research? Do such ethical concerns apply to research concerning insects?
5. The micro perspective is a key concept in this novel and sets the stage for much of the suspense. We often make comparisons in the other direction, considering insects if they were our size: how strong they would be, how far they would jump, and what heavy loads they could carry. For instance, it is claimed that an ant can lift 20 times her own body weight. If a second grader did that, the student would lift the equivalent of a car. Such comparisons are interesting but the same forces that allow the ant this ability when the ant is ant-sized would act differently when the ant becomes our size. How do the students experience being micro-sized? Is this realistic? Could the human body continue to

function normally at the micro scale? Or, how similar in function are insect and human bodies?

6. What insights do the graduate students gain from becoming micro-sized on the micro world? What insights about insects has this portrayal given you? Has this changed your thoughts or feelings about insects and the micro world?
7. Parasitoid organisms, such as the wasp in this book, lay their eggs inside other organisms to develop. Botflies (Family Oestridae) lay their eggs in the skin and guts of mammals, including humans. These larvae may be removed but sometimes they are left to develop in the skin and when mature, escape the skin without killing the host. Wasps have particularly exploited this mode of parasitism. Put yourself in Danny's place: what would you do in his situation? Would you have taken the risk to contact Vin? Is it possible that the wasp larvae affected Dan's reasoning?
8. Several times in the book, the micro-sized students encounter ants. There are also remarks by Vin and others that the ants will get them, that the students cannot survive the ants. What about ants makes this danger so great and even certain?
9. When Rick and Karen are restored to human size, do you think their attitude towards the micro world, and especially insects, has changed? Considering that Rick's specialty is plants and Karen's spiders, what might it mean that Karen is interested in exploring the micro world further but Rick is not? With whom do you identify?
10. What are other micro perspective questions or experiences with insects would you like to answer or have? Having read this book, can you imagine the answers or what the experience would be like?

References

Crichton, J. M. & Preston, R. (2011). *Micro*. HarperCollins Publishers.

Michael Crichton. (2021, January 18). Wikipedia. retrieved from

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