

What kind of world do we live in?

Excerpt from the Introduction of Micro, written by Michael Crichton.

In 2008, the famous naturalist David Attenborough expressed concern that modern schoolchildren could not identify common plants and insects found in nature, although previous generations identified them without hesitation. Modern children, it seemed, were cut off from the experience of nature, and from play in the natural world... It was ironic that this should be happening at a time when there was in the West an ever greater concern for the environment, and ever more ambitious steps proposed to protect it.

Indoctrinating children in proper environmental thought was a hallmark of the green movement, and so children were being instructed to protect something about which they knew nothing at all. It did not escape notice that this was exactly the formula that led to well-intentioned environmental degradation in the past – the deterioration of American national parks being a prime example, and the American policy of forest fire prevention, another. Such policies would never have been instituted if people really understood the environments they were trying to protect.

The problem was that they thought they did. One can argue that the new generation of schoolchildren will emerge even more certain. If nothing else, school teaches that there is an answer to every question; only in the real world do young people discover that many aspects of life are uncertain, mysterious and even unknowable.

If you have a chance to play in nature... you come away with a sense of mystery and uncertainty. The more you watch, the more mysterious the natural world becomes, and the more you realize how little you know. Along with its beauty, you may also come to experience its fecundity, its wastefulness, aggressiveness, ruthlessness, parasitism and its violence. These qualities are not well-conveyed in textbooks.

Perhaps the single most important lesson to be learned by direct experience is that the natural world, with all its elements and interconnections, represents a complex system and therefore we cannot understand it and we cannot predict its behavior. It is delusional to behave as if we can, as it would be delusional to behave as if we could predict the stock market, another complex system. If someone claims to predict what a stock will do in the coming days, we know that person is either a crook or a charlatan. If an environmentalist makes similar claims about the environment, or an ecosystem, we have not yet learned to see him as a false prophet or a fool.

Human beings interact with complex systems very successfully. We do it all the time. But we do it by managing them, not by claiming to understand them. Managers interact with the system: they do something, watch for the response, and then do something else in an effort to get the result they want. There is an endless iterative interaction that acknowledges we don't know for sure what the system will do – we have to wait and see. We may have a hunch we know what will happen. We may be right much of the time. But we are never certain.

Interacting with the natural world, we are denied certainty. And always will be.

Excerpt from Micro, A Novel by Michael Crichton and Richard Preston, Harper 2011. For more information, see <http://www.crichton-official.com>