Michael Crichton's *Jurassic Park* and Chaos Theory

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Abstract

In the Web Application Development lab at the Center for Advanced Research and Technology, students were assigned to get into teams with the User Experience Design lab and create a functioning website and mobile app based on Michael Crichton's 1990 novel, *Jurassic Park*. For project preparation, students read Crichton's novel in their English class and focused on Ian Malcom, one of the characters, who believed that Jurassic Park will crash as a business due to the idea of chaos theory. With that idea, students explored this idea and applied it to life lessons that can be learned and applied to someone's everyday life.

Michael Crichton's *Jurassic Park*: Life Lessons About Chaos Theory

Introduction

In *Jurassic Park* by Michael Crichton (1990), people are brought to an island that is supposed to be an amazing experience- they get to see real dinosaurs and all their mannerisms. But, eventually, something goes wrong, due to carelessness and greed. In the book, it is believed that one of the reasons as to why everything went wrong is because of the idea of chaos theory. It's important to implement the idea of chaos theory in this book, as it helps readers understand why everything may have happened the way it did - and maybe teach them a few life lessons. Due to the events that occurred in *Jurassic Park*, it's possible for readers to rethink how valuable life really is.

Scientific and Literary Origins of Chaos Theory/Butterfly Effect

Although *Jurassic Park* is fiction, the idea of chaos theory is not. Chaos theory, or the "butterfly effect," is the study and science of the unpredictable events that could happen subsequently to minor events. The idea of chaos theory was born around the middle of the 19th century by mathematician and meteorologist Edward Lorenz. Later in 1963, Lorenz made uncontrolled calculations and approximations while trying to graph the weather, which gave the

phenomenon its name (Oestreicher, 2007, para. 31). Ideas concerning chaos theory have evolved since then.

Chaos theory has also spread to pieces of literature. For example, in the short story titled *A Sound of Thunder* by Ray Bradbury, the main character Eckels completely alters the present due to a minor thing he did- stepping on a butterfly from the past. As the text says, **"'Not a little thing like that! Not a butterfly!' cried Eckels. It fell to the floor, an exquisite thing, a small thing that could upset balances and knock down a line of small dominoes and then big dominoes and then gigantic dominoes, all down the years across Time" (Bradbury, 1952).** Because of doing as little as stepping on a butterfly, everything was changed. Another example of literature that implements the idea of chaos theory is the novel *Cat's Cradle* by Kurt Vonnegut. This title is a satirical piece about a man named John (but calls himself Jonah) and his ideas about topics like science, religion, and technology. In the book, Jonah states, **"*Busy, busy, busy,* is what we Bokononists whisper whenever we think of how complicated and unpredictable life is'" (Vonnegut, 1963, p.4).** Bokononism is his religion, and he believes that the world is coming to an end at a given point and everything is unpredictable.These publications are only two of the many literary pieces that apply chaos theory.

Chaos Theory at Play in *Jurassic Park*

In *Jurassic Park*, the idea of chaos theory is very prevalent. And there is one character in particular who is very persistent about it- Ian Malcolm. Malcolm is a mathematician who is very passionate about anything that has to do with chaos theory. For example, he states, **"Real life isn't a series of interconnected events occurring one after another like beads strung on a**

necklace. Life is actually a series of encounters in which one event may change those that follow in a wholly unpredictable, even devastating way" (Crichton, *Jurassic Park*, 'Breeding Sites', 171). At another point, he says, **"Largely through science, billions of us live in one small world, densely packed and intercommunicating. But science cannot help us decide what to do with that world, or how to live. Science can make a nuclear reactor, but it cannot tell us not to build it. Science can make pesticide, but cannot tell us not to use it. And our world starts to seem polluted in fundamental ways—air, and water, and land—because of ungovernable science" (Crichton, *Jurassic Park*, 'Control', p. 312).** These excerpts show his way of thinking - everything that happens at one point is going to lead up to a series of events in the future.

Some people didn't believe in what he was saying, though, because they thought that everything that is happening the way it is in the present is how it will remain, or that nothing devastating will happen due to what they've done in the past. One of those people is Henry Wu. Wu was the lead scientist of the park and was focused on the present rather than the future, and he decided to believe that nothing bad could come of what was happening. Due to everything he decided to brush over concerning the dinosaurs, though, the park became unsafe. Despite the fact that chaos theory may not be something everyone believes in, it was still possible to take precautions to prevent what happened.

Consequences of Chaos Theory

As mentioned before, one of the characters that contributed to the chaos that recurred was Henry Wu. Even with such a responsibility as the head scientist, he still was somewhat negligent

when it came to specific details. For example, he wasn't exactly aware of how many species there were. The book states, **"'I'm not exactly sure,' Wu said. 'I believe the number at the moment is fifteen. Fifteen species. Do you know, Ed?' 'Yes, it's fifteen,' Ed Regis said, nodding. 'You don't know for sure?' Malcolm said, affecting astonishment. Wu smiled. 'I stopped counting,' he said, 'after the first dozen" (Crichton, *Jurassic Park*, 'Control', p. 111).** Although he was the head scientist for the whole park, he didn't keep track of the amount of species. Him not keeping track of the dinosaurs enough eventually led to them reproducing and going out of control. Another example of a character that added to Jurassic Park's chaos was Dennis Nedry. Nedry worked with computers at the park and eventually, when shown money, turned against the park. In the text, it states, **"Each embryo in a thin glass container, wrapped in silver foil, stoppered with polylene. Nedry quickly took two of each, slipping them into the shaving cream can" (Crichton, *Jurassic Park*, 'Breeding Sites', p. 175-176).** This is when Nedry steals embryos from the fertilization room. To do that, though, he had to turn off the power, which let the dinosaurs get out due to a lack of electric fences.

Due to all these factors, the dinosaurs in the park acted in unexpected ways. An attack from one of the tyrannosaurus rex at the park is an example of this. No one expected the dinosaurs to do much, but after a power outage, the dinosaur attacked the people that were near its enclosure, almost killing them (p. 185-191). Another example of the dinosaurs acting in unpredictable ways was the pterodactyl attack in the aviary. While Alan Grant (main character, paleontologist), Tim and Lex (John Hammond's grandchildren) were trying to get back to everyone else, they found the pterodactyls in the aviary, They didn't expect them to do any harm since the pterodactyls eat fish, but one of them bit Lex, which started the attack. Nobody

predicted the dinosaur attacks, but due to greed and irresponsibility, people's lives were put at risk.

Lessons Learned from Chaos

Despite everything that happened, though, there are things that can be applied to everyday life concerning the idea of chaos theory. For one, people can remind themselves that what they do - no matter how small - can have an impact. In the same way Dr. Wu's minor details he left out caused an outburst, even the littlest thing can change everything. This can encourage people to make the right decisions when it comes to anything, even if it seems unimportant.

Another lesson that may have been learned is to always try to make the best of the present, because it's unknown when everything will change. For example, Tim and Lex never expected to be in the situation they were in; they just believed that they would be going to a park to see the phenomenon of dinosaurs being alive again. Even if it seems difficult, people should always do their best to find the good in things, because no one knows when things will fluctuate.

Conclusion

Jurassic Park contains unpredictability and uncertainty, and understanding what chaos theory really is helps readers understand the book more due to how big of a topic is throughout the novel. Adding onto that, those two factors can encourage readers to see things differently, whether it be in their thoughts, words, or actions day to day. And because of everything that

happened, readers may reevaluate how valuable their lives truly are.

References

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