

The Effects of Chaos in Michael Crichton's *Jurassic Park*

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Abstract

In the Web Application Development Lab at the Center for Advanced Research and Technology (CART), teams were tasked with creating a website pertaining to some aspect of Jurassic Park if the company had an actual website. In preparation for the showcase project, students in the CART Technology Labs read Michael Crichton's 1990 novel, *Jurassic Park* and put emphasis onto the character Ian Malcolm, who is certain in his knowledge regarding chaos theory that Jurassic Park as a business will fail from the effects of chaos theory. Throughout the novel, students were able to identify life lessons through the consistent chaos in the novel and how those lessons can be applied to everyday life. These lessons include the domino effect that is chaos theory, how the smallest difference could affect major outcomes, and unpredictability is one of the most certain things in life. Society is blind to how common Chaos theory affects everyday life because we wouldn't know the difference. People would not recognize whether going to the store or not going to the store could affect the people we see or meet because we wouldn't know the difference. Overall, it can be concluded that Chaos theory is present in everyday life whether we can see it or not. It is in every decision we make.

The Effects of Chaos in Michael Crichton's *Jurassic Park*

Introduction

Michael Crichton's *Jurassic Park* gives readers an understanding of a very common phenomenon associated with chaos theory, "Real life isn't a series of interconnected events occurring one after another like beads strung on a necklace." (Crichton, 1990, p. 170). In the story, John Hammond's Jurassic Park is said to be "an accident waiting to happen." Hammond has no concern for the safety of his guests at his park, like a typical business man he is only concerned about whether or not he will profit through the park. Hammond is willing to jeopardize the safety of his guests by having the park contain genetically engineered dinosaurs. Everyone at any age has experienced the effects of chaos theory, even without realizing it. With 8 billion people in the world, everyone experiences each day in a different way, having different consequences or rewards for their actions. Some actions lead into other actions depending on your initial decisions. It is easy to forget that as a human, consequences to our actions are always lurking. For the vast majority of the population, waking up and choosing to get out of bed is something that comes very easily, it is that decision that allows people to make other decisions whether big or small that can drastically change the course of our day, the people we meet, or the opportunities we seek. Crichton is a genius when it comes to how he incorporates chaos theory into his novel, he incorporates this theory into a character, Ian Malcolm who is a mathematician with an emphasis on chaos theory. Malcolm's fresh spirit is a man who is consistently trying to warn Hammond of the consequences he will experience through the basis of chaos theory. Crichton's novel does an exceptional job at how allegedly small decisions or changes can have disastrous consequences.

Scientific and Literary Origins of Chaos Theory/Butterfly Effect

The idea of chaos theory also known as the “Butterfly Effect” was created as early as 1961 by Edward Lorenz. He discovered this phenomenon while creating calculations for uncontrollable weather. Many scientists after Lorenz soon started to learn and add on to his theory including Lorenz himself. One notable scientist is Mary Lucy Cartwright who was a British mathematician who contributed to the advancement of this theory. Cartwright worked alongside John Littlewood to study Chaos Theory further. Cartwright and Littlewood published their results post-war however their findings did not become publicly recognized until Lorenz and other mathematicians came across their work in the 1960’s and built Cartwright and Littlewoods research into the foundation of Chaos Theory. Throughout the history of chaos theory, there were a number of novels that have the essence of chaos theory within the story. Besides *Jurassic Park*, there are two literary works that showcase the idea of chaos theory. *A Sound of Thunder* written by Ray Bradbury in 1952 is a short story that illustrates chaos theory throughout the entire story. Bradbury depicts a world in which there is a way to travel back in time to be able to hunt dinosaurs. However when Bradbury’s main character Eckles realizes the true danger of the situation, he gets clumsy and steps off the path that was forbidden. What he does not realize is that the smallest change in the past can have a drastic change in the future pertaining to the idea of Chaos Theory. When the team travels back into the future, the changes aren’t 100 percent clear until they take a closer look at the language written on posters and propaganda. Another drastic change was who won the election and how the public felt towards it. This change shocked Eckels and ultimately his reality was forever changed because of one small mistake. Another prime example of chaos theory is the *Pedestrian* also written by Ray Bradbury. Leonard Mead, the protagonist in this short story, is first on a walk during the night

while the rest of society is inside watching the television. During his walk, the silence was similar to that of a graveyard, the world the Mead used to know was never like this but one change that he would never know of changed his world forever. Mead was an outcast in society to the point where just walking at night was considered to be abnormal in the current societal standards where he should be watching the television at home.

Chaos Theory at Play in *Jurassic Park*

Throughout the novel, Ian Malcolm is the main character that truly understands chaos theory. The idea of chaos theory is written into Malcolm's character by Crichton. He expresses to Hammond consistently throughout the story about the dangers of what Hammond is getting himself and others at the park into. This suggests to the reader that Malcolms understanding of chaos theory is far more than what is originally thought. John Hammond is a character that severely lacks understanding of Chaos Theory as shown throughout the novel by his reckless and careless behavior. One prime example of Hammonds lack of grasp on Chaos Theory is when he was ignoring the requests of Henry Wu, a genetic engineer who was tasked to create these dinosaurs. Hammond was deliberately ignoring the warnings from Wu to instead implement a different version of these dinosaurs to make them safer and more docile. Wu explains, "The past is gone. It can never be re-created. What we've done is reconstruct the past—or at least a version of the past. And I'm saying we can make a better version."(Crichton,1990, p.). Hammond only thinks about the way to make the most profit and to him, safety is the least of his concerns as implementing version 4.4 would make the dinosaurs' ferocious personalities less realistic to the public. Out of all the characters, Hammond and Malcolm are on the opposite ends of the spectrum in terms of their understanding of the consequences to their actions. With Malcolm having full understanding of it throughout the novel and Hammond having very little, their characters are polar opposites.

Lessons Learned from Chaos Theory

It is interesting realizing how many lessons can be learned regarding chaos theory not only from Michael Crichton's *Jurassic Park* but as well as many other novels and short stories. Throughout the novel, Crichton has done an excellent job in displaying how consequences have their own actions via chaos theory and how different situations can play out depending on the slightest difference. "But we have soothed ourselves into imagining sudden change as something that happens outside the normal order of things. An accident, like a car crash. Or beyond our control, like a fatal illness. We do not conceive of sudden, radical, irrational change as built into the very fabric of existence." (Crichton, 1990, p.170). In this quote, Malcolm is discussing the idea of Chaos Theory. He explains that reality is not a set sequence of events. People believe that the course of their life is linear, you're born, you live, you die. That is the obvious course of life but people are not able to grasp the unexpected situations in life. Obviously a given that death is inevitable but he describes that things like illness and accidents are things everyone sees as "sudden changes" that can and will impact the original course of your life. This is not to say that people should be cautious of every decision right as they get out of bed, but more to say that every outcome of our decisions can not be guaranteed. Another lesson taught throughout the novel is "Life is actually a series of encounters in which one event may change those that follow in a wholly unpredictable, even devastating way." (Crichton, 1990, p.170). It is very similar yet so different to a common theory known as the red thread theory. "There is an ancient Chinese proverb which says that "an invisible red thread connects those who are destined to meet regardless of time, place or circumstance". The thread may stretch or tangle, but it will never break." (St. Columba's College, n.d). This theory suggests that people who are destined to meet

will, no matter the circumstances. Which in comparison to chaos theory is quite intriguing due to the fact that chaos theory suggests that it is impossible to know our outcome.

Conclusion

Throughout life, as well as throughout this novel, Michael Crichton took readers through a ride of chaos not only through the storyline but also through the characters themselves. From characters like Ian Malcolm to John Hammond and Henry Wu chaos theory was evident from the first line of the novel to the last. There is much importance in truly understanding chaos theory as it can affect how readers see the world and may change their perspective on certain aspects of life. Chaos theory is a theory of how the smallest difference can have the greatest and most drastic outcomes. Like previously mentioned, it is as simple as what time one may wake up in the morning can affect the process of their day and the impacts it could have without even realizing it. It is an important lesson to remember that life is bound to have unexpected consequences and or rewards. Most can not realize where one went wrong or right until after the outcome is already determined. Knowing and understanding chaos theory, the meaning and its effects is able to seriously improve and impact a person's life. Understanding chaos theory is the first step to opening your perspective on the world. Many people have a difficult time with the unknown in the world and with so much of life being simply unknown it can be comforting to know that there is a theory to help ease the anxiety of the unknown.

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