

**CARTOONS: VISUALISING CAUSE AND EFFECT OF
CLIMATE CHANGE**

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ABSTRACT

Climate is one of the crucial parameters that determines the social and economic aspects of a place. It is, therefore, important to be aware of the climatic patterns that help in supporting the growth of the society at large. However, changes in climate are greatly affecting people, animals and places all over the world. It alters weather patterns, transforms landscapes and affects the habitat. It is, therefore, imperative that climate change be discussed, such that the message not only disseminates to the common man but it should intentionally be communicated such that it is well comprehended. Explaining climate change scientifically to get the message across is a challenge. Cartoons help overcome this challenge by visually presenting them, thus helping to convey the serious matter in a lighter, yet information rich in content. Single frame cartoons from leading websites on environment and nature are selected using purposive sampling method. Ecocritically analysing the cartoons helps better understand the damage caused to nature and the human's indifference to curtail it. Cartoons mirror how risks are to be understood by humans and how human action adversely affects climate change. Cartoons visually help communicate and understand climate change better.

Key Words: Cartoons, Climate Change, Deforestation, Fossil Fuel, Sea Level Rise.

1. Introduction

Climate is one of the crucial parameters that determines the social and economic aspects of a place. It is, therefore, important to be aware of the climatic patterns that help in supporting the growth of the society at large. However, changes in climate are greatly affecting people, animals and places all over the world. It alters weather patterns, transforms landscapes and affects the habitat. It is, therefore, imperative that climate change be discussed, such that the message not only disseminates to the common man but it should intentionally be communicated such that it is well comprehended. Explaining climate change scientifically to get the message across is a challenge. Cartoons help overcome this challenge by visually presenting them, thus helping to convey the serious matter in a lighter, yet rich in content.

2. Significance of the Study

Climate Change is no strange term or phenomenon today, yet people attribute the cause of climate change as contributions or concerns of others except themselves, thus distancing them from it. The study's significance is about how cartoons can help understand climate change as a consequence of one's own action. This would help to relate to it individually and initiate actions that help mitigate climate change.

3. Review of Literature

In *Effectiveness of Cartoons as a Uniquely Visual Medium for Orienting Social Issues*, Abraham (2009)^[1] states that "Cartoons are intended to transform otherwise complex and opaque social events and situations into quick and easily readable depictions that facilitate comprehension of the nature of social issues and events. In doing so, they present society with visually palpable and hyper-ritualized depictions (selectively exaggerated portions of 'reality') that attempt to reveal the essence and meaning of social events". Cartoons he states are unique visual communication forms using the theoretical aspects of semiotics and visual representation.

M. O. Adedire(2002)^[2] in *Environmental Implications of Tropical Deforestation* points out that it is essential to discuss about the increasing awareness of the benefits

of forest's. Its influence to humanity beyond their own interest is necessarily to be discussed at every opportunity. A balance to the ecosystem is brought about by the forests with their lush green nature, the dry woodland and the constantly wet ones. If proper care and attention are not given to the forests, it is likely that it would lead to changes in the environment that is most likely to occur. It is essential that the cause and impact of deforestation is deliberated upon to initiate awareness and check the unfriendly approach to forests.

Romadhon's(2011)^[3] research aims to find the environmental issues in the movie by analysing the connection among the characters. The film 'Avatar' is analysed based on the attitude of nature expressed in the text, but also considers the patterns of interrelatedness, human and non-human and other aspects of nature. Ecocritically analysing the film the researcher finds out that humans and non-human aliens appreciate and approach nature differently. Enmity between them arises as their approaches towards nature are unlike. Humans' exploit nature for their own gains due to the sense of superiority that they possess. It is with respect that natives of Pandora's planet the Na'vi people look at their place. This virtue of respectfulness helps to take care of it with reverence and passion enabling them to harmoniously coexist with the animals and deity. The dangers and benevolence of nature are recognised by them. Those who respect nature take care of it and are closely knit with it. The others who do not respect it, exploit nature for their benefit. The researcher concludes that Nature provides for all the needs of its inhabitants and is beneficial to humans. Humans need to realise this and take good care of the environment.

4. Methodology

Lawrence Buell's (1995)^[4] criteria for evaluating a text for its environmental consciousness is employed for analysing the cartoons. The four criteria are i) the non-human dimension is an actual presence in the text and not merely a façade, thus implying that human and non-human worlds are integrated. ii) The human interest is

not privileged over everything else. iii) The text shows humans as accountable to the environment, and shows any actions they perform which damage the ecosystem.iv) Environment is a process rather than a static condition.

5. Objectives of the Study

- To find out the aspects of climate change in the cartoons
- To find out the features that connect humans with non-humans
- To find how cartoons help understand climate change.

6. Scope and Limitations

A study on the effectiveness of these cartoons in bringing about behavioural changes that help mitigate climate change can be undertaken. The study has not looked into the impact of the cartoons undertaken for the study in understanding climate change.

7. Sampling Techniques

Fivesingle frame cartoons that address nature and environment issues on deforestation, dry lands, fossil fuels, melting of ice and sea-level rise and erratic weather are collected using purposive sampling technique from prominent websites.

8. Data Analysis and Interpretation

The Fossil Clock



Figure 1: The Fossil Clock

Space and resources are used and shared by both human and non-human living creatures. Their ways of lives, therefore, are integrated and affect each other. The cartoon shows the combined existence of both non-human living creatures – the

bird, the butterfly, the dragon fly and the flowers and the human existence by the tall multi-storeyed and the industrial buildings with the chimneys emitting smoke that are harmful to the environment. The clock symbolising the passage of time it also tells of how most of the time human interest dominates over that of the other living creatures. Humans' dependence on industry-based style of living has affected the conditions of the earth. They still continue to do so in spite of the knowledge of the harm attributed to their industry based dependence. Consideration to their well-being is crucial for a good ecosystem. Human beings' increased dependence on industry that uses fossil fuels escalates the pollution levels in the atmosphere drastically. The industrial emissions contribute to the global warming and damage the ecosystem. The bird, the butterfly, the dragon fly and the flowers are part of the ecosystem. The continued dependency of human beings on industries that use fossil fuels further damage the ecosystem. The bird on the tiny branch, the dragonfly, the butterfly and flowers indicate their dependency on the habitat for existence and food. They can survive and evolve only in conducive environment and it is process where in each affects the other. The complete absence of life in the smoke covered area and the presence of non-human living creatures on clear side indicates how crucial is quality of air for sustenance of life and duration left before it is wiped out completely from the face of the earth.

Grow ... Grow



Figure 2: Grow. ... Grow

The entire hilly region has been cleared of the trees by mass cutting them with the chain saw leaving behind only the tree stubs. The land now has become dry as there are no trees to protect it from the sun's rays. It thus changes the landscape of the area. The man in the cartoon is over watering the only sapling in the entire vicinity. He is not interested in taking care of the stubs to regrow. He wants the sapling to grow quickly into a tree and is impatient and frustrated with its growth. His impatience is because he wants to cut the sapling as soon as it becomes a tree and is ready with the chain saw. He is exploiting it for his own benefit. The mass cutting of the trees has changed the landscape, clearing trees of the forest into a desolate place with just the tree stubs. His action has destroyed the habitat of many animals and birds upsetting the ecology of the place. The land exposed to the sun dries it up that the stubs are not able to regrow. Tree saplings do not grow overnight. They take time and require the favourable conditions for growth and sustainability. Hence the man's intolerance towards it, as the process of evolving into a tree is taking time as it depends on the other factors of the environment. The destruction of forest by humans is depicted by the numerous tree stubs that are neatly cut indicating the use of a device.

A Heroic Figure



Figure 3: A Heroic Figure

The absence of the non-human aspect of water in the cartoon actually heightens the cohesiveness of both the human world and the world of non-human. The phrases

‘What a heroic figure!’, ‘He quit watering his lawn’ and ‘Saved our water supply’ depict the interconnectedness of humans and nature’s resource –i.e., water. It also highlights the fact that human interest can be sacrificed and privileges shared to sustain other living entities. Thus inclusiveness of others’ needs is given priority – helping in water resources to be available to all the other living entities. The man who was judicious in prioritising the use of water is depicted as a heroic figure. He quit watering his lawn that needed large quantities of water to maintain it. Aware of the water scarcity he was willing to give up on the excessiveness of water usage which was his privilege. Thus the cartoon connects how human behaviour can affect the way the resources are used. His action of quitting does not have an adverse consequence at large, but rather a constructive effect on using the resources. Evaporation of water during dry and hot seasons and extended periods of drought leads to water shortage. Unless it rains, nature’s water reservoirs will not be replenished. Hence it is a process and this has to be kept on mind while using nature’s resources. The water crisis has made the man give up on his luxury of watering his lawn. The erection of a statute to honour the man and attributing a heroic status to him tells how crucial and beneficial it turns out by an individual’s initiative to restrict his excess.

The Unique Meet



Figure 4: The Unique Meet

A penguin and a polar bear that live in the opposite regions of the earth's end met each other as they are drifted by the ice float to the meeting point. The melting of ice is contributed to the warming of the earth's temperature caused due to human activity leading to melting of ice at the Polar regions. Ice has melted at both ends of the earth with just a small block of ice for the animals to stay on has led to a grave situation drowning them that indicates their perishing. The penguin's utterances indicate the speed at which the phenomenon is occurring. Yet humans have not taken measures to protect and save these animals showing no concern towards their situation. The melting of ice at both the Polar regions are attributions of human action of their ways of handling the earth's resources. The melting of large blocks of ice and frozen sea surfaces has destroyed and dislocated the animals from their habitat. The melting of ice leads to other changes in the surroundings upsetting the ecological balance. The melting of ice leads to rise in water level and drifting of it to another place that is not appropriate for the penguins and the polar bears to survive as their habitat and food supplies are affected changing the course of the environment. The meeting of the polar bear and the penguin from opposite poles of the earth is 'enhanced' due to the melting of ice. The water from the melted ice floats the small ice cube on which they survive to a particular point indicating the presence of water all over that has enabled the movement of it. The penguin and the polar bear are aware of the little time they have before they perish.

The Hippos



Figure 5: The Hippos

The two hippopotamuses are standing close to each other yet each of them is experiencing a different climatic condition. They can be in both water and land. The cartoon portrays them as unable to bear the dry and hot climate and the flash bout of rain. These extremes in climate conditions are attributed to human-related activities in particular. The deserting of the place, absence of vegetation and the inadequate measures taken by humans to provide a habitat for the hippopotamus to live tells of the priority given for the non-human living creatures. Human activity-induced climate change and changes in landscapes impact the living conditions of the hippopotamus. This cartoon portrays how they are affected by unavailability of water and the changes in the water flow of the land in which they live due to the semiaquatic nature of the animal. It is too hot for one that the hat does not help and is perspiring and the other needs assistance to breathe as rains flash leading to sudden rise in water levels. The snorkel worn by the hippo helps in artificially breathing when the water level rises and the animal is under water. The drastic changes in climatic condition will change the course of existence of the keystone species and change the environment that sustains other life depending on it. A hippo with a hat on one hand with the other wiping the sweat drops indicate the warmth of the place and the other hippo with the snorkel to enable artificial respiration due heavy down pour of rain.

9. Results and Discussions

Use of fossil fuels in industries emit enormous amounts of carbon di oxide that pollutes the surroundings without boundaries. It also contributes to greenhouse effects that damage the ecosystem diminishing the presence of the existence of living creatures. Deforestation destroys landscape and the green canopy, allowing the heat of the sun to dry the land. It also contributes to the lack of rain that replenishes the land with water. Humans can help in effectively using the scarce natural resources by their constructive actions. Rise in temperature melts ice at the Polar regions affecting the habitat of the polar bears and penguins. Extreme and

different weather conditions prevail disturbing the weather patterns. Cartoons thus help visualise the causes and the effects of climate change and ways to handle natural resource. Cartoons thus incorporate these messages and help recognise the nuances of climate change.

10. Conclusion

The cartoons thus help clearly visualise the effects of climate change in a closer quarter and assist in disseminating the message. As the images capture attention and linger in the minds for a longer duration cartoons can be used as a tool to discuss the various aspects of climate change. Further studies can be undertaken to find out the impact of the environment messages conveyed through cartoons. It also aids to vividly comprehend climate change.

11. Acknowledgements

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