

# The Benefits of Visual Cartoons in an Effort to Disseminate Plastic Waste Reduction in Bali

*by I Wayan Swandi*

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## The Benefits of Visual Cartoons in an Effort to Disseminate Plastic Waste Reduction in Bali

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Article Info	Abstract
<p><b>Article History</b></p> <p>Received: May 07, 2021</p> <p>Accepted: December 09, 2021</p> <p><b>Keywords :</b> Plastic, Plastic Waste, Bali, Semiotics, Cartoons, and Visual Empowerment.</p> <p><b>DOI:</b> 10.5281/zenodo.5771122</p>	<p><i>Plastic is a material that is flexible and easy to shape. This is because plastic is made of synthetic or semi-synthetic polymerization materials. Over time, plastic has been widely used for various purposes. The amount of plastic used is increasing from year to year. The increase in the use of plastic causes a large enough problem, namely plastic waste. Plastic waste is a special concern in Bali as one of the world's most famous tourist destinations. As a tourist place, of course, it prioritizes beauty and comfort for its visitors. The reality is that there are still many waste problems, especially plastic waste, that can reduce the sense of beauty and comfort for tourists. The emergence of Bali Governor Regulation Number 97 of 2018 is a form of concern for Balinese leaders in seeing the existing plastic waste problem. The problem of plastic waste certainly needs serious handling by the Bali government. The research methods used are qualitative and use a semiotic approach. Semiotic analysis using the Fresnault-Deruelle approach, which divides cartoon space into three, namely acoustic space, visual space, and tactile space. The use of cartoons as a visual alternative is very helpful in communicating messages in an informative and communicative way. Messages conveyed textually and contextually are displayed explicitly. Message communication in cartoons can take various forms, such as local culture and familiar characters.</i></p>

### Introduction

Plastic is a material that is flexible and easy to shape. This is because plastic is made of synthetic or semi-synthetic polymerization materials. Polymerization is the process of reacting monomer molecules together in a chemical reaction to form a three-dimensional network or polymer chain. Over time, plastic has been widely used for various purposes. In further development, there are various types of plastics such as PVC, polythene, PS, PET, PP, and PA (Srinovaz, 2017). PVC stands for Polyvinyl chloride is a plastic used to make credit cards and waterproof clothing. Polythene is divided into two types, namely polythene with low density, which is often used to make plastic bags. While polythene with a higher density and strength is commonly used to manufacture plastic milk bottles. PS stands for Polystyrene. The form of polystyrene is divided by shape, namely rigid and foam. Rigid polystyrene is used to make toys and containers. While the foam is used as a fast food container, PET stands for Polyethylene terephthalate is a very strong plastic used to make soft drink bottles. PET can be recycled into video cassette tapes. PP stands for Polypropylene is a plastic with a high melting point of 1600 °C. PP is used to make manual camera film and machine-washable plastic items. PA stands for Polyamide, and is a plastic that is only used to wrap cheese or meat. PA is also known as a nylon class plastic that can be used as a material for clothing and toothbrush bristles.

The amount of plastic used is increasing from year to year. In the 1930s, the amount used was only a few hundred tons. In the 1990s, it increased to 150 million tons/year. Furthermore, in 2005, it increased to 220 million tons/year (Henstianto, 2019). The increase in the use of plastic causes a large enough problem, namely plastic waste. It is important to note that plastic is a material that is difficult to break down by microorganisms. This is because plastic is not produced from nature but from petroleum. The problem of plastic waste, which is becoming more prevalent, has the potential to reduce the exotica of the landscape as well as the health of the environment. Beautiful and exotic panoramas are a motive for tourists to travel to a place (Pradana, 2019).

Bali is known as a favorite tourist destination for tourists (Pradana and Parwati, 2017). Bali as one of the world's famous tourist destinations, the problem of plastic waste is certainly a special concern in the management of tourist destinations. As a tourist place, of course it prioritizes beauty and comfort for its visitors (Pradana and Pratiwi, 2020a). The reality is that there are still many waste problems, especially plastic waste which can reduce the sense of beauty and comfort for the guests traveler. Argeswara et al. (2021) said that the total landfill including households, non-households and tourists resulted in a landfill of more than one million tons. So it can be said that Bali is an emergency plastic waste. The emergence of Bali Governor

Regulation number 97 of 2018 is a form of concern for Balinese leaders in seeing the existing plastic waste problem. The problem of plastic waste certainly needs serious handling by the Bali government. The use of materials that are easily destroyed and do not poison the soil and nature is very necessary as an effort to overcome the problem of plastic waste that has been troubling the Balinese people.

## I. Research Methods

The methodology used is qualitative, using a hermeneutic paradigm and a semiotic approach. The qualitative method is a relevant scientific method for finding and analyzing visual data (Kumar, 2019). This study aims to analyze the image language of plastic bags and then provide ideas, developments and developments about image language to provide education and awareness to the public about the impact of waste on society if they care about health and beauty.

The object of research is the visuals on plastic bags and cartoons with the theme of caring about the impact of plastic waste on society. All data were gathered through observation and a literature review on waste issues and cartoon literacy. After that, all of the data was analyzed qualitatively and interpretatively. In other words, the cartoons are then analyzed for the meanings contained in them using the Fresnault-Deruelle version of the semiotic approach. According to Fresnault-Deruelle (2008), semiotic analysis must divide cartoon space into three, namely acoustic space, visual space, and tactile space, to be able to find the textual and contextual meaning of the cartoon images made.

## II. Results and Discussion

At first, plastic shopping bags were used to promote the goods and services of a company. This is done to practically expand the company's business to carry goods purchased from traditional markets to modern markets. Plastic shopping bags are also very affordable and easy to obtain because Indonesia already has industries that produce products made from plastic (Hanggoro, 2019).



Figure 1. Plastic Bags for Company Promotion  
(Source : Pageh, 2021)

Over time, the number of plastic bag users is increasing and is causing environmental problems. As reported by Wahyuni et al. (2021), Indonesia ranks second in the world as a contributor to plastic waste. Then came the environmentally friendly plastic bags. This type of plastic bag is widely used in supermarkets as a substitute for the prohibited type of shopping bag model. This plastic bag contains the "Go Green" or "Save Our Planet" logo as an initialization that the plastic bag being used is an environmentally friendly plastic bag.



Figure 2. Environmentally Friendly Plastic Bags  
(Source : Pageh, 2021)

Napper and Thompson (2019) stated that environmentally friendly plastic bags were still intact after three years at sea or buried underground. The test was carried out by placing compostable, biodegradable, oxo-biodegradable, and conventional polyethylene (PE) plastic bags in three different environments, namely buried in the ground, outdoors exposed to air and sunlight, and submerged in seawater. None of the bags broke down completely in all of the environments tested. In particular, biodegradable bags are able to survive on land and sea almost without damage (Thomlinson, 2019). In the study, crushed compostable plastic bags were exposed to the air and sea, but remained intact and buried in the ground after more than two years. These plastics are generally not designed to degrade without special treatment. Seeing this, a deep concern arises for the people and the government of Bali. The Bali Regional Government, through the Governor of Bali, has issued Governor Regulation Number 97 of 2018 concerning the limitation of single-use plastic waste as an effort to overcome the problem of plastic waste in Bali. Through this Governor's Regulation, it is hoped that it will reduce the amount of plastic waste problems in Bali.

The impact of this governor's regulation is starting to be felt. Nevertheless, Koster in NV (2019) emphasized that socialization of the governor's regulations is still needed in the rural areas of Bali. In general, Balinese people can now switch to traditional materials and are no longer dependent on plastic materials. For example, a number of restaurants and restaurants have switched to straws made from bamboo. That is, community support for the implementation of Governor Regulation No. 97 of 2018. The response has been very positive.

In fact, it can be seen from several minimarkets that they no longer provide or sell plastic bags to consumers as a means of carrying goods. Among them, minimarkets ask consumers to bring and use their own shopping bags. The emergence of new shopping bag designs in minimarkets shows support for the Bali Governor's regulation. The materials used no longer contain plastic, predominantly use cotton and no longer use plastic materials.



Figure 3. Shopping Bags in Minimarkets  
(Source : Pageh, 2021)

From a visual perspective, in the bag design made by a minimarket called Alfamart, the use of text without illustrations is considered less communicative. As said by Kusmiati (2004), image illustrations are used to help communicate messages accurately, quickly and firmly. With illustrations, messages can be more memorable, especially when readers have difficulty finding the message behind language mediation and they tend to remember images more easily than words. Seeing an illustration of an object has a better impact than just reading the text (Kusrianto, 2009:25).

On the other hand, writing can only be understood by the reader when the person concerned is able to communicate in that language. Therefore, images have more effective power than writing (Pujiyanto, 2013: 107). The use of images is also expected to not give ambiguous meaning. Ambiguous meanings can result in increased reader confusion and can add a negative impression to the text. For example, the picture on a shopping bag made by a minimarket called Indomaret gives an ambiguous impression. The tree image conveys meaning in the form of asking the reader to plant trees in their environment or asking the reader to protect the environment by not cutting down trees. The visualization that is made needs to be emphasized in the narrative section so that the ambiguity of the message does not occur.

An interesting visualization of the text must be able to arouse the emotions of the reader. In this case, every reader is expected to actively participate in reducing plastic waste while gaining knowledge about the



impacts caused by plastic waste. For people to be able to understand this, among other things, *propaganda* is needed so that people will respond positively to messages (Pradana, 2012). *Propaganda* is carried out by analogizing and connoting myths and cultural values for readers (Pradana, 2018). The only way to build and maintain their understanding is to communicate frequently.

Every time a sign is used in a moment, then the sign is affirming the second order of meaning, both culturally and practically (Pujiyanto, 2013:5; Pradana et al., 2016; Dharmika and Pradana, 2020; Dharmika et al., 2020; Pradana, 2021). Cartoons were chosen as a visual form because they have good visualization in supporting informative and communicative techniques, are situational in nature with warm disclosures, and contain sufficient humor content (Sobur, 2016: 139; Swandi et al., 2020). The use of cartoons as a visual medium is expected to make the message content on shopping bags more meaningful, informative, communicative, and reflective for the growth of awareness about the importance of maintaining environmental cleanliness by reducing plastic waste. One form of shopping bag development is to use cartoons using local culture, namely the Balinese language and traditional clothing, as shown below.



Figure 4. Visual Cartoon using Balinese Culture  
(Source : <https://dictionary.basabali.org/w/images/5/5f/Menag.png>)

The cartoon picture above shows the conversation of two people about the activities carried out. The form of the conversation using Balinese is as follows:

A (top): *Sing lek nuduk luu di muka umum Tut ? Suba ada petugas bersih-bersih nyemak geгаen ento. Pabedikin nyemak gae lebih, engken ?!!*

(Aren't you ashamed to pick up trash in public, Tut?! There was already a cleaner who took the job. It's just a little more work, how?! )

B (bottom): *Bli benehne ane lek. Ngudiang iraga ane ngelah gumine sing peduli ajak palemahan pedidi. Ento torise ane uli gumi len bise peduli. Mani puan iraga ngortaang lantasi Tri Hita Karana. Meh, mabubuh kladi adane to bli.*

(The real sister is embarrassed. Why don't we who own the territory care about our own environment? Tourists from other places can look after it. The day after tomorrow, we will talk about Tri Hita Karana (three causes of happiness: human relationship with God, human relationship with others, and human relations with the environment). Wow, that's called being weak, Sis).

Fresnault-Deruelle in Noth (2006:482) has divided the dimensions of space in cartoons into three, namely acoustic space, visual space, and tactile space. Acoustic room It can be seen from the conversation balloons between the two characters. The shapes of the balloons and arrows in normal line drawings indicate direct speech between the characters. In the direct speech that occurs, signs such as "?" and "?!!" appear, where this sign shows the astonishment and attention given by one of the characters. This shows the concern of one character with another character. The visual space can be seen through the eyes of the two characters, which expresses the feelings of the two characters. In the upper frame, the first character, with wide eyes, gives an expression of surprise, surprise and concern for what the second character is doing. While the second character gives the usual eyes, showing an ordinary expression without any tension. In the second frame, the first character's eyes look a little smaller, which gives a sign of embarrassment and surprise at hearing the explanation given by the second character. While the second character's eyes are fixed on the third character. The third character shows the stranger stated in the second character's statement. Tactile space is seen in the distance between the two characters, where the distance is a social distance (Noth, 2006:419).

For privacy and social comfort, space and social distance are regulated through cultural symbols (Pradana and Pratiwi, 2020). The cultural signs that appear in the cartoon above are the headband and the language used. The headband or *udeng* is a headgear that is worn with traditional Balinese clothes. Therefore, it can be said that the context of the cartoon story is addressed to the Balinese people as readers.



Figure 5. Udeng as a Balinese Headband.  
(Source : Pageh, 2021)

*Udeng* has the meaning of mind control (Anonymous, 2019). *Udeng* is divided into three, namely: *udeng jejanteran*-used for holy places and social activities, *udeng kepak dara*-worn by the king, and *udeng beblantukan*-used by religious leaders. The language used in the cartoon is Balinese, in the daily interactions of Balinese people. Another form of development of plastic bags with cartoons can be seen in the image below.



Figure 5. Cartoons with Humorous Style

(Sumber : <https://www.ayosemarang.com/read/2020/01/26/51255/kartun-gag-pengganti-kantong-plastik>)

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The cartoon above tells us about the prohibition on the use of plastic bags for shopping and the power of cloth to accommodate purchased items. The illustration uses a humorous style by utilizing the Superman character. Superman is a super hero who has extraordinary powers. Such extraordinary strength is not only due to his physique, but also to his clothes. According to the story, Superman has the power to withstand bullets without getting hurt. This Superman character has become an idol among children and teenagers and has even released six series since its premiere in 1978 (Siregar & Afrizal, 2015).

This cartoon image of Superman by Muhammad Muslih shows his concern for reducing single-use plastic bags by using minimarket signs that are generally known by the public and giving instructions to replace plastic bags by using cloth materials. Minimarket signs such as cash registers, minimarket waitress outfits, and cashier desks. These signs can be seen in the image below.



Figure 6. Minimarket Cashier

(Sumber : <http://infokabarnitizen.blogspot.com/2016/10/cara-kejam-kasir-di-indomaret-ini.html>)

The analysis using three spaces, namely the acoustic room, the visual room, and the tactile room, is as follows. The acoustic room is indicated by a balloon with an image of a plastic bag marked with a cross. The cross sign has the meaning of prohibition, not allowed, and taboo. The use of red is an affirmation of the meaning of prohibition. Signs without balloons in the form of circular lines give the meaning of confusion, surprise and astonishment. Visual signs can be seen in the eyes of each character. The character of Superman looking into the reader's eyes gives the meaning of confusion, surprise, and astonishment. Other signs that support this meaning, such as hand gestures, holding the head with a smile, The cashier's character looks at the cash register with his mouth open, as if to say something about the total amount of money that the buyer must pay. Based on the information on the cash register, the buyer paystotal amount of money that must be paid by the buyer is "Rp. 382,000". In addition, the cashier also said that he did not provide plastic bags for his customers as a place to put their purchased goods. While the buyer character shows his eyes on the purchased items, which are then placed



on the Superman character's clothes. A consumer figure with a smiling face puts the goods he bought on the clothes of the Superman character. The tactile space is indicated by the distance between the three figures and the items they carry. These three figures show social distance with the things they carry or hold. The cashier guard character holds the cashier machine as a manifestation of his identity as a payment officer at the minimarket. His role as a payment officer at a minimarket is shown in the numbers that appear on the cash register in front of him. While the cash register is the embodiment of the identity of the place from the activities of these three figures, this cash register is only available in minimarkets or supermarkets and not anywhere else. Therefore, this cash register indicates that these three figures are in a shopping mall. The buyer figure holds the item he bought and the Superman figure's clothing section. This buyer figure seems to say that the goods he bought can be placed on the fabric without having to worry about being damaged. A smiling face is a manifestation of satisfaction with the strength of the cloth used as a medium for carrying the purchased goods. The strength of Superman's clothes can be seen from the number of items that are not damaged after being placed by the buyer's figure.

Based on this analysis, it can be said that texturally, the cartoon image means that cloth also has extraordinary strength and can be used as a substitute for plastic bags, which are not allowed. Contextually, the cartoon image is intended to provide information to readers who will shop at minimarkets that currently do not provide plastic bags as a place to store purchased goods and can be replaced with cloth bags as substitutes.

### I. Conclusion

The increase in the use of plastic causes a large enough problem, namely plastic waste. Therefore, a solution is needed to solve it. The use of visuals on plastic bags made by minimarkets as a way to reduce the problem of plastic waste still seems less informative and communicative, so there needs to be creativity and innovation to provide education and invite readers to participate actively in reducing the problem of plastic waste. The use of ambiguous text and images in bag designs made by minimarkets is still not communicative enough to communicate messages to readers, so innovation and creativity are needed in images.

The use of cartoons as an alternative way of preventing the increase in the problem of plastic waste is very helpful in communicating informative and communicative messages. By using the Fresnault-Deruelle approach by dividing the space into three in the cartoon image, it can be seen that the cartoon provides quite interesting information with an element of humor in it. Messages conveyed textually and contextually are displayed explicitly. Message communication in cartoons can take various forms, such as local culture and familiar characters. This is done so that readers can immediately understand the message displayed.

### III. Acknowledge

This article is a scientific paper based on research in the field or based on literature studies. This article is a reflection of the implementation of theories and methods from dissertation research related to the study of social phenomena in the form of visualization of Balinese cartoons as my final project while studying at the Postgraduate Doctoral Degree in Cultural Studies, Udayana University Denpasar Bali.

When I took my doctoral education, my dissertation was accompanied by the promotor, Prof. Dr. A. A. Bagus Wirawan, SU. At the same time, at that time, he was the head of the Doctoral Program in Cultural Studies at Udayana University and the holder of the Kapita Selecta Politics course in Indonesia. In relation to one of the course content, ideology is very relevant to reviewing this article related to social phenomena that are reflected in cartoon visualization. Prof. Dr. Drs. I Nyoman Artayasa, M.Kes is a co-promoter and interior design lecturer at the Indonesia Institute of the Art in Denpasar, Bali. In addition to the field of design science as a general basis, much is reflected in the case of my dissertation and is implemented in the study of this article. Dr. I Gede Mudana, M.Si, as the co-promoter II of the dissertation who is also one of the lecturers holding the Indonesian Political Capita Selecta course, provides many dissertation study strategies that have an impact on cartoon research studies that reflect information on social phenomena and the implications of Bali Regional and National Government regulations.

Theories and methods related to the study of this article with the issue of social phenomena in cartoon visualization have been disclosed through the disclosure of the process of experience and understanding of the theory inherent in the study of this article. Thank you to all those who helped with the dissertation study process and the implications for the realization of this article related to the messages reflected in cartoon art.

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