# Storytelling for Behavior Change: Use of Folktales for Promoting Sustainable Behaviors

# Opowiadanie historii i wykorzystanie baśni ludowych do promowania zrównoważonych zachowań

## Soumita Mitra*, Ahmed Sameer**

*Indian Institute of Technology (Indian School of Mines), Dhanbad, India*
*\*E-mail: soumita.rupa@gmail.com, ORCID: 0000-0003-2632-2705*
*\*\*sameer@iitism.ac.in, ORCID: 0000-0001-6066-726X*

## Abstract
Our Earth has been entangled in different adverse effects resulting from the excessive human interference into the territory of nature. The habit of extracting and consuming indiscriminately is moving them to a situation, where their own future generation would not be able receive benefits of the natural resources. It has also been recognized that human action is perhaps the most significant contributor to this. And therefore, a proper equilibrium, i.e., sustainable development, could only be achieved by bringing about a change in human behavior in general. We explore the possibility of using indigenous knowledge for encouraging sustainable behaviors. We propose a model for behavior change through storytelling by using folktales. We argue that folktales serve three functions – epistemic, motivational, and ethical – which make them potent tools for promoting sustainable behavior. We conclude by pointing out limitations and suggestion for future research.

**Key words:** folktales, storytelling, behavior change, sustainability, environment
**Słowa kluczowe:** bajki ludowe, opowiadanie historii, zmiana zachowań, zrównoważoność, środowisko

## Introduction
Humans fulfill their needs through resources found in the environment. With advances in technology, they developed tools that could harness the environment for large scale utilization of resources. This led to widespread material progress and development but it also brought about an imbalance – humans used up more resources than what could be replenished naturally. This pursuit for development became *unsustainable* as it led to harmful changes in the nature. Perhaps the most striking part of these changes is climate change. Seriousness of the situation can be gauged from the fact that by the end of the 19th century, the air temperature on Earth has risen by 0.8 $^0$C, and in the past twenty-five years the rise was by 0.2 $^0$C per decade (Kristl et al., 2020). This global warming has led to climatic variations which brought droughts, floods, cyclones, heat-waves, crop-failures etc. in many areas that were largely dependent on their natural environment for economic activities. Even the controlled environments like the metropolitan areas have been severely affected by these climatic variations (Bloomberg Green, 2021). These devastating impacts do not just lead to the above-mentioned undesirable phenomenon but may extend to corporal damages or may even lead to socio-economic deprivation (Kristl et al.,2020). Thus, our path to development seems to be unsustainable in the long-term.

To address this issue of unsustainable development, two points must be recognized. First, the consequences are not restricted to the place where environment is being harmed. It can have far reaching changes extending, both in space, and in time. Second and perhaps more critically, the main hindrance to pursuing a sustainable development path are the humans themselves. The Inter-governmental Panel on Climate Change (IPCC) recent report (Masson-Delmotte et al., in press) concludes that there is no doubt that human action has to take the blame for global warming. Rapid and far-reaching changes have occurred in the atmosphere, ocean, cryosphere and biosphere largely in pursuit of material progress by humans. Therefore, any serious solution to counter this anthropogenic problem must focus on understanding unsustainable behaviors.

Recent studies have found that a person's attitudes to the environment is determined by variables such as values, political ideology, world-view rather than education, knowledge of climate change, experience of extreme weather events or even sex (Hornsy et al., 2016). Furthermore, in today's world we have the *development focused* ideology which has made humans knowledgeable and skilled in the use of technical equipment for utilizing the natural resources, at the same time, it has dragged people to be lost in only looking after one's own material and tangible contentment. This has resulted in developing an attitude in a significant number of humans who do not bother about sustaining the environment at least when it is in conflict with material progress. In terms of values or world-views, aspiration for material progress takes center-stage even at the cost of the natural heritage or sustainability. The stiff resistance by developing countries such as China and India to adhere to Kyoto protocols is a case in point. These developmental aspirations coupled with shallow understanding of religious instruction have made case for sustainable behaviors more complex. Many of those who oppose affirmative action for climate change interpret their religion to conclude these phenomena as a consequence of the divine will and therefore no action on part of human is required. Thus, the psychological resistance to encouraging climate change behaviors is high because, it requires to change behavior (therefore effortful) and is in conflict with materialistic aspirations (values).

Past few decades have seen a growing literature reporting effectiveness of behavior change on a range of human problems like health, education etc. (Hagger et al., 2020). Behavior change involves either replacement of undesirable behaviors (such as smoking) with desirable behaviors (such as physical exercise) or engaging in a desirable behavior (such as compliance in medicine). Several theories and techniques have been proposed and tested for behavior change (Mitchie et al., 2013). One such technique for behavior change is storytelling (Passon, 2019). Storytelling is emerging as a powerful technique to encourage those behaviors that are generally resistant to persuasion. For example, Niederdeppe and colleagues (2015) conducted a study that had asked people to read a story about *Cynthia* and her daughter – who tries her hand at smoking in one of the scenarios and struggles with weight loss due to consuming soda in another. Just reading these stories increased the participants' resistance to the various kinds of messages industries use to oppose healthy policies. Another example (bbcmediaaction, 2014) was a media campaign used to deal with tuberculosis in India. This utilized humor and was found to be more effective than traditional information providing campaigns. Storytelling seems to work for persuasion as it by-passes the psychological resistance during persuasion (De Wit et al., 2008). Stories are also easier to retain and therefore work better than facts in the long term. Therefore, storytelling seems to be a promising tool for encouraging behaviors compatible with sustainable development and is worth the exploration. This paper looks at the mechanisms through which folktales, a common type of storytelling, may lead to behavior change in general.

### Folktales as Tools of Behavior Change

Storytelling has many different forms and types. We will not attempt to define and categorize types of storytelling here. We will focus on one form of oral storytelling that has survived throughout human history – *folktales*. A folktale, is a type of folklore, that is passed from one generation to another usually in the form of an oral story. This oral form of sharing and preserving information predates writing. Several scholars have documented the varied dimensions of life that are influenced by folktales. The folklores were not only a part of oral tradition but they were also a part of special performances, a form of visual art, where people gathered to watch them could understand the stories in a much better way (for examples see Ghosh, 2003). Folktales are remembered over life time and are characterized by motifs and themes that aim to transmit a positive message to its audience. These messages often serve as guide to individual and collective behavior. An individual ponders over these messages to derive underlying lessons or moral at various points. The ease with which they can be communicated and comprehended make them an extremely powerful medium for transmitting ethics and values.

### Why folktales work?

In our understanding, from the findings in development psychology, social psychology and behavioral economics folktales should work for persuasion because they serve three functions (see figure 1). First function may be called the epistemic function. Epistemic function helps to provide information about the environment/surrounding in the absence of objective measures. This function is very effectively captured in what has been called Traditional Ecological Knowledge or TEK. Samuel Phillips Huntington, an American political scientist, mentioned that TEK to be the knowledge and insights acquired through extensive observation of an area or species. This part of knowledge is generally passed on from one person to another in the form of oral communication. It has been ages since the natives from a particular region has applied this TEK to not only put it in the form of a life force but also to construct and give a permanent seat to it for becoming a part of their unique cultures. In Melanesia, which is a sub-region of Oceania in the southeastern Pacific Ocean, the TEK and customs related to their cultural background is the result of their long preserved unique mastery that they have acquired about their environment. The wisdom gained have helped them in having an optimistic interaction and relationship with the ecosystem *that are based on time-depth, qualitative, holistic and oral approaches* (Pollard et al., 2015). Similarly, they can be used to obtain a rough estimate of how things should be in the absence of objective measures. For example, many Indian folktales feature the sparrow (for example, Chibi from Punjab). However, the population of sparrows has declined rapidly

over the past few decades or so (Vijayan, 2003). A curious mind is bound to ask, why we do not see sparrows anymore. This would also motivate them to do something for preservation of sparrows.
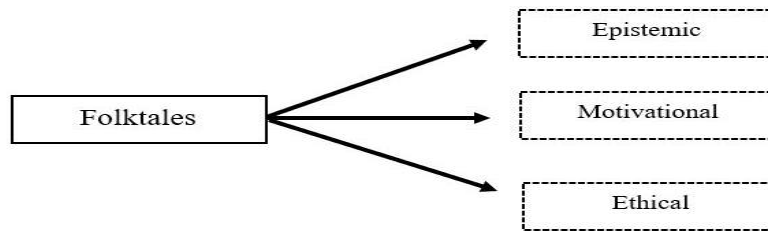


Figure 1. Summarized Diagram of Three Functions/Features of Folktales Related to Behavior Change

Second function is the power of folktales to motivate by lowering the psychological resistance and thus we call it motivating function. This idea about folktales is very well articulated in one of the native American proverbs which states, *tell me the facts and I'll learn. Tell me the truth and I'll believe. But tell me a story and it will live in my heart forever.* Social psychologist Melaine Green (Green & Sestir, 2017), explained the function and effectiveness of storytelling in convincing individuals for any particular thing or action, through the theory of narrative transportation. She explains how a person engrossed in listening to any story, gradually starts dissolving in it, in order to create a link with the story and understand it better. The listener remains unaware that how the worldly realities keep fading as they sink deeper into the narrative of the story. As a consequence of this, the mind expands its realm to absorb in more new belief systems and behavior changes, that the story propagates. Thus, at this juncture, the resistance of that person gets diminished. A person may also be prepared with counter-arguments when the held beliefs are threatened. The art of story-telling evades this defensive behavior and subsides pre-established opinions thus making room for the newer thoughts. Because of the deep immersion in the narrative of the story, the whole procedure takes place without allowing the listener to having a hint about how the story is engaging with the mind and thereby transmitting the message (Mitra, 2017). Although, narrative transportation can work for any story, we believe, that most probably it is the case with folktales because they are able to engage the listener emotionally. Another important aspect of folktales is that they are born out of the cultural background and intrinsic knowledge of the indigenous people. And therefore, contain the motivating and guiding principles for the people since ages about the ways through which nature and its natural inhabitants could be preserved and protected.  A similar argument can be made based on findings in moral psychology. Johnathan Haidt (2012) in his Moral Foundations Theory proposes two modes of moral cognition – an effortful one and another automatic. He uses the metaphors of rider and elephant for the effortful and the automatic processes respectively. Several studies have shown that chances of persuasion are increased significantly if the appeal is made to *the elephant* i.e., automatic processes. These processes are those that appeal to emotions, imagery, habit, values etc.  It is by engaging that these automatic routes that the folktales advocates, through their storylines, persuade any individual respond to ordinary rhetorical persuasion. But persuasive appeal based on facts and arguments without a narrative structure appeal to the effortful processes which require a lot of effort to change. One excellent metaphor demonstrating this was proposed by Jonah Berger (Nussbaum, 2015). He equates effectiveness of stories in motivating individuals through the tale of Trojan Horse. Here the symbolism of the wooden horse has been used to explain the psychology that how individuals seem to let their guard down, when they are enough satisfied with the arguments presented in the storyline (Nussbaum, 2015).  Facilitating natural learning, narrative transportation and appeal to automatic processes are the properties of a folktale that, in our opinion, can be used to encourage people to behave in sustainable ways. It may even inculcate in them aspirations that prioritize nature and environment over material luxury.

We call the third function – the ethicizing function because the story and message within a folktale provide concrete ethics for ideal behavior. This function is very similar to what is similar to teachings in religious literature (for example see Okyere, 2011; Prakash, 2021). The folktales have a story which is a concrete example of how to behave in a particular situation. Additionally, they have the underlying message that is meant to be absorbed. Even if one argues that level of comprehension of the message in a folktale may be not be adequately understood by each individual. This objection misses the logic of why folktales have survived for generations. The concrete example in the story can be understood and emulated even by children. This is in accordance with the theory of Jean Piaget, the well-known developmental psychologist, that, children are able to work with concrete objects before going on to form mental formulations and abstractions. Similarly, Lawrence Kohlberg, an American psychologist, proposed stages of moral development explaining how the experiences in the form of teaching, which the child learns at their early age, goes on to form a permanent part of their character (*Levine at al., 1985).* The steps which are included in the theory proceeds to describe how gradually the moral instincts are adapted in the life of an individual. This can be easily facilitated using folktales.

| Function | Components | Process |
|---|---|---|
| **Epistemic** | Traditional Ecological Knowledge | *Provide knowledge about environment in absence of objective measures* |
| | Natural way of learning | *Enabling learning at various ages and levels of comprehension* |
| **Motivational** | Engagement through transportation | *Narrative transportation disarms counter arguments* |
| | Appeal to automatic processes | *Emotional contents by-pass rational route* |
| **Ethical** | Behavioural examples | *Exemplify desired behaviour that can be imitated* |
| | Underlying themes | *Provide moral codes to govern behaviour* |

Table 2. Table summarizing the mechanisms of behavior change related to functions of folktales

## Conclusion

Folktales have been used since ancient times to transmit messages from one generation to the next. They have been successful in this regardless of age. In this paper we have attempted to present folktales as possible tools for persuading to opt for sustainable behaviors. Storytelling is already established as an effective tool for behavior change (Passon, 2019) and has been successfully applied in various settings such as health, management and education. Folktales, being a type of storytelling, thus holds immense potential. There are additional features in folktales that amplify the engaging power of storytelling. We presented three of such features – epistemic, motivational and ethicizing (see table 2).

Folktales have been customized and used for achieving desirable behavior for example by being easily implemented in curriculum. Stories can be included in literature class or almost anywhere. For example, in Indonesia, comics were developed from local folktales to teach concept of physics (Pathoni et al.,2020). There is also a case of preservation of a Costa Rican staple dish called Gallo pinto. The origin of the dish is based on a legend which has continued and the dish itself took a national character (Jiménez, 2012) such that today there is an active effort to promote behaviors to reduce the impact of climate change. Because climate change disturbed the rainfall patterns and production of rice, the Gallo Pinto was being harmed and motivated people to take action. This last point on Gallo Pinto points to the most of the mechanisms of changing behavior for sustainability that we have argued for in this paper.

A good example of an approach which is similar to our model comes from the work of 19th century Indian educationist Ishwar Chandra Vidyasagar who designed the Bangla premier - *Barnoporichay*. The mastery of this book lies with its integration of Kohlberg's Theory of Moral Development. The first part introduces the children to the alphabets, letters, metrical works, and rudimentary sentences, on the other hand the Second part contains moral embedded within the text. The portrayal of good being helped in framing a paradigm, based on which a child would decide as to what actions should be performed and what should be forbidden. Thus, it helps them in resolving their first confrontation with *Ethical Dilemmas* at the stage of their early childhood. We see a similar function in folktales as well with other oral literature, including religious motivational stories, fables etc. We believe that these traditional tools can and should be customized to sensitize children to issues about sustainability. Understanding of the old is vital if one is planning to ring in the new. In the educational era there are constant changes taking place, therefore, there is ardent requirement to review, analyze and make amendments in the older educational policies. In respect to this, there is a requirement to redirect the lost adroitness in an embedded form with all dimensions of educational engineering. This would help in developing of expertise amongst individuals which would in turn, lead to awakening of their feeling of responsibility, become farsighted, flexible and also obedient. With all these capabilities they will be proficient enough to accept and handle any task that they might be given.

The paper does suffer from some limitations. First of all, the model presented here has not been tested empirically nor have we outlined any ideas for testing them. Our objective was to bring out the potentialities of this tool for promotion of behavior in-line with sustainable development. Future research must test these ideas empirically. Secondly, we suggest future research should do a thematic analysis and explore the possibility of using themes in a different form of narration, for instance comics or mobile app. Also given the alarming situation of

development and issues of sustainability, every effort must be made to find solution at all levels. Most importantly we need to find ways to address issues of human behavior for sustainability just as it is being done for health. We believe that the wisdom that the natives have regarding environment could be a help in protecting the ecosystem from facing complete destruction and also renewing the lost resources. Thus, this work would be an exploration of indigenous knowledge which had been part of the folklores and serving mankind since a long time. But it is we who had failed to identify their emphasis in safeguarding the environment. Therefore, going back to these treasures which are lying deep inside the folktales related to a particular region can be of great help in not only enabling the protection of the ecosystem but also paving path for sustainable development.

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