

# TECHNICAL UNIVERSITY OF SOFIA

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### „MODERN TECHNOLOGIES IN CULTURAL HERITAGE “

Topic: “Contemporary issues and studies of cultural heritage”

## REPORT

### **Comparative analysis of Bulgarian and Trinbagonian mythological creatures.**

#### **Design and Emotional user experience.**

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### **Summary**

The report presents a study of mythological beings and phenomena from the folklore of Trinidad and Tobago, compared to creatures from Bulgarian folk mythology. There is a comparative functional and visual characteristic between specific characters from the two cultures. The study includes author's suggestions for re-design of Trinbagonian creatures and testing its impact on the viewer. For the purpose an user experience research is conducted. Static and dynamic data about the users' affective states during the interaction with the creatures images are collected. The data shows how the original and the re-designed images of the creatures are emotionally accepted by the locals of Trinidad and Tobago.

*Key words:* Illustration, design, digital 2D, user experience, emotional response, affective states.

### **Introduction:**

Mythology based on the supernatural reflects phenomena and processes, that were inexplicable to past generations. The fantasy world and the heroes, that inspire it, are a reflection of reality, as our forebears have seen it. Albeit differently in its essence, oral folk art all over the world shares universal truths. This fact provoked the present study by presenting two completely different cultures thousands of kilometres apart, in direct comparison between mythology and style of depiction. The result of this experiment is proof of how small the world is, how close are human perceptions and imagination, regardless of race, gender, and social appurtenance.

### **Exposition:**

The comparative analysis between Caribbean and Bulgarian mythological creatures is conveyed in a functional and visual parallel. After each pair of analogues, an author's re-design of the representative from Trinidad and Tobago is introduced.

*Papa Bois (TT) compares to Zmei (BG):*

*Functional Characteristics:* Papa Bois known as Guardian of the Forest is a kind and wise spirit. His watchdog function corresponds to the mission of his analogue- The Cosmic Mediator in Bulgarian Mythology - Zmei, a defender of the villages, a master of the sky, a Thunderer, who is fighting with the Hala.

Papa Bois can also be threatening if someone provokes him. He does not like to look at his deer's legs and can cast spells on hunters. These features draw him close to the raw essence of Zmei - who often shows his

dominance over the ordinary man. The forest is the home of both characters. Papa Bois was primarily a man with weaknesses, fears, doubts, yearning. This tendency of male weakness is inherent in Zmei attracted by the most beautiful girl in the village. Papa Bois plays the role of a partner of Mama Dlo - his female prototype. In native mythology, Zmei is bound up with Zmeitsa. who responds to Mama Dlo.

*Visual Characteristics:* Papa Bois is a diverse hero. With the power to change his appearance, he is seen in all forms - an old man with rags, a half-man- half-deer, a tree, a hummingbird, a muscular young man, a hairy creature with plant elements. Zmei is also loaded with a variety of visions and multiple interpretations. The common visual features with Papa Bois are the hybrid marks - a semi human animal. The Bulgarian character has snake tail, head, gill or fish head, being depicted as a handsome and strong man with small wings under the arms.

*Re-Design:* The author's decision about external features is based on the function that performs the character. Illustration 1 presents *Papa Bois* with all the above characteristics. His posture embodies his balanced and harmonious nature. The hummingbird landing on his hand is a symbol of Trinidad and Tobago.

*La Diabliesse (TT) compares to Samodiva (BG):*

*Functional Characteristics:* La Diabliesse was born as a human, but after a deal with the devil she became a demon-woman. She is a symbol of an offended woman seeking revenge from men, enchanting them to follow her into the woods, where they're expecting an evil fate. An old belief says that if someone senses the presence of La Diabliesse, he can defend himself from her magic by bending his clothes upside down. The image of Samodiva, who embodies the spirit of the unmarried bride, also performs the function of a seductive woman who lures the men in the woods. In Bulgarian folklore legends and songs, men are often mentioned who are sick of love, disgusting and mumbled. But the difference with the Trinbagonian creature is the lack of demonic origin. The process of "charm" is also reversed with the help of certain herbs and rituals.

*Visual Characteristics:* La Diabliesse is seen both as a beautiful woman and with repulsive features hidden under a large hat. One of her legs ends with a hoof, the other has an elegant boot. She dragged behind her slave bonds, that strongly contrast with her pompous clothing and gold jewellery. In her bosom she holds a bag full of human bones. The image of Samodiva is simpler and more unpretentious. She is often described as a fairy creature dressed in a white shirt girded with a belt that holds her power. Samodiva has loose disobedient hair and a veil, which is loaded with a protective function.

*Re-Design:* The visual interpretation of the character of *La Diabliesse* aims at achieving a suggestion of mystery and ominousness. Despite her role as a seducer, the accent falls on the fate and the slave. Therefore, building the image (Illustration 2) seeks a suggestion of pride, strength, independence, control.

*Lugarhoo (TT) compares to Kutsulan (BG):*

*Functional Characteristics:* Lugarhoo is a mythical creature changing its shape. He is the "cousin" of the werewolf, but could turn into any beast and can also change its size from small to very large. It is active at night. He practiced black magic, having power over nature. He could curse and beware of a curse.

Kutsulan is an evil, wandering night spirit, who changes his appearance. Most Werewolves' beliefs reflect rituals or mythical incarnations as violations of certain prohibitions. He is the greatest enemy of vampires, devils and other supernatural evil creatures. Also acts at night.

*Visual Characteristics:* Lugarhoo is a tall black man in a black suit. Stunning red eyes. Some say he was so tall that his head was hiding in the clouds. In addition to himself, coiled with coffin and chains, he was conceived accompanied by a huge phantom figure. It is displayed in a human form, as a demon or as typical werewolf. Kutsulan is portrayed as a big lame wolf, but sometimes as an old man.

*Re-Design:* Because the wolf is not a typical inhabitant of Trinidad and Tobago, the animal characteristics of *Lugarhoo* are attributed to the wild boar. Illustration 3 presents the creature with tusks, hooves and fur

inherent in the above-mentioned wild animal. Red eyes emphasize the demonic nature of the character. An obligatory element is the chains and the coffin.

*Mama's Dlo (TT) compares to Zmeitsa (BG):*

*Functional Characteristics:* Mama D'Leau plays the role of guardian of forest springs and the patron of water creatures. Mortal men who break the order of the forest are married to her for life as a punishment for their misdeeds. They can be saved from this binding after a certain ritual. It is believed that Mama Dlo is the lover of Papa Bois. The image of Zmeitsa is like an extremely powerful woman. Like Mama Dlo, Zmeitsa is mighty and can capture every man she wants in the role of her lover. This union can be terminated by herbs and spells. Zmeitsa is portrayed as the wife of Zmei.

*Visual Characteristics:* Mama Dlo was once described as a beautiful woman holding a golden comb that she uses constantly for her lush hair loose lush hair. Sometimes she looks like an old witch-like woman, dressed in numerous necklaces with coloured beads. From the waist down is the body of the anaconda. Zmeitsa often appears like a Grizzly bear. She is also described as a beautiful woman, decorated with gold jewels. Her body is covered with bright flakes - like a snake.

*Re-Design:* The image of the Mother of Water (Illustration 4) would seem most credible with the face of an old woman with African features, big earrings, and colourful necklaces. In African culture, body paintings, decorations, and accessories have different social status symbols and help build a deeper character such as *Mama Dlo*.

*Soucoyant (TT) compares to Vampire (BG):*

*Functional Characteristics:* Soucoyant called the Old Witch, is a supernatural blood-sucking creature that has contracted the devil to be able to turn into all sort of forms. At night, she throws her human skin and turns into a fiery ball or animal, casting spells on people. The creation of Soucoyant is a result of mixing vampirism with African practices. In Bulgarian mythology, there is no creature so close to that of Soucoyant, for witchcraft is not so much applied to our folklore. But it can relate to the character of Vampire - an invisible demonic being who is also a bloodthirsty. This is an improperly buried dead man, or he was a villain during his lifetime. He has also lost his human nature and drinks blood. Its destruction is again through religious symbols and rituals. There is a painful process of transformation in both images. There is a means and a way of defeating both- the Vampire and the Witch.

*Visual Characteristics:* Soucoyant is described as a flying fireball. In the middle of whose flames one can recognize the face of a woman with African features. It sometimes takes the form of a bat or a wild boar. The most widespread idea of Vampire is like an inflated bellows. There is a belief that he can accept the appearance of the animal that has skipped it. Some say it was like a shadow passing by wind. According to a third description, he looked like a man, but was only skin and blood, had a hole instead of a nose, red eyes, no legs and no hands. Vampire image descriptions often vary, which also includes the tendency for their gradual change.

*Re-Design:* The features for *Soucoyant's* vision characteristics define clear boundaries for author's interpretations. The flared skin involves the portrayal of a bony woman, all embraced with flames, covered with smouldering fire and coals. Illustration 5 aims to suggest a sinister and repulsive pose of the character.

*Duennes (TT) compares to Navi (BG):*

*Functional Characteristics:* Considered as "lost souls" of children who have not been baptized before death. Duennes are doomed to roam the earth forever, practicing their collection of jokes. They can get close to the kids and fool them into the woods, or approach people's houses at night, cry and whimper. The appearance of Duennes can be avoided if the child's name is never called out loud. In the Bulgarian mythical concepts of non-baptized (like Duennes), stillborn, mischievous, dead children turn into evil demons, known as Navi. At night, they are looking for a pregnant woman or a newborn baby, descend the chimney, and drink their blood or strangle them. In both characteristics, the religious motif and influence

on the community are laid - the significance of baptism as a ritual and the consequences of its disregard.

*Visual Characteristics:* Duennes appear as naked children, carrying a bunch of withered flowers. They are described as white figures illuminating the earth. These creatures have their legs turned back and wear an old-fashioned straw hat. Duennes have no sex, no face, only a small round mouth and a big head.

The appearance of Navi is very specific in folk descriptions - they are invisible, taking the look of naked chickens with the size of little eagles.

*Re-Design:* In this author's decision (Illustration 6) *Duenne's* face has only a mouth. The proportions of the body are related to the size of the infant, which determines a larger head size. To emphasize their essence of spirits, a post-death state, the predominant range is cold - shades of blue with monochrome part.

*Mermaids / Fairymaids (TT) compares to Rusali (BG):*

*Functional Characteristics:* The Mermaids of Tobago are men inhabiting the depths of the sea, riding the waves, having the power to fulfil desires. Sometimes they are committed to mortal women. They meet Fairymaids from the mountain streams. They were most attracted to Mermaid with smooth skin. But in addition to their mythical friends, they could use their power to "turn" the head of a mortal man. They stole his shadow and made him mad. This was reversible, after performing a certain ritual. The Fairymaids inhabit the caves behind waterfalls.

Rusali are the closest beings to the image of mythical aqueous Trinbagonian creatures. They are mostly female creatures, living near water and lakes, coming out only during Rusal Sunday, when it has morning dew, beginning to kidnap unmarried men and women. In the Ruse region of Bulgaria, Rusali are considered to be men living in the mountains, which throw big stones. Rusali cause illness, but they can also cure.

*Visual Characteristics:* Mermaids were attractive men, noble kings, and mighty warriors. Shown as creatures - semi-humans, semi-fish. Fairymaids are beautiful women, with long lush hair and a small step in the shape of an elk hoof. Rusali are women in white clothes, long blond or green hair.

*Re-Design:* Illustration 7 presents 3 personification of *Ferimaides* - beautiful creature with Amerindian, African and Indian features.

Tobago *Mermaids* genesis probably originates from ancient times, inhabiting the land long before the colonists and slaves came. This implies their image to be the closest to indigenous natives of the island - the Amerindians. Illustration 8 introduces - strong and majestic man, with body paintings, symbolizing and telling about ancestry and rank.

### **Emotional experience study of redesigned creatures:**

As a part of the study, a hybrid model to collect and analyse user experience data is used. It integrates a static and a dynamic approach to obtain information when the users interact with the product. Images of creatures from Trinidad and Tobago folklore were presented to various participants and the emotional impact is measured.

The static approach is based on collecting data with questionnaires. The participants give an emotional assessment (valence) of whether they like or dislike the image they see. The ratings vary from 1 (terrible) to 10 (incredible). The dynamic approach uses special helmets - mobile devices for collecting data on the brain activity of an individual - that provide us information about the momentary user experience. Different devices ensure 2-6 performance metrics data. The values of these parameters are recorded per second.

As the hybrid model combines qualitative and quantitative data to identify major development problems, no more than 15 people are required to the study (Nielsen 2000). This research involves students from the University of the West Indies in Trinidad and Tobago, subjects of the country, who have grown up entirely in the cultural and emotional environment of the islands. They were presented with 27 images of mythological creatures from the local folklore. 8 of the images are newly created and 19 – old. Each

participant observes each image in an interval of 10 seconds, using a calibrated monitor, a working environment with a temperature of 24-26°C and an artificial lighting. Special survey questionnaires and two different EEG helmets are used to collect valence, engagement, interest and excitement data (Figure 1) (Store Neurosky), (Emotiv).

The data obtained from the hybrid model for measuring the user experience shows that the new images of mythological creatures are very well received by the locals of Trinidad and Tobago. The static approach data indicates that 71.4% of the new image ratings are higher than their competitors' average ratings. And only in 28.6% of the cases the average score of competing samples receives higher values. Full details of each new image's assessment and its competitors' average values are shown in Table 1.

	SeUX-Assessment	
	Old Samples	Re-design
<i>Papa Bois</i>	5.33	5.5
<i>La Diabliesse</i>	6.5	5
<i>Lugarhoo</i>	4	4.5
<i>Mama's Dlo</i>	4.67	5
<i>Soucoyant</i>	5	4
<i>Duennes</i>	6.33	6.5
<i>Mermaids &amp; Fairymaids</i>	6	7.25

Table 1

Dynamic approach data shows that the advantage of the new images is even greater. Engagement, Interest and Excitement values were investigated. 81% of the values are higher for new images and only 19% report the superiority of old samples. The full details of the dynamic emotional user experience are shown in Table 2.

	DeUX-Assessment					
	Old Samples			Re-design		
	Engagement	Interest	Excitement	Engagement	Interest	Excitement
<i>Papa Bois</i>	49.3	48.8	24.2	50	53	37.5
<i>La Diabliesse</i>	57.5	55.7	24	55	56.5	19.5
<i>Lugarhoo</i>	50.2	56.2	57.3	58.5	58.5	63
<i>Mama's Dlo</i>	59.5	55.7	40.7	64	64	61.5
<i>Soucoyant</i>	50	52.7	42.3	49.5	57.5	50.5
<i>Duennes</i>	44.2	54.8	60.7	45.5	55	61
<i>Mermaids &amp; Fairymaids</i>	52	53.5	39	50.3	56	55.7

Table 2

## Conclusion:

The study of the creatures of Trinidad and Tobago's mythology, the analysis of its characteristics and the selection of specific beings involved in the comparative analysis with its Bulgarian analogues presents not only a functional but also a visual similarity. The ways of interpretation and design solutions speak of a common language and a contemporary level, reflecting on the fact that the Bulgarian folk heroes and

those of Trinidad and Tobago are extremely close in the narrative of the legendary folk art, but are also portrayed in a similar way, which are presented through the style of modern artists. This proves that the development of perception and mode of expression is not only a local but also a global process running at a close pace.

The conducted test of the emotional user experience has shown that local people in Trinidad and Tobago perceive new images of mythical creatures very pleasantly. 71.4 – 81% of the analysed affective states values of the new pictures show a higher score than the old ones. These data evidence a higher positive emotional influence of the new pictures on the users and the users tend to pay more attention to interesting and enjoyable visual elements.

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Illustrations:



Illustration 1. *Papa Bois*, I. Daulova   Illustration 2. *La Diabliesse*, I. Daulova   Illustration 3. *Lugarhoo*, I. Daulova

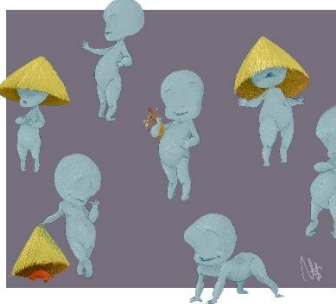


Illustration 4. *Mama's Dlo*, I. Daulova   Illustration 5. *Soucoyant*, I. Daulova   Illustration 6. *Duennes*, I. Daulova



Illustration 7. *Fairymaids*, I. Daulova   Illustration 8. *Mermaid*, I. Daulova

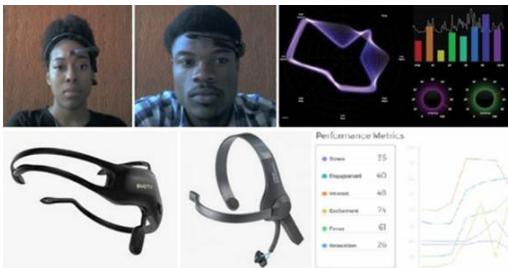


Fig. 1 Measuring dynamic emotional user experience