

THE POWER OF STORYTELLING

An Undergraduate Research Scholars Thesis

by

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ABSTRACT

The Power of Storytelling (May 2013)

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Storytelling is a crucial aspect of the human condition, and it has been used since the beginning of civilization in order to communicate and express ideas. This study examines the relationship between storytelling and decision-making, seeing if there is a relationship between the two and how stories can affect a person's actions and choices. Specifically, we are investigating how stories can affect impulsive and risk-taking behaviors. We are studying narratology in order to find the root of storytelling and choose stories that fit the most basic categories. With this, we will see which story types are either effective or ineffective at influencing decision-making. Once the stories are prepared, we will ask participants to read them and then respond to a questionnaire about a scenario involving risk-taking. Once the data is collected, we will see if certain stories or story patterns influenced decisions made after they are read.

CHAPTER I

INTRODUCTION

Since the beginning of time, myths, traditions, and history have been spread through the use of story telling. Civilization relies on stories to preserve ancestral heritage while implanting prideful knowledge into the lives of various cultures. Story telling makes an appearance in diverse forms, from the stories children are told at bed time to a student reading a current events article. The importance of story telling plays a crucial role in not only preserving knowledge, but also often influences the behavior of many individuals. This study investigates the structures that hold essence in the foundation of story telling while greatly impacting individuals in modern society. Furthermore, the main question addressed is how do the structures which frame a story influence decision making?

CHAPTER II

METHODS

In order to begin the investigation regarding the structure and influence of story telling, cognitive psychological surveys were given to Introductory Psychology students at Texas A&M University. Participants were provided a set of three surveys including two questions per form. The questions on the surveys are based off of Kahneman and Tversky's (1991) theories regarding risk seeking versus risk aversion. Kahneman and Tversky hold the belief when people are given; individuals tend to become risk seeking. In contrast, when people are gambling at their own expense, individuals tend to react aversely regarding risks. Furthermore, individuals make decisions based off of "status quo" or familiarity.

In addition, when analyzing choices and decision making the prospect theory proposed by Kahneman and Tversky (1991) come into play. The base of this idea is centered on the belief that decision making consists of two different phases. In the first phase, editing, individuals gain new knowledge or encounter a new experience and begin their initial analysis. In the second phase, evaluation, individuals come to conclusion and chose their favored prospect, or make a final decision.

Story telling lies at the heart of the collective human psyche called "culture." Whether the cave paintings in northern Spain and France or the saga of the Harvard-educated professional basketball players Jeremy Lin, people have created, consumed, and manipulated stories since the dawn of humanity. But what is a *story* and how does it impact our everyday thinking? Can

stories be analyzed in a way such as chemists analyze benzene, helium, and water? Is it possible to develop a “periodic table” of story telling so that every story available in the digital media—Disney animations, Fox blogs, and YouTube video clips—can be systematically studied?

The discipline of narratology has been working toward the production of a comprehensive theory of story telling. Vladimir Propp, who developed a grammar covering a restricted corpus of Russian folktales, started Narratological analysis in the 1920s. Propp’s analysis decomposed a story into a small number of characters (*dramatis personae*) and a set of narrative functions over states. Propp showed that a small set of about 30 narrative functions together with a few constraints could generate the whole corpus of Russian folktales. Propp’s theory was substantially refined in the 1960s, when a distinct discipline called “narratology” emerged. Our study will take as its starting point the work carried out by French semiotician and linguist Algirdas-Julien Greimas and later revised by David Herman, Marie-Laure Ryan, and others. Greimas claimed that every story could be reduced to a very small number of relations (less than 10) among an even smaller number of actors. Greimas’ theory is very general and comprehensive and, as a result, extremely abstract. Following later revisions (including those proposed by the authors mentioned above, and other contemporary narratologists and cognitive psychologists), our work will apply a simplified version of his narratological theory to concrete instances of story telling as gleaned from the mass media and internet communications, and investigate impacts of “story-telling” on the psychological, legal, and cultural spheres.

In order to utilize Greimas’ theory, stories were built using an online narratology tool. This application listed all the main genres such as rags-to-riches, comedy, tragedy, the quest, etc.

Once the genre was selected, a unique ‘scene’ was picked from a list of scenarios related to that specific genre. For example, the ‘rags-to-riches’ story offered story devices such as absence, mistreatment, selflessness, reward, etc. Once the genre and scene were chosen, the piece of the story for that scene was written. This way, a string of scenes created a film-like story that could be watched and edited. Different genres and scenarios were mixed in to ensure diversity, while still utilizing the limited choices theorized by Greimas. The stories were created as follows: four stories involved taking a risk and succeeding, while the other four stories involved taking a risk and failing. The objective is to have subjects read the stories and then see if they affect the decision-making process for the individual. The diversity and specificity of stories ensure that the subjects will be able to pick up on the risk taken without it feeling like a test.

Once the stories were create and refined, they were translated into an XML document. This type of document allows names, phrases, or sentences to be put into a specific system. The stories were broken down as follows: at the most outer tear was the kind of story, either a success or failure. The next level specified exactly which genre the first ‘scene’ belonged to. Inside of the genre container was placed the scene title (e.g., selflessness), in which the sentence corresponding to that scene and genre was placed. Refer to Figure 1 as a visual representation of the system used:

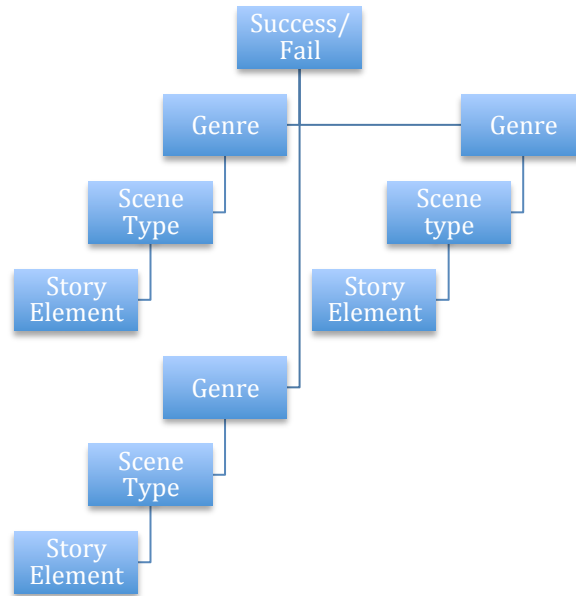


Figure 1. Story Structure System.

Once the stories were categorized this way, they were analyzed for patterns in structure, story type, and outcome. The categories used to place the stories derives originally from Greimas’ theory, but using Roland Barthes’ method. In his novel *S/Z*, Barthes takes Greimas’ theory of abstraction and applies it to the short story “Sarrasine” by Balzac. After a detailed reading of the story, Barthes came up with five story codes that he argues make up all of storytelling together. Figure 2 provides the five codes:

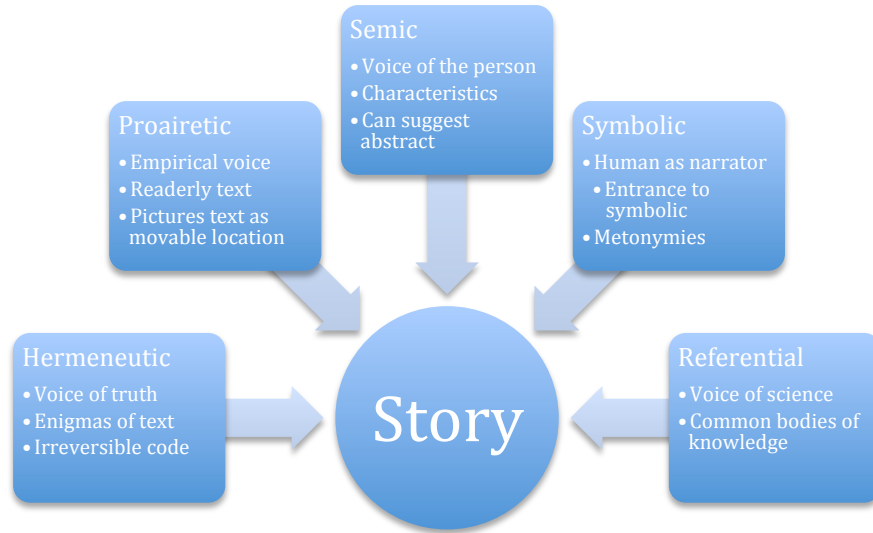


Figure 2. The Five Story Codes.

With an understanding of how the codes interact and intertwine to make a story, the Barthes' system was used to structure the stories created for the research project. With this information, the stories will be developed and refined in order to better test the narratological connection with decision making.

CHAPTER III

RESULTS

After running experiments on the subjects to put Kahneman and Tversky's Prospect Theory to the test, the results showed an inconsistency. According to the theory, in a risk averse situation participants desire a sure gain over a less sure gain. Results showed consistency with this theory, subjects in the experiment chose the sure gain over a 50% chance of loss. However, in a risk seeking situation where participants also showed a sure gain over a 50% chance loss; which was inconsistent with the Prospect Theory.

Currently, study two is being ran in hopes of further exploring the Prospect Theory, with the addition of priming participants before presenting a risk-seeking or risk-averse situation.

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