A Preliminary Analysis and Catalog of Thematic Labels

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Abstract

An account of the labels commonly used to express themes could both help in assessing the coverage of models of narrative processing, and support recognizing themes by the textual appearance of these labels. This paper presents a preliminary analysis and catalog of thematic labels such as "vicious cycle" and "underdog". In contrast to a top-down approach characterizing themes in terms of components of a model of narrative processing, a bottom-up approach is taken. Thematic labels are gathered independent of any particular model and they are catalogued according to the types of relationships the corresponding themes convey.

Introduction

Much work in formalizing the thematic structures within narratives proceeds with the goal, either explicit or implicit, of developing operationalizable models for some form of story-understanding. As a result, specific themes are characterized in terms of structured representations generated by software processing a narrative's content. For example, a model may define a "double-cross" in terms of the actions and motivations of interacting agents. Defining themes in this way, in terms of components proposed by a model of narrative, has led to the analysis of only a subset of the themes commonly used to describe narrative situations and roles within them. A broader list of the textual labels for themes, or *thematic labels,* would serve two important purposes: 1) It could form the basis of a corpus testing the coverage of proposed models of narrative structure, and 2) it would support summarizing narratives by automatically finding and gathering thematic labels explicitly applied by observers to situations. To facilitate these goals we identify features of thematic labels and provide well-known examples. Further, we assign provisional categories to the examples to illustrate the breadth of domains they cover.

We focus on thematic labels originating within a variety of domains. Some, such as "vicious cycle," "prisoner's dilemma," and "inflection point" are jargon terms that originate in technical or scientific fields and subsequently

become popularized. Others, such as "star-crossed lovers" and "catch-22," arise from literature.

A thematic label is used to summarize a narrative, or describe an aspect, such as an actor's role or a maneuver an actor undertakes. It:

- conveys an "insight" about a situation by identifying and highlighting a coherent and salient set of relationships,
- is short, typically a two to three-word-long noun or verb phrase,
- is widely used, and may be an idiom,
- is domain-independent, or originated in one domain but is commonly applied within other domains,
- is usually used in a linguistically unmarked manner by those observing or participating in narratives,
- is generally NOT expressive enough to convey the entire plot of a story at a detailed level.

Background

Although thematic labels appear peripherally in work on modeling narratives, no previous research has focused specifically on them.

In early work on thematic structures, Schank explains remindings in terms of Thematic Organization Points (TOPs) which accumulate sequences or patterns of plans and events in service of goals (Schank, 1982). The role of a TOP is illustrated when a person recognizes "West Side Story" to have the same plot structure as "Romeo and Juliet." In contrast, we set aside the problem of how a TOP is activated to focus on just the label applied to this situation: "star-crossed lovers". Also, although, as Schank notes, referencing fables may aptly convey one's experience, their use is generally infrequent and marked.

Dyer's Thematic Abstraction Unit (TAU) formalism represents a subset of themes for expectation and planning failures, such as "(being caught) red handed" (Dyer 1983).

For summarizing stories, Lehnert represents causal links among positive and negative events and mental states as "plot units" (Lehnert, 1981), including "double cross."

To model the reasoning of an individual holding an ideology or system of beliefs, Abelson represents an actor's action and purpose, and the state of a situation (Abelson

Social Context \ Theme Type	Situation Description	Maneuver	Role
Interpersonal (Dyad)	star-crossed lovers, he said/she said	double-cross, backstab	sidekick, sugar daddy, fairy godmother
Competition and Conflict	prisoner's dilemma, arms race, head-start	leap-frog, hit below the belt	underdog, maverick, dirty trick
Negotiation	backroom talks, tit-for-tat	buy-in, arm twisting	trump card, dealbreaker, honest broker
Organization	leadership vacuum, circular firing squad	pull strings, stovepipe	scapegoat, turncoat, mastermind
Public	the worm turns, (being caught) red handed	(float a) trial balloon, (draw a) line in the sand	martyr, sacred cow, big brother

Figure 1: Thematic labels applied to social situations

1973). These combine to form plans, which then combine to form another limited set of themes including "turncoat", "end of the honeymoon," and "the worm turns."

Jones employs proverbs, such as "a stitch in time saves nine" to elicit advice from a user and guide a system's operation (Jones, 1992). As with the names of fables, proverbs are commonly used by observers to describe situations at a thematic level. Also like fable names, however, the use of their full form is generally marked.

Because thematic labels are commonly used to describe everyday situations, they are in principle suitable to appear in collections of common sense knowledge such as Cyc and OpenMind (Lenat, 1995) (Singh, 2002). These resources primarily include concrete knowledge, however, and lack many widespread thematic labels presented here

From the perspective of literary theory, archetypes such as "scapegoat" and "underdog" have long been recognized as common devices used for storytelling. Literature, meanwhile, is itself the source of many thematic labels including "catch-22" and "big brother."

Proposed Approach

Themes articulated in previous work largely convey relationships with the domain of social interactions. Figure 1 presents a categorization of thematic labels and provides a provisional categorization with examples. Some explain personal interactions between two actors outside of any larger social context. Others involve competition or conflicts conducted according to an agreed-upon set of rules or norms. Still more describe the interaction between individuals or representatives of organizations in the context of a negotiation. Others involve members of an organization, or the interaction between a member and an individual outside of the organization. Finally, public themes involve the global perception of a large community

or society as a whole and the ways this perception may be influenced by an individual's action or a course of events.

Examples mentioned earlier include themes outside of the relationships between social actors, however. Some, such as "tip of the iceberg" and "needle in a haystack" involve the perception of an observer within the context of a theory or perspective but independent of a social or even human context. The discovery of a physical phenomenon may be described as the "smoking gun" in a scientific mystery, for example. Others reflect the Event Structure Metaphor, in which causal states are metaphorically mapped to locations (Lakoff, 1993). These include "vicious cycle/circle," "point of no return," "inflection point," and "slippery slope."

In conclusion, I argue that thematic labels merit deeper consideration for two reasons. First, they serve as a test of computational models of narrative. Any claims for the completeness of a proposed model must account for the labels observers would apply to narrative situations. That is, if a human can recognize an "underdog" within a competition, or a "scapegoat" in a controversy, but a model cannot, then this suggests a limit to the expressivity of the model. Second, recognizing the textual labels indicating themes can substitute for more computationally expensive approaches for recognizing narrative themes.

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