Unnamed things: Creating a controlled vocabulary for the description of animated moving image content

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ABSTRACT When a needed controlled vocabulary does not exist in available taxonomies, it is necessary to develop a new taxonomy based upon original research and or authoritative sources. This article presents an example of how an animation-specific taxonomy and subsequent controlled vocabulary was constructed to assist in the successful search and retrieval of animated moving image assets. The outcome of this research was used to assist in the automation of internal workflows used to comply with the Children's Television Act. The actual methodology of applying a term, keyword, or tag to moving image content, or how these data are administered, stored, queried and displayed is outside the scope of this article.

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INTRODUCTION

Taxonomy is best defined as a classification system, or a grouping of things, based on a specified set of rules. Things, or more precisely the words that represent things, can be arranged into groups based on a shared characteristic or attribute. The creation of a new taxonomy is likely the result of an expressed need that makes the work of creating a new classification system necessary. For example, the grouping of books by subject classification allows for clustering together of all books about a particular subject because a library has an expressed need to arrange books in a manner that assists in the finding and retrieval of books.

How well a classification system works is evaluated against the extent to which its intended purpose or need is satisfied or

how accurately it does what it is expected to do. Conversely, a classification system will also limit the ways in which the things that have been classified can be accessed.¹ That is to say, in order to find books on a particular subject in a library, one must search using the same subject terms that the library has used to classify these books.

This article will discuss how a unique taxonomy was developed as an example for those new to the world of taxonomy creation. The purpose of this project was to create an animation-specific taxonomy that would supply a controlled vocabulary for the description of animated moving image content. The overall outcome of this project was initially intended to assist in efforts to comply with Federal Communications Commission (FCC) regulations regarding the Children's Television Act (CTA).²

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SCOPING THE NEW TAXONOMY

In order to comply with FCC's CTA regulations, broadcasters need the ability to describe the content of children's programming and the content of commercials broadcast within children's programming in such a way to insure clear separation between the program content and the commercial content. Research was undertaken to define the taxonomy needed to accomplish this task.

When Congress enacted the CTA in 1990, it limited the amount of time commercials could be broadcast within children's programming to 12min per hour on weekdays and 10.5min per hour on weekends. These regulations are applied to programming originally produced and intended for an audience of children 12 years old and younger. Collectively these regulations are referred to as CTA. The intention of kidvid regulations is to prohibit broadcasters from tying children's programming to commercials in such a way that a child may be confused as to what is programming and what is a commercial.

One way a program may be tied to a commercial is by broadcasting a commercial within, or adjacent to, a program where both contain the same characters. For example, if the character Fred Flintstone appears in a Fruity Pebbles commercial the concern is that he is, by his inclusion, endorsing the product Fruity Pebbles. Running this Fruity Pebbles commercial within, or adjacent to, an episode of *The Flintstones* would result in a violation because Fred is in both the programming and the adjacent commercial. This method of tying programming to commercials is referred to by the industry as 'host-selling'.

It is conceivable that a child may not be able to distinguish the program from the commercial because the same character appears in both the program and the commercial. When tying occurs, the FCC considers the duration of the program content and commercial content together as one full block of commercial time or a 'program length commercial'. This results in an overage in the allowable amount of commercial break time per hour, and thus a violation of the FCC kidvid regulation.

Certainly, the scope of this new taxonomy must include the identification of character

names within both the program and the commercial content. However, there are also other relevant signifiers found in animated moving image content identified as noteworthy. These signifiers are fundamentally visual, auditory and spatio-temporal,³ that is, what we see and hear, and how these signifiers relate to each other over time. Whether they are concrete objects or abstract concepts, these signifiers must be identified and evaluated for relevance. So, the scope of the taxonomy for this project is more than a listing of character names; there is a need to describe animated moving image content in such a way that all pertinent signifiers are captured.

In animation, there are a number of referencing techniques (such as parody and pastiche) that can make the clear identification of characters challenging. Within the idiom of parody, characters may be like other well-known characters, or famous celebrities, but are more accurately identified as imitators of that character or celebrity. Pastiche can reference particular character types or situations satirically or stylistically, but there is only a similarity to the referenced character types or situations.

In addition, characters often have one-too-many relationships to other characters. Characters in television animation are most commonly shown in dyads⁴ (Batman and Robin, Fred and Barney, Yogi and Boo Boo and so on). In this way, the identification of a single character may signal the existence of another character, or characters. That is to say, Robin signifies Batman or signifies the dyad team of *The Dynamic Duo*.

Research was also needed to obtain a fuller understanding of the animation-specific symbols, rule sets and devices employed to communicate meaning to verify relevance. While this research focuses primarily on the signifiers found in animated content as differentiated from signifiers found in live-action content, some signifiers are inherent in both types of content. Ultimately, the findings from this research resulted not only in controlled vocabulary necessary to describe animated content, that is, terms specific to animated content, as well as an enhancement to the controlled vocabulary used to describe live-action content.

DOES THIS TAXONOMY ALREADY EXIST?

There is no single standard taxonomy, thesaurus or controlled vocabulary that fully encompasses all facets of moving image content description. Visual communication studies can arise out of many disciplines, and each discipline may have a decided different viewpoint. For example, art theory and psychology are very different disciplines, but studies regarding the interpretation of imagery may be found in both disciplines. Therefore, any taxonomy based on a set of signifiers culled from any particular discipline would be useful primarily within the confines of that particular discipline.

While certainly related, the classification of still images and moving images differ. The obvious dissimilarity between moving images and still images is that moving images move and still images do not. More importantly, moving images are more than a simple presentation of sequential still images, there is meaning communicated by the order in which, and the relationships made between, the groupings of sequential images, that is the relationship of one shot to another.⁵ So, any taxonomy that encompasses all facets of moving image description would be able necessarily to reflect the time-based signifiers that represent movement within shot and also represent any meaning communicated by shot groupings.

The methods in which moving images are dissected for description purposes employ varying levels of granularity, that is, description applied at the individual-frame level, at the shot level, the overall level and so on. The level of granularity necessary to satisfy any stated descriptive need is dependant on the required outcome; that is to say, the need for content retrieval to return either a single frame, a whole shot or an entire piece of content is the level at which content is described. Shot-level description is particularly useful for news programming,³ but does not reflect the relationships and meaning communicated by shot groupings (time-based signifiers) found in entertainment media such as motion pictures or television productions.

Some studies indicate that subject matter terms useful for indexing still image content is also useful for subject matter indexing moving image content.⁶ The Library of Congress Prints

and Photographs division's Thesaurus for Graphic Materials (TGM I & II) is intended for subject matter indexing still image collections. If it is true that subject matter terms useful for still image content are useful for subject matter indexing moving image content, the TGM I & II should contain terms (that is, words) useful in this project.

Unfortunately, while the TGM I & II contains many terms that appear useful for describing live-action, it does not contain animation-specific terms. Certainly, kissing is a term found in the TGM I & II, but it doesn't fully describe a character telescoping out its lips in order to kiss another character. Nor does it contain a term that represents the concept of an idea, indicated in animated content by a light bulb appearing above a character's head.

Also, thesauri are typically concerned with the relationships between terms and not necessarily the classification of terms. In this way, a thesaurus may be considered a manifestation of taxonomy, but the reciprocal is not true. So it's not particularly useful to attempt to pick apart a thesaurus to discover any underlying taxonomy.

IDENTIFYING THE PROBLEM SPACE

Unlike live-action content, animated content can more fully manifest ideas and concepts visually, and these ideas and concepts are represented with a specific set of signifiers. McCloud suggests that animation has exchanged the form and the appearance of the physical world in favor of the idea of the form, placing itself within the world of concepts.⁷ While animated content can be very much like live-action content, it also contains many conceptual signifiers that can only be identified with animation-specific terminology.

Because animation can depict things that don't exist in the real world, the physical laws of our universe need only sometimes apply in animation. More importantly, there are no terms for these nameless things that break the physical laws or don't exist in the physical world (that is, a coyote walking off the edge of a cliff in defiance of gravity).

Any meaning signified by these nameless things is rarely singular as these signifiers can

communicate many possible meanings simultaneously.⁸ However, the likely meaning of these signifiers can be concluded through repeated viewing experiences; therefore the likely meaning of animation-specific signifiers is the result viewing experiences over time.⁴ For example, when in animation a mouse drops an anvil on a cat, it is unlikely to expect the cat will die from the blow because our viewing experiences dictate that it is more likely to expect the cat will live but be momentarily deformed by the blow.

This is also true for moving image-specific signifiers; the likely meaning of these signifiers is based on conclusions drawn from repeated viewing experiences over time. In moving image content, the likely meaning of the fade-to-black signifier followed by a fade-up-from-black signifier, is a passage of time.

IDENTIFYING ANTECEDENTS

McCloud says that any particular medium has a predecessor, which it emulates to some extent.⁷ The predecessor of animated moving images, like live-action moving images, is the stage. While the longer duration of feature films reflect aspects of the stage play structure (that is, an act-based storytelling convention), this is not true for the shorter duration of animation. The duration of animation is particularly suited to emulate the sketch-based humor of Vaudeville and the bawdy stereotypes, satire and parody of Burlesque.

A theatrical cartoon from 1916, 'Krazy Kat Goes a-Wooing', is much more a humorous sketch than it is an act-based story. Here, violence is presented as a comedic device much like the slapstick routines found in Vaudeville. Radiating lines and stars indicate the concept of pain; these are animated representations of the same graphic elements utilized by comic strips to also signify the concept of pain. In the same way, another predecessor of animated moving images is the comic strip.

As the form of animated content evolved and motion picture technology advanced, cross-pollination of signifiers occurred from live-action to animation. For example, animation's static film frame was supplanted by the live-action motion picture techniques of camera movement, although a simulation of

camera movement since the animation camera doesn't move. Also borrowed from live-action motion pictures are the signifiers of scene transitions (that is, the fade-to-black signifier and so on). Some elements borrowed from the comic strip, such as the dialogue balloons found in 'Krazy Kat Goes a-Wooing', were discarded in favor of recorded dialogue when sound was introduced to moving images.

Briefly, these are the predecessor media that spawned the language of animation:

- The comic strip
- The sketch-based comedy routines of Vaudeville and Burlesque
- The techniques employed by live-action motion pictures

These predecessors are identified as the likely source of the terms needed to guide the structure of this new animation-specific taxonomy.

CREATING THE TAXONOMY

While the origin of animation-specific signifiers (the symbols, rule-sets and devices) is not known with certainty, these signifiers exist most likely within the predecessor media. The assumption is that these animation-specific symbols, rule-sets and devices are the signifiers that inform the structure of an animation-specific taxonomy. In the course of gathering all pertinent signifiers, it became clear that animation-specific signifiers might have formal names found in the predecessor media and that the problem of signifier polysemy might be resolved by a contextual reading of these signifiers in the predecessor media to identify a likely meaning.

Over 200 hours of television animation and theatrical cartoons were screened and described in order to collect signifiers. Informal names were applied to the signifiers subjectively, but most often these provisional terms took the form of a descriptive phrase (that is, a coyote walking off the edge of a cliff in defiance of gravity). Terms and term-phrases were grouped into visual, auditory and spatio-temporal clusters.

Of the 1126 terms collected in the initial screening phase of this project, 437 terms had

conceptual or exact matches to terms contained in the TGM I & II. The 437 terms were declined from the term clusters. The remaining terms appeared to represent signifiers that existed only in animation. These terms were evaluated and grouped into sub-clusters deemed as conceptually related or identified as having shared attributes.

Sub-clusters were given provisional names, such as 'graphic elements' in the example above, until research was able to uncover a formal name. Provisional terms and term-phrases gathered during the collection phase were conceptually matched to attributes of signifiers found in the parent media. For example, a sub-cluster containing terms such as 'seeing stars or birdies', 'lines indicating rapid movement', or 'exclamation points or question marks appearing above a character's head' were representational of signifiers that also appear in the comic strip.

Mort Walker's *Lexicon of Comicana* provided a number of terms for the sub-cluster 'graphic elements'. This book describes the art of the comic strip and provides a list of terms that can be applied consistently to signifiers that would otherwise be nameless. In this way, the provisional sub-cluster of 'graphic elements' adopted Walker's term 'Symbolia'; another Walker term 'Emanata' was used for the node grouping term-phrases such as 'exclamation points appearing above a character's head' and 'question marks appearing above a character's head'.⁹

Any remaining provisional names for sub-clusters or terms that could not be matched to any parent media remained with their provisional names. The initial structure of the new taxonomy is: clusters (visual, auditory and spatio-temporal), sub-clusters (such as 'Symbolia') and nodes (such as 'Emanata'). The terms are listed, both provisional and formal, under the nodes.

All terms used in this taxonomy have been validated externally by looking at literature and studies of the predecessor media. When no external source was able to provide terms, the provisional terms and term phrases were adopted.

Disclaimer The opinions, interpretations, practices and solutions discussed here are the views of the author and do not necessarily reflect the views and positions of Turner Broadcasting System, Inc.

SUMMARY AND CONCLUSION

This research provided for the comprehensive description of animated moving image content and can assist with the automation of internal workflows used to comply with the CTA. The resulting vocabulary enhances the taxonomy used for the description of live-action moving image content to accommodate terminology used to describe animated moving image content. In addition to a character name authority file, which maintains character relationships, such as Yogi relative to Boo Boo, the outcome of this research project provides the full scope of description necessary to index animated moving image content.

When a new taxonomy is needed for any project, it is necessary to identify the project scope, the problem space, review relevant data and then apply research-driven conclusions to the solution. This example of how an animation-specific taxonomy and was constructed resulted in a controlled vocabulary manifest in a thesaurus of animation-specific terminology.

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