

Reality Television and Social Problems

APPROACH

Our taxonomy is intended to organize the multitude of reality television programs into an easily navigable information space. Scripted television has long been broken down into categories that make sense to users. Browse for a scripted show and you will be presented with numerous and understandable concepts. In scripted television there are westerns, comedies, crime procedurals, medical dramas. Reality television on the other hand, is generally considered to be a single category, not worthy of its own taxonomic structure. We have created this framework in the hopes of improving the experience of exploring reality shows and the social issues they portray.

Our taxonomy and ontology is intended to organize and relate shows and social issues. The reality shows, as represented by their titles are our information objects, and are not included in the taxonomy. Including the shows themselves in the taxonomy would make our system too rigid and difficult to maintain. Our approach instead was to create a taxonomy with well-defined concepts which could be related to the information objects through our ontology.

This dual taxonomy is made up of two separate concept schemas: Reality TV and Social Problems. Of course, social problems are at the core of many reality shows, ranging from mental illness on *My Strange Addiction*, to divorce on *Untying the Knot*, to poverty on *Here Comes Honey Boo Boo*. Our approach was to keep these related concept schemas separated in order to create a dual funnel for users. The concept scheme for Reality TV will attract viewers who are most interested in finding shows to watch. The Social Problems concept scheme will attract researchers or people who are more interested in investigating social problems than watching shows for pure entertainment. No matter which taxonomy scheme draws a user in, they will be able to explore the ontological connections between the two.

Improvement of Taxonomy

Based on feedback from the midterm, we flattened our taxonomy from five levels to four. As we migrated from excel to PoolParty, we also ensured that concepts were alphabetized. According to the refinement criteria mention in ANSI/NISO, we performed error checking to detect duplicate terms and structural inconsistencies. The taxonomy was built out with the expertise of the taxonomists and through user feedback. Term definitions, alternative terms and narrower concepts were included to provide rich knowledge and descriptions of the concepts in the taxonomy. These were further improved utilizing the powerful features of PoolParty to extract data from DbPedia and WordNet. Finally, a user survey was conducted to test the robustness of the taxonomy.

Ontology

The initial phase of ontology development was involved the creation of competency questions. According to Noy and McGuinness (2001), brainstorming a list of questions that a “knowledge base based on the ontology should be able to answer” is helpful in determining whether an ontology contains enough information. Some questions we asked included:

- Which shows portray obesity?
- What issues, besides obesity, does *The Biggest Loser* portray?
- Do different shows feature the same cast members?
- What is The Bachelor known for?
- What community are the Kardashians a part of?
- What do Survivor winners have in common?

With these questions in mind, we began diagramming potential relationships. Most of this diagramming was done on a whiteboard where we could quickly sketch as many connections between taxonomy concepts as possible. The relationships we drew became the predicates for our triples. As we created these predicates, we tried to write as many inverse relationships as possible. This added flexibility and depth to the ontology.

Project planning and time frame

The phases of this information architecture were well defined by our Professor and consisted of the following stages. Iterative taxonomy built using PoolParty. Then split into two categories to create a linked taxonomy namely Reality TV and social ills. The second phase was building the ontology using the subject-predicate-object method through white-boarding and listing it on an excel sheet. The third phase was using the ontology we built in excel and feeding it into pool party to link it with existing optimal taxonomy. We incorporated our predicates into a master ontology dataset so as to make it available for other related information architectures. We then created a schema that include only the predicates that were directly related to the reality TV and social ills. These predicates were picked from the master ontology that include the predicates built for Reality TV and social ills as well as predicates that were built for other projects but usable for our project. This repository was then linked to our taxonomy using the state of the art features provided by pool party.

All phases had varied and broad scopes and the milestone dates were set by pre-determined deadlines. This helped us in staying on track for the final deliverable and kick starting the subsequent phases in a timely manner. Pending tasks from the previous phases were addressed in the subsequent phases through additional time put in by the project team members.

Controlled Vocabulary

The taxonomy, ontology, metadata schema are terminologically restricted guided by some selection principles of controlled vocabulary as described by Svenonius. The scope of the terms have been limited to the domain of reality TV and social Ills. Even though this could imply a very broad taxonomy, the terms have been controlled by referencing a limited number of information objects. For example under the taxonomy of reality TV there is a concept of 'relevant occupation' and under this category there are limited number of occupations listed that were deemed relevant to a limited number of existing reality TV shows and not every existing occupation, for example a janitor.

Certain terms in the taxonomy do not fall under a definitive hierarchal structure yet have been considered like 'Weight loss' has been included under 'Get Healthy'. This has a structural warrant as it has a collocating function of getting healthy through loss of weight. Consistency is the third criteria that has been well employed. Under the same category of 'Participant Goal' the terms have been prefixed with 'To' e.g. 'To Get Healthy', 'To Find Love', and 'To Win'.

IMPLEMENTATION

We made very few changes to the structure of our taxonomy after the midterm. As we moved forward, we shifted our focus from identifying and organizing concepts to defining those concepts and including alternative labels to improve the findability of our concepts and to make it easier to maintain for future taxonomists. Adding alt labels and definitions enhances the ability of users to search for and understand the meaning of each concept. For example, a user searching for shows about doctors who deliver babies might search for "maternity care." In this taxonomy, the preferred term is "obstetrics." In our midterm taxonomy, there was no link between the two search queries. Today, "maternity care" is listed as an alt label so that that user would still be able to find a show such as, *A Baby Story*. We used DBPedia to identify potential alt terms and definitions. We chose to directly link our concepts to definitions from DBPedia because it provides standard definitions which enhance the project's authority control.

We understood that such alternate labels could be used by users in surveys to tag shows even though the preferred label would be decided by us the Information Architects. We also added definitions for all concepts retrieved through pool party for semantic understanding of the terms. The issue we faced was purging the vast amount of data retrieved through PoolParty as we had to keep the data relevant to our expectations and approach. DBPedia supplied many alt terms that were not synonyms, as defined by ANSI/NISO, for the preferred term. The suggested alt terms for marriage included terms such as "Wife approval factor," and "History of Marriage," which needed to be removed. We also needed to remove misspellings such as "Marrage." Several definitions also needed to be edited to reflect the domain. The DBPedia generated definition of "documentary," for instance, was a definition related to documentary filmmaking. Although documentary filmmaking is related to reality TV, within our domain, "documentary" refers to a style or structure of a reality show. In this particular case, we produced our own definition, *"Documentary is a style of reality show which follows the lives of participants. Although there may conflict between participants, those individuals do not compete with each other for a particular prize."*

Throughout the process of finalizing our taxonomy, we performed a careful analysis on the terms and concepts used in other projects. We noticed that our colleagues who were creating a Video Games taxonomy group was also using the concept “Mood.” However, their approach to mood was much more expansive than ours. While we elected to use only five relatively broad moods to classify reality shows, the Video Games group identified twenty very specific moods. After considering this, we felt that keeping our mood concepts broad would make our taxonomy both more flexible and easier to maintain. As such, we decided not to formally link our taxonomies. As we developed our ontology, we found that other groups created predicates that were very applicable to our domain. We included many of these predicates in our custom schema, including, “canManifestIn,” “isMotivatedBy,” and “isAccompaniedBy.”

We found that we could relate concepts to each other within our taxonomy so as to present the user with related content when they search for key terms. For example, under populations affected we have women as a concept and under social issues -> civil rights we have gender equality as a concept. Gender equality is related to woman conceptually had hence we coupled to be as related concepts.

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- 5) As you built out each individual CV—including definitions, relationships and assigned meanings—how did you monitor cross-CV term usage? How did you know that the term you were working on might also be present in other CVs?

We closely monitored cross-CV term usage across all projects within pool party and evaluated that there was only one concept in the taxonomy called mood that would relate to our controlled vocabulary. However due to a long list of moods that was used in other projects, we decided against using it as it did not integrate well with our information objects. For the ontology we referenced relations from the master ontology which were created for other projects. We examined the classes and relations and choose those classes and relations which were applicable to reality TV. For example we included the class ‘ability’ and the relations ‘isSkilledAt’, ‘hasTheSkill’ and ‘hasTheAbility’ from the master ontology. We had created 7 classes and 26 relations, so identifying additional classes and relations was relatively simple using pool party. We collaborated with other project team members and evaluated the ontology created in an excel sheet twice a week. We did however have duplicate terms in different controlled vocabularies. For example the term ‘isCreatedBy’ was also part of the Video Game Character ontology with a generic class concept. So we included that in our Reality TV custom schema.

The authority control for our taxonomy and metadata relatively stayed the same post the mid-term. The ontology was determined by referencing our taxonomy, metadata and information objects. Out of the 26 relations 7 were directed, 17 were inverse and 2 were symmetrical types.

We set focus on creating as many inverse types of relations possible to have better findability for the the information objects, which was the authority control we used in the mid-term as well.

- 7) Did you explore or even use different standards this time? (e.g. did you go beyond just Dublin Core?)
- a. Dublin Core
 - b. ANSI NISO
 - c. DBPedia for definitions

We used Dublin Core to reference standards while creating our metadata schema for the mid-term. The metadata schema has relatively remained the same post the mid-term. We referenced ANSI/NISO Z39 from the onset upto the point of project delivery. This was for controlled vocabularies, ontology, metadata schema and almost every component of the project. In addition we also referenced “Design of Controlled Vocabularies” by Elaine Svenonius for setting standards for our controlled vocabulary. For example we used the principles of scope, structural warrant and consistency while developing our controlled vocabulary.

To keep the definitions of terms in the taxonomy standardized we used DBPedia and WordNet to to define all possible terms in the taxonomy.

- 8) What difficulties did you encounter trying to map all of the CVs back into the all up taxonomy?

We tested our taxonomy to ensure its completeness. We did so by adding articles about our information objects to a corpus analysis. We added

IMPACT:

Binge-watchers rejoice! The proliferation of streaming and on-demand television services has made more television shows available to users than ever before. Unfortunately, this increase in content has outpaced some service providers’ ability to organize it. This is especially true of “reality television” programming – a catchall term for all shows that aren’t scripted or sports. Our taxonomy of reality television shows and social issues offers several improvements for helping users find reality television shows to watch. Viewers who are looking for scripted programs from providers such as Comcast, Hulu and Netflix can easily search by genre, network, or theme to find an appealing show to watch. Below are the genre concepts Netflix users are shown for television shows:

Action & Adventure	Cult TV Shows	Kids’ TV	TV Sci-Fi & Fantasy
British TV Shows	TV Documentaries	Korean TV	Reality TV
Classic TV Shows	TV Dramas	Military TV	Science & Nature
TV Comedies	Food & Travel	Miniseries	Spanish Language TV

Crime TV Shows

TV Horror

TV Mysteries

Teen TV Shows

Here, scripted programming is broken down into 19 separate categories. All of reality TV is contained in a single category. Netflix's Reality TV subgenre, contains all of their reality offerings in a single, seemingly unorganized list. For example, "Celebrity Plastic Surgeons of Beverly Hills," "Undercover Boss," and "House Hunters" are shown next to each other, despite being extremely different shows (Netflix, 2016). Comcast breaks their On Demand online interface into 47 genres of TV shows, but again relegates reality television into a single category. A user looking for a reality show is confronted by a list of 147 shows without an obvious organizing structure to sort through (Comcast, 2016).

Our taxonomy addresses the wide-ranging subject matter of modern reality television and offers a means of organizing these shows so that they are as easy or easier to discover as their scripted counterparts. This taxonomy and ontology can be used by service providers as a basis for improving the entertainment experience of their customer base. The metadata we have selected supports this effort. Metadata such as premiere year, number of seasons, number of episodes, episode duration, and video quality are all critical at the most basic level so that a user can see what time period a show covers, how long it would take them to watch a given number of episodes, how many episodes they would have to watch to see the entire series, and whether the video will look good on their device of choice. We incorporated each show's creator, host, and supporting stars because people on one show often create, or appear on, other shows. For instance, if a user enjoyed watching Ted Allen on Bravo's "*Queer Eye for the Straight Guy*," they might also be interested in watching him host "*Chopped*" on the Food Network. A general makeover show and a cooking competition respectively, *Queer Eye* and *Chopped* have few elements in common except for Ted Allen. Fans of his, however would probably be interested in watching both shows. Our ontology represents this as:

Chopped - **is hosted by** - Ted Allen - **frequently appears on** - *Queer Eye for the Straight Guy*

Although for most viewers, a reality TV show is pure entertainment, reality shows, like all TV shows are cultural artifacts. What shows get made and what shows people choose to watch speak to larger issues within our society. With that in mind, we have created a second taxonomy of social problems in America. Academics and social critics may use our taxonomy and ontology together in order to examine what these shows can tell us about how people view, or respond to, the pressing issues of today. This will be especially helpful to researchers who are interested in, but unfamiliar with, reality television as a potential topic of scholarship. The metadata elements location, popularity and audience age are intended to enable researchers to identify which shows cover particular geographic regions, how many viewers a show attracts, how old that audience is. We also selected emotional tone because it suggests how viewers are encouraged to see a particular topic. For example, the *The Biggest Loser* is a show about weight-loss, and has an inspirational tone which invites viewers to understand that obesity is a dangerous problem that must be overcome, even by extreme measures.

Although Reality TV and Social Problems are contained in separate concept schemes, they are related by our ontology. For example, a researcher interested in how substance abuse is portrayed on reality television might be interested in learning about *Intervention*, a show in which people with addictions are confronted by their friends and family. Our ontology relates the show to the social problem like so:

Substance abuse - **is a social problem depicted in** - *Intervention*

Of course, it might be obvious that *Intervention* is related to the social issue of substance abuse. What might be less obvious, is that, although not explicitly stated in the show's description, many of the issues depicted in *Intervention* are connected to issues of economic inequality. In fact, many reality shows focus on poor communities or individuals, but very few specifically mention poverty. Presently, researchers who are interested in studying portrayals of poverty on reality TV would struggle to find those shows. Our ontology reveals those relationships. To continue the *Intervention* example:

Intervention - **depicts the social problem** -substance abuse

Substance abuse - **is correlated to the social problem** -poverty

PROBLEMS

We created a Treejack test in order to test our taxonomy. Users were generally successful in completing tasks that asked them to navigate to part of our taxonomy where they would expect to find a specific show. We were concerned, however, by the results of a task that asked users to navigate to a part of our taxonomy where they would expect to find an issue depicted in *Teen Mom*. We had anticipated that the majority of users would take the following path:

Social Problems - Social Issues - Families - Teenage Pregnancy

None of our test users approached this task the way we expected. Instead, the most popular path was:

Social Problems - Populations Affected - Children/Teens

This answer is also correct – children and teens are certainly affected by teenage pregnancy, the topic of *Teen Mom*. It was surprising, however, that only one of our test users noticed that there was a more specific concept they could have selected. In fact, only one of the users even looked within the “Social Issues” subheading. It’s possible that users were more likely to select “Populations Affected” because, as subheadings were listed alphabetically, it appeared before “Social Issues.” It’s also possible that some users didn’t click on “Social Issues” because they did not understand what precisely was meant by that term. In a follow-up conversation, one user commented that she didn’t explore “Social Issues” because she assumed it was identical to its parent concept, “Social Problems.” After receiving this feedback, we considered changing the

names of the concepts within the “Social Problems” concept scheme. In the end we decided not to change the concept names, instead we related them through SKOS.

Another problem we faced was creating triples that connected concepts within PoolParty. We did not make substantial changes to the structure of our taxonomy as we began creating our ontology. One problem this created for us was that our taxonomy does not include any reality television show titles. There are too many reality shows, and particularly too many shows that will be produced in the future, for us to create a maintainable taxonomy that includes titles. Instead, we chose to keep the specific shows as information objects. Unfortunately, this decision limited our ability to create and store triples in PoolParty. For example, we created the predicate: “depicts the social problem of” with the intention of connecting specific shows to particular social problems such as:

My 600lb Life - depicts the social problem of - Obesity

Obesity - is a social problem depicted in - *My 600lb Life*

Of course, we can still show this relationship using *My 600lb Life* as an information object, but we could not create that relationship within PoolParty. Fortunately, there were many concepts within our taxonomy that could be connected in our ontology, including

Bravo - is a subsidiary of - NBC | NBC - has subsidiary - Bravo

Obesity - is correlated to the social issue - Poverty

Project data

Metadata

Administrative Metadata			Descriptive Metadata
Series Title	Network	Premiere Date	Location
Language	# of Seasons	# of Episodes	Host
Episode Duration	Currently On?	Video Quality	Tone
Creator	Popularity Level	Audience Age	Supporting Stars
Location			

Annotated List of Terms

Term	Origin	Definition	Description
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Series Title	Dublin Core	The name of a book, composition, or other artistic work.	Name of the reality TV show
Network	Claire - Elton	A group or system of interconnected people or things	Name of the broadcasting company
Premiere Date	Dublin Core	a first public performance or showing of a play, opera, film, etc.	Date when the first episode of the TV series was telecasted
Language	Dublin Core	the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way.	Language spoken in the TV series
# of seasons	Claire - Elton	Number of sets of episodes of a show	Number of sets of episodes of a show
# no of episodes	Claire - Elton	each of the separate installments into which a serialized story or radio or television program is divided.	Number of installments in each season
Episode duration	IMDb	the time during which episode continues.	Time length of the episode
Currently On?	Claire - Elton	Telecasted in the present time	Whether show is currently aired on the network
Video quality	IMDb	A formal or informal measure of perceived video degradation	Quality of streaming or recorded video
Creator	Dublin Core	a person or thing that brings something into existence.	Person who developed the concept of the TV show
Popularity	IMDb	the state or condition of being liked, admired, or supported by many people.	Statistic determining number of people watching the show
Audience Age	Dublin Core	Age of the assembled spectators or listeners at a public event, such as a play, movie, concert, or meeting.	Recommended age limit for viewing the show
Location	Claire - Elton	an actual place or natural setting in which a film or broadcast is made, as distinct from a simulation in a studio.	Place where the show has been shot
Tone	Claire - Elton	the general character or attitude of a place, piece of writing, situation, etc.	Emotional description of the series
Host	Claire - Elton	a person who receives or entertains other people as guests.	Person anchoring or narrating the show
Supporting stars	IMDb	Cast members that do not have primary roles in the show	Additional performers apart from the main or lead characters

Sample Taxonomy



Sample Ontology

Class/Concept	Predicate	Class/Concept	Type	Predicate	Example Triple
Cast & Crew	hosts	Show	Inverse	isHostedBy	Ryan Seacrest Hosts American Idol

Show	depictsTheSocialProblem	Social Ill	Inverse	isASocialIllDepictedIn	My 600 lb life depicts the social ill of obesity
Concept	isRequiredToCombat	Social Ill	Inverse	isCombatedBy	Exercise is Required to combat obesity
Concept	isCorrelatedToTheSocialProblem	Concept	Symmetrical		Obesity is correlated to the social ill poverty
Concept	haveGoalOf	Concept	Directed		Bachelor contestants have goal of finding love
Concept	takesPlaceIn	Setting	Inverse	isSettingOf	The Bachelor takes place in Malibu
Community	isACommunityThatPossesses	Concept	Directed		Malibu is a community that possesses wealth

RESOURCES USED

Guidelines for the construction, format, and management of monolingual controlled vocabularies. (2005). Retrieved March 10, 2016, from

https://canvas.uw.edu/files/34297418/download?download_frd=1

We used the ANSI/NISO Z39 standards as a primary source to help structure our controlled vocabulary. It was the starting point for us in determining and selecting the appropriate terms and structure for our taxonomy and ontology.

Svenonius, E. () Design of Controlled Vocabularies. Retrieved March 10, 2016, from

https://canvas.uw.edu/files/34297420/download?download_frd=1

This was our secondary reference for designing our controlled vocabulary and establishing our authority control over the project.

Noy, N. F., McGuinness, D. L. Retrieved March 10, 2016, from http://protege.stanford.edu/publications/ontology_development/ontology101.pdf

We utilized this to cross reference standards in utilizing controlled vocabularies and for the development of our ontology.

Duval, E., Hodgins, W., Sutton, S., & Weibel, S. L. (2002). Metadata Principles and Practicalities. *D-Lib Magazine*, 8(4). Retrieved March 10, 2016, from https://canvas.uw.edu/files/34297410/download?download_frd=1

We relied on Duval and Sutton as a resource for helping think about employing modularity in our metadata. This was critical because we would like our work to be able to operate with other types of television shows and social concerns. We also used their Association Models, which helped us to conceptualize how we could draw on embedded metadata in our work.

Glushko, R.J. (2014). *The Discipline of Organizing*. Retrieved March 10, 2016, from

We drew upon Glushko's approach on how to select a metadata schema. His work was especially helpful in terms of deciding which type of descriptive metadata would make sense within our domain.

DCMI Metadata Terms. (n.d.). Retrieved February 1, 2016, from <http://dublincore.org/documents/dcmi-terms/>
We used this as a framework to select our metadata elements from. We used this because the Dublin Core is an industry standard and it will keep our system compatible with those of our classmates.

Issues | The White House. (n.d.-a). Retrieved January 29, 2016, from <https://www.whitehouse.gov/issues>

We used the White House's list of current social issues to create our concepts for our social problems taxonomy. We selected this list because it was the most comprehensive resource we were able to find that addressed relevant social problems in the United States.

Netflix. (n.d.). Retrieved February 1, 2016, from <http://www.netflix.com/browse/genre/9833>

We selected Netflix as an example because it is a leader in the American television streaming market. Netflix has a wide range of television offerings from many different networks.

US TV Networks - Who's TV's Top Network Bunch? (2015, June 3). Retrieved from <https://www.engagementlabs.com/us-tv-networks-whos-tvs-top-network-bunch/>

Watch Reality & Game Shows Online | Hulu. (n.d.). Retrieved February 1, 2016, from <http://www.hulu.com/tv/genres/reality-and-game-shows>

We examined Hulu to see how they sorted their reality TV programming versus that of their scripted shows. We selected them because they are a Netflix competitor, and could benefit from the taxonomy we are developing.

Watch TV Shows On Demand: XFINITY TV. (n.d.). Retrieved February 1, 2016, from http://xfinitytv.comcast.net/ondemand/full_episodes?page=1&sortBy=fancastVodRank&layout=gallery&filters=%7B%7D

We examined how Comcast organizes their On-Demand service because, unlike Hulu and Netflix, they operate two similar, but ultimately quite different user interfaces – one online interface, and another interface that appears on a customer’s television. We were interested not only in how Comcast organizes information, but how they appear to change their organizational system depending on the interface.

IMDb (n.d.). Retrieved February 01, 2016, from <http://www.imdb.com/>

We used IMDb for the selection process of metadata elements that helped in deciding the volume of embedded metadata and additional elements.