

Vlogging the Museum: YouTube as a tool for audience engagement

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## **Abstract**

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Each month more than a billion individual users visit YouTube watching over 6 billion hours of video, giving this platform access to more people than most cable networks. The goal of this study is to describe how museums are taking advantage of YouTube as a tool for audience engagement. Three museum YouTube channels were chosen for analysis: the San Francisco Zoo, the Metropolitan Museum of Art, and the Field Museum of Natural History. To be included the channel had to create content specifically for YouTube and they were chosen to represent a variety of institutions. Using these three case studies this research focuses on describing the content in terms of its subject matter and alignment with the common practices of YouTube as well as analyzing the level of engagement of these channels achieved based on a series of key performance indicators. This was accomplished with a statistical and content analysis of each channels' five most viewed videos. The research suggests that content that follows the characteristics and culture of YouTube results in a higher number of views, subscriptions, likes, and comments indicating a higher level of engagement. This also results in a more stable and consistent viewership.

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## CHAPTER 1: Introduction/Significance

The internet and the content it generates has become a fixed presence in our everyday lives. All a person needs is an internet connection to reach a wealth of information that just a few decades ago was unimaginable. A major component of this digital cultural shift is social media. Internet users spend 16 minutes of every hour online on social media sites (“Top Social Media Stats,” 2013). Along with the likes of Facebook, Twitter, and Pinterest, YouTube is one of these social media sites with a massive following. The amount of content available on YouTube is staggering and spans everything from current events and lectures to comedy sketches and cat videos.

Each month, more than a billion individual users visit YouTube and over 6 billion hours of video are watched (YouTube Statistics, n.d.). The platform has users and content creators from not only all over the country, but also all over the world. 70% of the site’s users are from outside of the United States (Clough, 2013). YouTube and internet video as a whole are beginning to compete with more traditional forms of media. YouTube reaches more people than most cable networks (YouTube Insights, 2013). The site also has access to key demographic groups. The most popular age group on the site is 18-29 (Social Media Marketing, 2013). Compared to the rest of the internet, YouTube users are more likely to have children and less likely to have a college education (Clough, 2013). There is also a stronger minority presence in the site’s users (compared to the rest of the internet) (Clough, 2013).

At its core, YouTube is a social media site. 100 million users use the platform's social features, such as liking and commenting, every week (Social Media Marketing, 2013). The more popular YouTubers, people who upload content to the site, produce regular, original content and actively engage their followers. They also link their channels with their other social media accounts to promote their channels and create more ways for their audience to interact with them. YouTube is one piece of the modern transmedia marketing campaign and social media presence that institutions, individuals, and businesses use to build and engage with their audience.

One subset of YouTube that is particularly relevant to museums is the growing number of educational channels providing content in an informal learning setting for students, teachers, and interested individuals. These channels explain subjects like chemistry, literature, algebra, etc. Many are run by educators, professionals, and even universities. The site has an auto-generated channel called YouTube EDU that curates the educational content into the categories of primary and secondary education, university, and lifelong learning. The site also has resources available for teachers and schools. The platform has special benefits and resources for nonprofits. Nonprofits can have livestreams on their channels, a donate button on their page, and access to the site's nonprofit community forum.

The type of activity, content, and engagement that is happening on this platform presents a world of possibility for museums. The site can provide museums with a way to not only more actively engage their current audience through a digital medium but also reach new groups of people, including demographic groups that do not typically frequent museums in general such as teenagers and minorities. The YouTube EDU-

type content fits directly with the educational mission and programming of many institutions. However, despite the opportunities YouTube provides, there is little research or discourse on how museums could make use of this platform. Lack of understanding and established best practices is a common problem when it comes to the field and social media. Russo, Watkins, Kelly, and Chan (2006) have suggested that museum social media is in its infancy with a lack of scholarly literature on the subject and discussion of its effects. The existing literature on museum social media tends to focus on sites other than YouTube and there has been little research into the platform itself, let alone how museums are making use of it.

The goal of this research is to describe how museums are utilizing YouTube as a platform and to begin to identify the most effective tools for audience engagement. Specifically, what are the characteristics of museum YouTube content and what are the connections between these characteristics and their engagement statistics? This is a very brief look into how the field is using this platform and what has come from it by looking at a few examples and how users are reacting to them. It is intended to be a resource for institutions that are looking to engage with their audience in a more active and dynamic way through the YouTube platform. By providing examples of what museums are currently producing and analyzing what the outcomes are, other museums will better understand what will work best for their institution and how to most effectively invest for the future. This study is also a starting point for future research and meant to spur the discourse about museums as digital content creators, YouTube as platform for engagement, and state of the field's use of social media in general.

## CHAPTER 2: Literature Review

This chapter discusses the role of social media, specifically YouTube, in the museum field including what the field's current attitudes are toward the technology as reflected in the literature. The first section describes how platforms such as YouTube change the traditional museum-visitor relationship. The second explores YouTube and its community of users in the context of participatory culture as well as the content available on the platform and how it is creating a new community of informal learning.

### **Social Media in Museums**

It has been acknowledged that social media changes the dynamic between the museum and the audience (Russo, Watkins, Kelly, & Chan, 2008; Russo, Watkins, Kelly, & Chan, 2006; Proctor, 2010). Social media is based in discourse, a two way conversation between multiple parties. The traditional communication style of museums is the one-to-many model where "curatorial expertise is 'broadcast' to the community via exhibition and publication." (Kelly, 407, 2010) With the adoption of more participatory and interactive strategies, this paradigm is shifting. Proctor (2010) states that "like a node at the center of the distributed network that the museum has become, the curator is the moderator and facilitator of the conversation about objects and topics proposed by the museum, even across platforms not directly controlled by the museum." (38) This fits with the shift in the field from institutions that present information to ones that engage people with that information (Russo et al., 2008) and can in fact work to their advantage. Simon addresses this phenomenon in her hierarchy of social participation, or "me-to-we" design (Simon, 2010). Her theory on visitor-museum

interaction and social participation is based on a continuum of five stages: individual consumes content, individual interacts with content, individual interactions are networked in aggregate, individual interactions are networked for social use, and individuals engage with each other socially (Simon, 2010). Social media and its many-to-many communication model is one element that disrupts the traditional model by giving the museum's audience a way to voice their opinions and question what the museum has interpreted. The incorporation of these more participatory models can benefit the museum as whole. Simon (2012) has claimed that these strategies "support audience development, repeat visitation, membership, maybe could even attract new kinds of donors" and has seen these benefits firsthand at her institution. Social media is a tool that can be used to facilitate this process of creating content and providing channels for visitors to both interact with it and each other.

Social media gives museums the power to move their activities into the digital space while also reinforcing their reputation for cultural authority and authenticity. It is a set of tools that can be used to engage with people and communicate with new audiences, extend the museum experiences beyond the exhibition space, and encourage learning by moderating conversation and content creation (Russo et al., 2008). Social media provides museum visitors with an opportunity to have the participative learning experience they want in their own space that can continue outside of the physical museum (Russo et al., 2008). Museums are in a strong position to be creating online content and moderating the conversations about it, which in turn bolsters their position as a cultural authority. Russo, Watkins, Kelly, and Chan (2008) have argued that the lack of reliable information online is a reason in itself why museums

should be more active with social media. Museum visitors in particular are actively engaged in Web 2.0 and social media. In her article on Web 2.0 and museum communication, Kelly discusses how research shows that people who visit museums are more likely to participate in "online activities such as blogging, commenting on websites, reading and posting customer ratings and reviews, and taking part in discussion boards and forums" (406, 2010) and another study that suggests that the majority of one museum's visitors use Facebook, Wikipedia, and YouTube. Villaespesa (2013) has also discussed research that shows museum visitors' use of social media stating that "the amount of online user-generated content about the museum continues to increase at a very fast pace."

As research shows that the audience for this content exists, museum experts and educators can use social platforms to facilitate and add to the dialogue that they often do not happen in exhibition spaces. This museum-visitor interaction feeds back in to the museum in a way that legitimizes its reputation for authenticity and authoritative information. Museums are institutions with cultural and informational authority because they are perceived to be a credible source for this material (Russo et al., 2008). Russo, Watkins, Kelly, and Chan (2008) have claimed that the "notion of authenticity as provided by the museum organizes collections of narratives into recognizable and authoritative histories, mediating the relationship between visitors and objects. Social media extend this authenticity by enabling the museum to maintain a cultural dialogue with its audience in real time." (24) By engaging in conversations with their audience about cultural content, the museum keeps the content relevant, active, and transparent. Russo, Watkins, Kelly, and Chan explain that "...social media can be used to enable

cultural and scholarly dialogue to propagate authentic and authoritative museums knowledge within a community of interest using a many-to-many communication model." (24)

### **YouTube Content & Community**

YouTube is unique among other social media platforms in the nature of the social interactions that take place. Communities, strengthened by the participatory culture inherent to the platform, are formed around content and content creators (Strangelove, 2010; Chau 2010). YouTube content is also different from television in that it is perceived as more authentic (Strangelove, 2010) and an increasing amount of it is focusing on education, creating new communities of informal learning. As with social media in museums, there is a lack of scholarly research on YouTube culture and the platform's social interactions in general.

**YouTube Communities & Participatory Culture.** YouTube is defined by its intersection of content creation and social networking capabilities. While the concept of the YouTube culture is disputed, the platform's users see themselves as part of a community (Strangelove, 2010). These individuals form strong bonds with each other and content creators. Members of YouTube communities and other internet groups "tend to believe that they know the personalities of other community members and that they both experience and observe more personal relationships than do members of offline communities." (Strangelove, 103, 2010) This is connected to the participatory aspects of the culture surrounding this platform, especially with its teenage and young adult users. Chan (2010) states that YouTube combines the "technical aspects of youth as media creators" and the "social aspects of youth as social networkers" to create a

participatory culture in which teens and young adults can be active members.

Participatory culture is integral to the social interactions and communal experience of YouTube. This is reflective of a larger cultural shift where viewing media and consuming content has become a more social and active process. Strangelove argues that:

With the advent of digital technologies and new theories about the active character of the audience, we now see the viewer as interacting, participating, collaborating, and co-producing. The biggest change maybe the shift from individualized and personal media consumption towards consumption as a networked practice. (2010, 117)

YouTube exhibits the five characteristics of participatory culture: low barriers to artistic expression and civic engagement, strong support for creating and sharing projects, informal mentorship, belief that individuals' contributions matter, and a sense of social connection (Chau, 2010). Participatory culture inherently fosters engagement and interaction which can be harnessed by museums. Russo, Watkins, Kelly, and Chan (2008) have stated that social platforms like YouTube have allowed museums to take advantage of the demand for participatory activities and more actively engage visitors with their resources.

Despite the fact that only a minority of users actually create content, participants are active in commenting and critiquing content from others (Strangelove, 2010).

YouTube's content sharing and social networking capabilities create a "sense of belonging and identification with the community and, in return, loyalty to the platform." (Chau, 69, 2010) Chau (2010) states that users express their membership in the

community and support for the content creator by using the platform's feedback mechanisms (liking or disliking videos and posting comments); and likewise the content creators who regularly interact with their viewers (through comments or creating additional content) grow and strengthen their community. YouTube communities are also tied to the identities associated with them. The Western idea of self-expression through media forums is manifested on this platform (Strangelove, 2010). These elements of participatory culture combined with the social networking traits create a platform with the conditions to foster the creation of tightknit communities of invested members. YouTube has some of the most active and engaged communities on the internet (Clough, 2012; Strangelove, 2010). An example of this phenomenon is Nerdfighteria, which is the community surrounding the Vlogbrothers channel. This community of "nerdfighters" is closely tied with the more traditional elements of nerd culture but also strongly appreciates philanthropy and community service which are manifested in the content of the channel and the actions of the community such as their annual fundraising drive, the Project for Awesome.

**YouTube Content & Education.** Video content on YouTube is distinct from television in that it emphasizes authenticity or at least the perception of it. One of the most common types of videos on the site are video diaries, or vlogs, in which the content creator records themselves speaking to the camera about any topic of their choosing. Most often these videos lack high production quality or sophisticated means of communicating giving them the appearance of being more genuine and simultaneously subverting any association between television and authenticity by comparison (Strangelove, 2010). The popularity of these videos represents a "growing

taste for the 'unmediated' and 'unedited' representation of the other (although mediation and editing remain)." (Strangelove, 82, 2010) Vlogs are perceived to be more authentic than other more mainstream forms of media. Strangelove calls vlogging the punk version of television in that authenticity, transparency, and nonconventional methods of self-representation are embraced while also recognizing that editing is still practiced and the very presence of an audience alters how the vlogger presents themselves (Strangelove, 2010). The reputation vlogs have for authenticity is paralleled by the reputation of museums and speaks to how YouTube and social media in general can add to it. As Russo, Watkins, Kelly, and Chan (2008) have stated, social media can reaffirm museums' reputation of authenticity and authoritative information.

The growing number of YouTube channels that focus on creating educational content have also created a new online informal learning setting similar to museums. The viewers of these videos have a variety of motivations and reasons for watching. Dirksen (2012) describes two types of learners: intrinsically and extrinsically motivated. Intrinsically-motivated learners are interested in the topic for its own sake or have a specific problem. Extrinsically-motivated learners are motivated by an outside reward or punishment. Both are applicable to the platform's educational content. These channels also exhibit characteristics of knowledge-centered learning, which focuses on understanding and sense-making balanced with developing necessary skills, and community-centered learning, which involves creating an environment that fosters learning (Bransford, 2000). An example of this would be the Crash Course channel, which will answer its viewers' questions that they post as comments on each video, or the Mental Floss channel, which answers one question in each video from the previous

episode whether it fits with the topic or not. The idea of community-centered learning on an online platform aligns with museums as an informal learning setting. Museum learning is a communal experience that can be transferred and continued online through social media which also responds to the challenge to shift from dictating information to encouraging critical thinking about the content they present (Russo et al., 2008).

## **CHAPTER 3: Methodology**

The goal of this study is to describe how museums utilizing YouTube as a platform and to begin to identify the most effective tools for audience engagement. The study focuses on two questions: what are the characteristics of museum YouTube content and what are the connections between these characteristics and their engagement statistics? Three case studies were chosen to explore this topic. The research focuses on describing the content that each institution created and analyzing the level of engagement each channel achieved based on a set of quantitative key performance indicators inherent to the platform: views, likes, dislikes, comments, and subscribers.

### **Case Studies**

Three institutions and their channels were chosen based on several criteria: the museums operate the channel themselves and they actively create original content specifically for the channel that focuses on some aspect of the museum. Only institutions located in the United States were considered for this study. Channels were identified by searching the site to find a group of that represented museums with an assortment of disciplines, organizational sizes, and geographic locations. The group is also intended to represent channels with a variety of audiences, amount of content, and production quality. The three institutions chosen for this study were the San Francisco Zoo, the Metropolitan Museum of Art, and the Field Museum of Natural History.

**Table 1: Case Studies**

Name of Institution	Location	Name of Channel	Date Channel was Created	Number of Subscribers
<b>Field Museum of Natural History</b>	Chicago, Illinois	The Brain Scoop	December 17, 2012	211,458
<b>San Francisco Zoo</b>	San Francisco, California	SFZoo	August 5, 2006	2,111
<b>Metropolitan Museum of Art</b>	New York City, New York	The Metropolitan Museum of Art	January 5, 2007	18,241

### Case Study Background Information

**The San Francisco Zoo.** The San Francisco Zoo is a historic California institution originally established in 1866. It is currently home to over 1,000 animals and its mission is “to connect people with wildlife, inspire caring for nature and advance conservation action.” (“About the Zoo,” n.d.) The San Francisco Zoo has an annual budget of \$18,000,000. Their YouTube channel is linked to the website along with its other social media accounts. In addition to the channel, this institution also has a podcast.

The San Francisco Zoo’s top five most viewed videos include *It's a Gorilla! Baby Gorilla Update*, *Two Giraffe Calves born at the San Francisco Zoo*, *Penguin Knocks Over Camera*, *Wildlife Theater*, and *Baby Gorilla & New Mom!*. These videos have between 180,000 to 1.6 million views. *It's a Gorilla! Baby Gorilla Update* and *Baby Gorilla & New Mom!* are about baby gorilla Hasani, sharing footage of him as an infant before being put on exhibit. *Two Giraffe Calves born at the San Francisco Zoo* is similar

in that it describes the status of the infant animals including footage of the birth of one of them. *Penguin Knocks Over Camera* features a short clip of a group of penguins followed by information on an upcoming, penguin-themed event. *Wildlife Theater* includes behind the scenes footage of the Wildlife Theater show at the Zoo such as interviews with the employees that are in and run the show and clips from one the performances.

**The Metropolitan Museum of Art.** The Metropolitan Museum is one of the largest and most prominent art museums in the world. Located in New York City, the museum has an annual budget of \$400,000,000. The museum's mission is "to collect, preserve, study, exhibit, and stimulate appreciation for and advance knowledge of works of art that collectively represent the broadest spectrum of human achievement at the highest level of quality, all in the service of the public and in accordance with the highest professional standards." ("Museum Mission Statement," n.d.) The YouTube channel is not featured or linked to the museum's website, which does include several blogs and other digital content like the Heilbrunn Timeline of Art.

The Metropolitan Museum's top five most viewed videos are entitled *The Roentgens' Berlin Secretary Cabinet*; *Masterpieces of Chinese Music: A Musical Performance by Music from China*; *Stradivari violin, "The Antonius," played by Eric Grossman - Part 1 of 2*; *Abraham Roentgen's Writing Desk*; and *The Harvesters*. Each of these videos has between 87,000 and 4.8 million views. *The Roentgens' Berlin Secretary Cabinet* and *Abraham Roentgen's Writing Desk* are videos of pieces of furniture with intricate details and many hidden compartments. These objects were part of an exhibit the museum. *Masterpieces of Chinese Music: A Musical Performance by*

*Music from China* and *Stradivari violin, "The Antonius,"* played by Eric Grossman are recordings of live performances at the museum. *Masterpieces of Chinese Music* was made in coordination with an exhibit and *"The Antonius"* was a performance using an object from the collection. *The Harvesters* is a video interviewing various staff members about the painting featured in the title. The audio from these interviews was edited together with B-roll footage of the object.

**The Field Museum of Natural History.** The Field is a natural history museum located in Chicago, Illinois. The museum's mission statement includes a commitment to education, collecting, research, collaboration, public service, and conservation. The Field has an annual budget of \$75,000,000. The Field has multiple YouTube channels. The channel included in this study, *The Brain Scoop*, was created by Hank Green and Emily Graslie and acquired by the Field less than a year after it was established. It originally centered on the Philip L. Wright Zoological Museum at the University of Montana. Green, a prominent vlogger and YouTube producer, visited the museum and was given a tour by Graslie, the host of *The Brain Scoop*, who was a volunteer with the museum at the time. The two created the channel soon after. *The Brain Scoop* uploads weekly episodes that show various behind the scenes activities at the museum and educational videos using objects from the collection. The museum features the channel as one of their podcasts on their website.

The Field's videos included in this study are *Where My Ladies At?*, *Skinning the Wolf*, *Gutting the Wolf*, *Horns vs. Antlers*, and *Welcome to The Field Museum*. These video have accumulated between 170,000 and 800,000 views each. *Where My Ladies At?* is a vlog-style video in which Graslie discusses her experience as a STEM focused

content creator and her lack of female peers on the site. *Skinning the Wolf* and *Gutting the Wolf* together show the preparation of a specimen to be accessioned into the collection. *Horns vs. Antlers* is a video describing the difference between horns and antlers in animal anatomy using objects from the collection. *Welcome to The Field Museum* was the first video filmed at the Field. It introduces the viewers to the museum's collections and plan for future content on the channel.

### **Methodology**

The methods used in this study consisted of a content analysis and statistical analysis. The content analysis looked at the characteristics of each institution's videos and how they align with the common practices of the platform. The statistical analysis examined the level of engagement the channels reached with their viewers based on the rating systems built into the hard infrastructure of the platform. The five most viewed videos from each channel were isolated for analysis for a total of fifteen videos. For each video its number of views, likes, dislikes, and comments were recorded. For each channel the total number of videos, views, and subscribers were recorded. This numerical data was recorded on April 26<sup>th</sup>, 2014 and therefore reflects the channels' activity up to this date. All numerical data was taken directly from YouTube and ChannelMeter was used to identify the channels' five most viewed videos.

### **Content Analysis Coding Rubrics**

The purpose of the content analysis is to describe the content's subject matter and alignment with the common practices of the platform. Emergent coding was used to analyze subject matter. Six themes were identified from the fifteen videos: behind the scenes, advertising and marketing, collections, performance, vlog or podcast, and

educational. Each video was assigned up to three codes. To assess how these channels have conformed to other popular, non-museum channels five common practices were compared to the content of each case study. The practices used in this analysis were taken from Dixie Clough's article "On the YouTube Bandwagon" from the American Alliance of Museums' publication (2012). The five practices included in this study are having a regular vlogger or host, employing a consistent style, soliciting responses from viewers, collaborating with other content creators, and following the culture of the platform. For the purposes of this study the channels are recognized as incorporating the practice if they can be seen in at least one of their top five videos.

**Table 2: Video Subject Matter Coding Rubric**

Code	Description	Examples from Data
<b>Behind the Scenes</b>	shows institutional activities, people, and spaces not normally available to the public	<i>It's a Gorilla! Baby Gorilla Update</i> : shows the care of an animal that is not on exhibit  <i>Skinning the Wolf</i> : shows the preparation of a specimen for the collection
<b>Advertising &amp; Marketing</b>	intended to advertise either a specific program or the institution as a whole	<i>Penguin Knocks Over Camera</i> : advertisement for a special event (March of the Penguins)
<b>Collections</b>	shows and/or describes objects from the collection	<i>Stradivari violin, "The Antonius"</i> : shows violin from the collection being used in a performance  <i>Welcome to The Field Museum</i> : shows and describes objects in the collection that will be featured on future episodes
<b>Performance</b>	recording of a live performance	<i>Masterpieces of Chinese Music: A Musical Performance by Music from China</i> : live performance from a local group to coincide with an exhibition

<b>Vlog/Podcast</b>	video that addresses a specific topic	<p><i>Where My Ladies At?:</i> host speaks about the misogyny she encounters on YouTube and the lack of women producing STEM content on YouTube</p> <p><i>Two Giraffe Calves born at the San Francisco Zoo:</i> describes two newborn giraffe calves and their conditions</p>
<b>Educational</b>	content that teaches a specific topic or actively incorporates teaching in the content	<p><i>Horns vs. Antlers:</i> teaches viewers about the anatomical differences between horns and antlers using objects from the collection</p> <p><i>Gutting the Wolf:</i> teaches viewers about animal anatomy and biology during the preparation of a specimen for the collection</p>

**Table 3: Common Practices Coding Rubric**

<b>Code</b>	<b>Description</b>	<b>Example from YouTube</b>
<b>Regular Vlogger/Host</b>	Person or group of people who regularly appear in the museum's videos; functions as the "face, voice and personality of the institution."	<i>SourceFed:</i> this channel is hosted by a team of comedians and actors reporting on news stories in a comedic and entertaining way.
<b>Consistent Style</b>	Having a regular format for videos either through graphics, type of footage, host, etc.	<i>VlogBrothers:</i> this channel is run by two brothers who make videos addressed to each other. Each begins with saying good morning to the other and stating the day of the week and ends with the sign off of telling the other that he will see him in the next video. Videos are usually filmed in the same location in the style of vlogging (speaking directly to the camera).
<b>Solicit Response from Viewers</b>	Interaction with viewers where the museum asks for a response as in asking for comments or a challenge for a future video.	<i>The Art Assignment:</i> each video on this channel interviews a contemporary artist who designs an art project. Viewers are encouraged to complete the project and post it on the internet, some of which are featured on the channel.

<p><b>Collaboration with another YouTuber</b></p>	<p>Working with another content creator to create a video</p>	<p><i>The Fine Brothers</i>: this channel produces a series of videos called “YouTubers React” in which popular content creators are filmed watching viral videos and are interviewed afterwards. The channel provides links to their channels at the end of the video.</p>
<p><b>Follows YouTube Culture</b></p>	<p>Adheres to the culture of “informality, humor, approachability, interactivity, and collaboration”</p>	<p><i>Stuff Mom Never Told You</i>: the host of this channel researches questions dealing with social and gender issues using academic literature and presents them in a colloquial and informal style. She also uses costumes, sketches, and humor to make her videos more entertaining and approachable.</p>

## CHAPTER 4: Results & Discussion

### Characteristics of Museum YouTube Content

This section describes the content produced by the three institutions by analyzing each channel's top five most viewed videos. Of the three, the Field Museum best aligns with the best practices and trends in YouTube video content.

**Content Subject Matter.** The most common theme in the content from these channels was featuring objects from their collections, followed by behind the scenes activities. All three channels featured collections in majority of their top five videos. This ranged from being solely about the collection (e.g. the San Francisco Zoo filming updates on specific animals) to teaching with the collection (e.g. the Field's video teaching the difference between horns and antlers with skulls from the collection). The Field Museum and the San Francisco Zoo also frequently featured a range of behind the scenes activities. The Zoo showed footage of zookeepers working with animals and had an in depth video on one of their programs at their institution. The Field chronicled the preparation and dissection of a specimen and a virtual walk through of their permanent exhibitions.<sup>1</sup>

The themes less frequently exhibited were education, vlog/podcast, advertising and marketing, and performance. The Metropolitan Museum was the only channel to feature performances in their top five videos. These were recordings of live concerts, one of which using an instrument from the collection. The other themes used only by one institution were advertising and marketing by the San Francisco Zoo and education

by the Field Museum. This Zoo’s channel had one video featuring a short clip of penguins followed by an announcement for an upcoming event. The Field has three videos with an educational theme including the video on animal anatomy and the videos on the preparation of a specimen which explain concepts of anatomy and biology during the dissection.

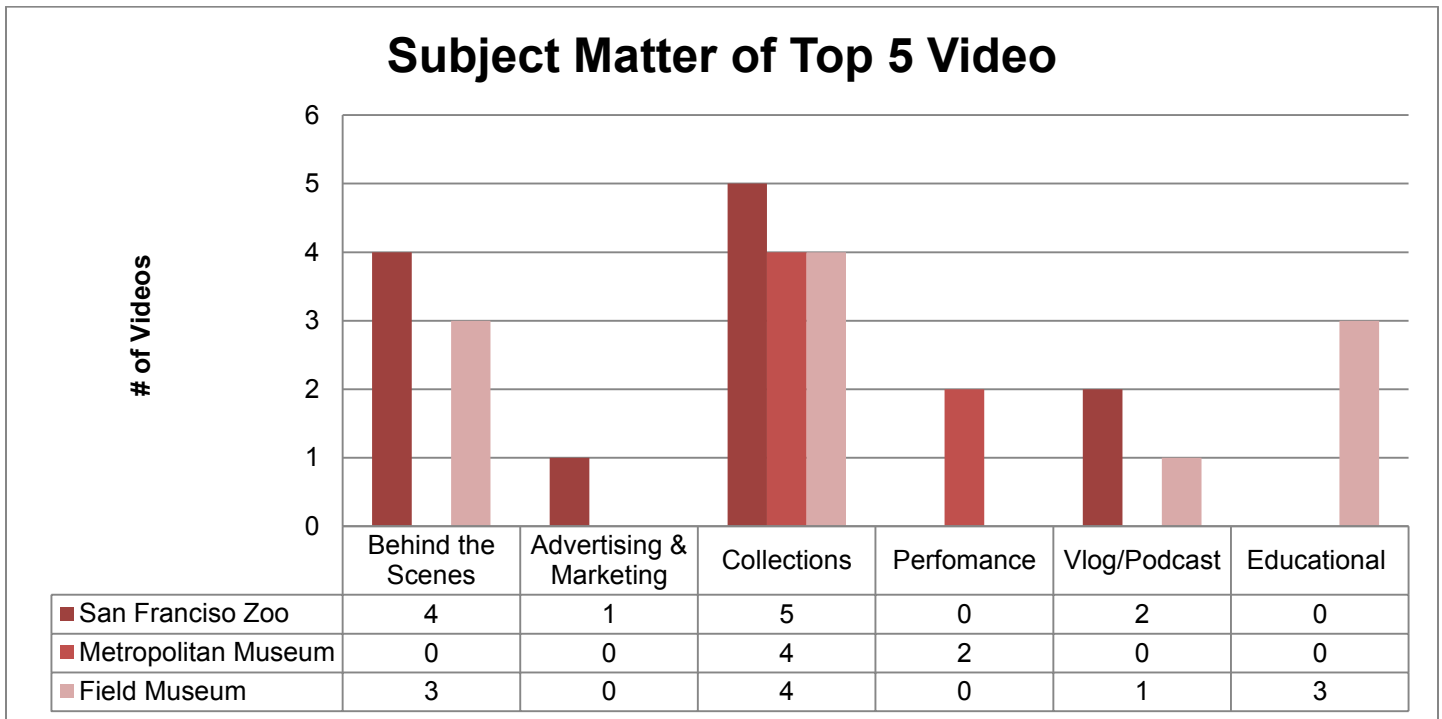


Figure 1: Subject matter of top five most viewed videos.

**Best Practices.** The Field Museum aligns most with YouTube best practices, followed by the San Francisco Zoo. Of the five practices included in the coding rubric the Field exhibits four. *The Brain Scoop* has a consistent host. Graslie appears in every video both by herself and with other Field employees. The channel has a regular format. Each video has a title sequence and credits at the end played with the channel’s theme song. The channel also has several jokes or memes that are in every episode: a taxidermied raccoon dubbed “Soon Raccoon” and the phrase “it still has brains on it”

are included in every video. These jokes exemplify the channel's informal and humorous tone that permeates YouTube culture. Graslie comes off as approachable and likeable in these videos. This channel was coded as collaborating with another YouTuber as Hank Green and Michael Aranda are listed in the credits. Aranda also appears in the video *Where My Ladies At?*.

**Table 4: Best Practices**

	San Francisco Zoo	Metropolitan Museum	Field Museum
<b>Regular Vlogger/Host</b>			X
<b>Consistent Style</b>	X		X
<b>Solicit Response from Viewers</b>			
<b>Collaboration with another YouTuber</b>			X
<b>Follows YouTube Culture</b>	X		X

The San Francisco Zoo has the second greatest number of best practices incorporated into their videos. The podcast videos in their top 5 have a standard introduction and title sequence. Similar to the Field, the people in these videos speak directly to the audience both on camera and in a voiceover, explaining what is shown in the footage and their actions in a colloquial manner with minimal jargon. This is in contrast to the Metropolitan Museum's videos. There is one video in this channel's top five that has employees talking in which the speakers address the interviewer. The one practice that was not integrated into any of the channels was soliciting a response from the viewers at the end of the video.

## **Museum YouTube Engagement Statistics**

Out of the three case studies, the Field has the most consistent and active audience, as well as the largest. This is based on an analysis of each institution's likes, dislikes, and comments on the top five most viewed videos and the number of subscribers and views for both the top five videos and overall channel.

**Views and Viewership.** The Field channel's audience is the most consistent of the three YouTube channels. In terms of the volume of traffic to these channels, the Metropolitan Museum has the most views and the highest average number of views for their top five videos. For all three channels, the average number of views for the top five videos is superficially inflated because of the abnormally high number of views their most viewed video has had. Each channel's most viewed video is significantly higher than their second most viewed video, most particularly with the Metropolitan which has over 4 million views for their top video, and also the San Francisco Zoo with over a million views. This is less extreme with the Field, with only 797,985 views for their top video.<sup>2</sup> When these outliers are removed the averages show a more accurate account of the most viewed videos. The averages of the top four without the most viewed video are almost the same for each channel.

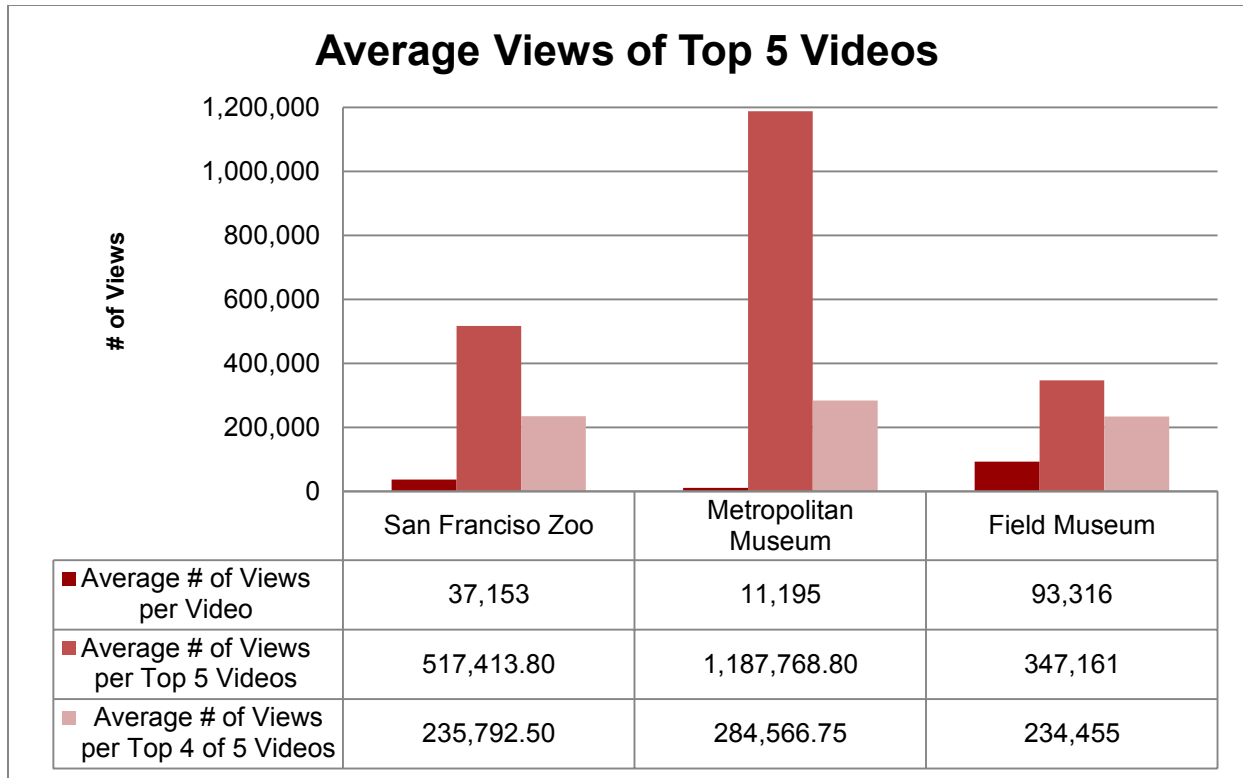


Figure 2: Average number of views per video, top five video, and top four without most viewed video.

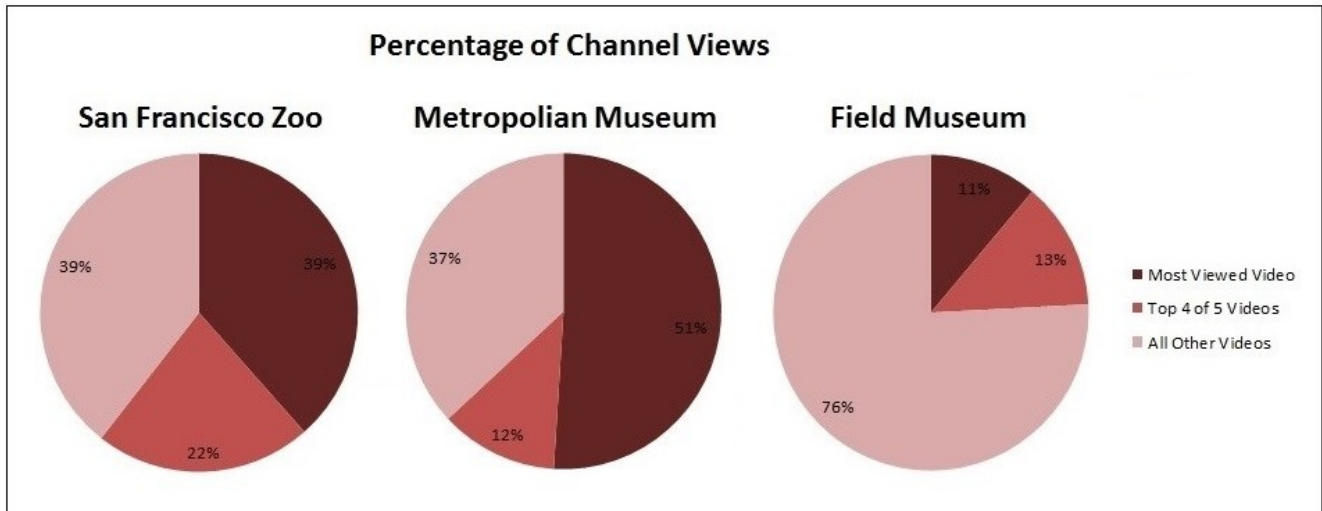
While the Field and the San Francisco Zoo’s channels have not generated the same volume of traffic as the Metropolitan Museum, they see a steadier stream of viewers for their content. This can be seen most clearly in the overall average number of views per video. The Field has the highest average at 93,316 views per video followed by the Zoo at 37,153 views per video. Both are significantly higher than the Metropolitan Museum’s average of 11,195 views per video. The Field has the greatest number of subscribers and significantly more than the other two channels: 168% more than the Metropolitan Museum and 196% more than the San Francisco Zoo. This is a substantial difference in the number of people who are regularly receiving the content put out by the Field when logging on the site as compared to the Metropolitan Museum and the San Francisco Zoo. In addition to this, the Field has the fastest growing

subscriber base of the three channels. Despite the fact that the San Francisco Zoo and Metropolitan Museum started six years earlier than the Field, the channel has more than ten times the subscribers than the two older channels combined and has averaged gaining over 400 new subscribers per day. In contrast the San Francisco Zoo averages less than one per day and the Metropolitan Museum about 7 per day.

**Table 5: Growth in Channel Subscribers**

	San Francisco Zoo	Metropolitan Museum	Field Museum
<b>Total Subscribers</b>	2,118	19,048	215,657
<b>Average # of new subscribers per day</b>	0.75 per day	7.19 per day	429.23 per day
<b>% growth in subscribers per day</b>	0.04%	0.04%	0.2%

The presence of a consistent audience can also be seen in the breakdown of what percentage of views is generated by which videos. Both the Metropolitan Museum and the San Francisco Zoo received over half their channel views from their top five most viewed videos. In the case of the Metropolitan Museum 51% of the channel's overall views came from their most viewed video. This shows that the majority of the traffic and views for these channels are coming from only a small number of videos, meaning a large amount of people are sharing a watching these videos once but not watching the rest of the channel's content. In contrast the Field Museum received almost a quarter of their overall views from the top five most viewed videos with only 11% coming from their most viewed video. This reflects a smaller but much more loyal audience that watches larger volume of content created by the museum.



*Figure 3: Percentage of channel views from most viewed video, top four of five videos, and all other videos.*

**Viewer Engagement and Responses.** In addition to having the largest subscriber base and most consistent viewership the Field also displays the highest rate of engagement based on the number of likes, dislikes, and comments. The top five most viewed videos on the Field Museum’s channel have the greatest number of comments, the greatest number of likes, and the highest ratio of likes to dislikes. When comparing the average number of likes of the top five videos, the Field had the most with over 42,000 followed by the Metropolitan Museum with 3,307. The San Francisco Zoo had the lowest average number of likes with 251 and also dislikes with just 17.8 (this is to be expected as these videos had a lower number of views). This indicates Field’s content is the most successful at engaging with its viewers; they are invested and interested enough to “like” the videos. The Field Museum’s videos also had a lower number of dislikes than the Metropolitan Museum. The ratio of likes to dislikes show a clearer picture of how viewers are responding to each channel’s content. For every dislike one of the Field’s most viewed videos received they had 180 likes. The San Francisco Zoo had the second highest ratio with 14 likes for every dislike, followed by the Metropolitan

Museum with 6.5 likes for every dislike. This indicates that the Field and the Zoo’s viewers tended to react positively to the content rather than not.

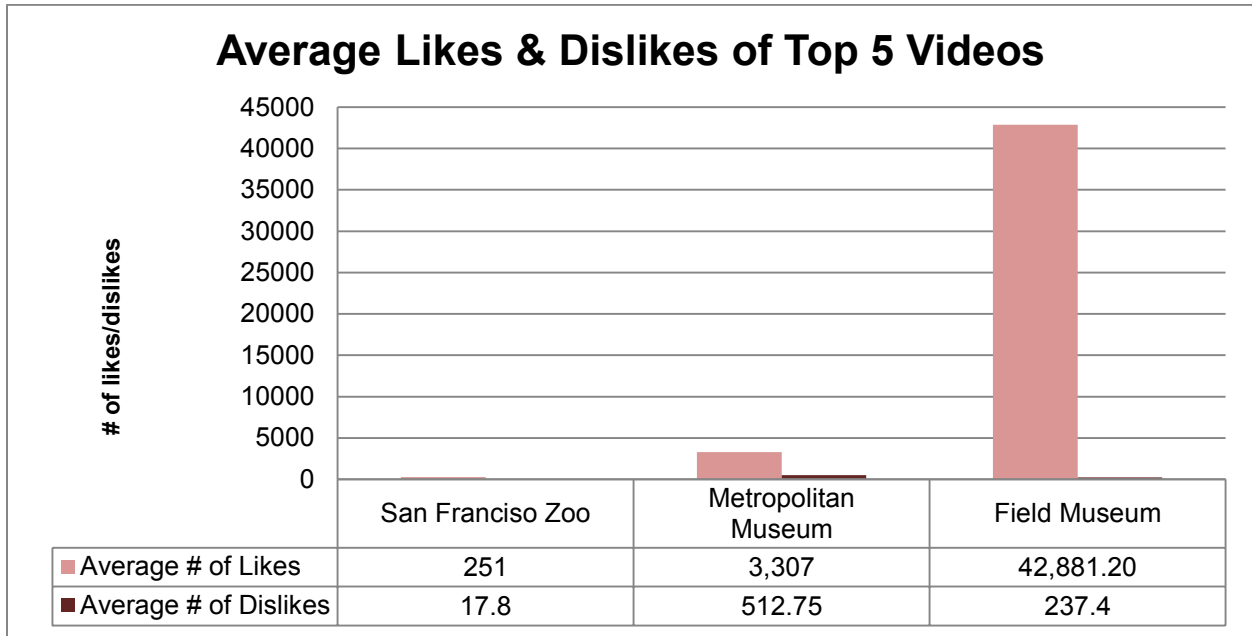
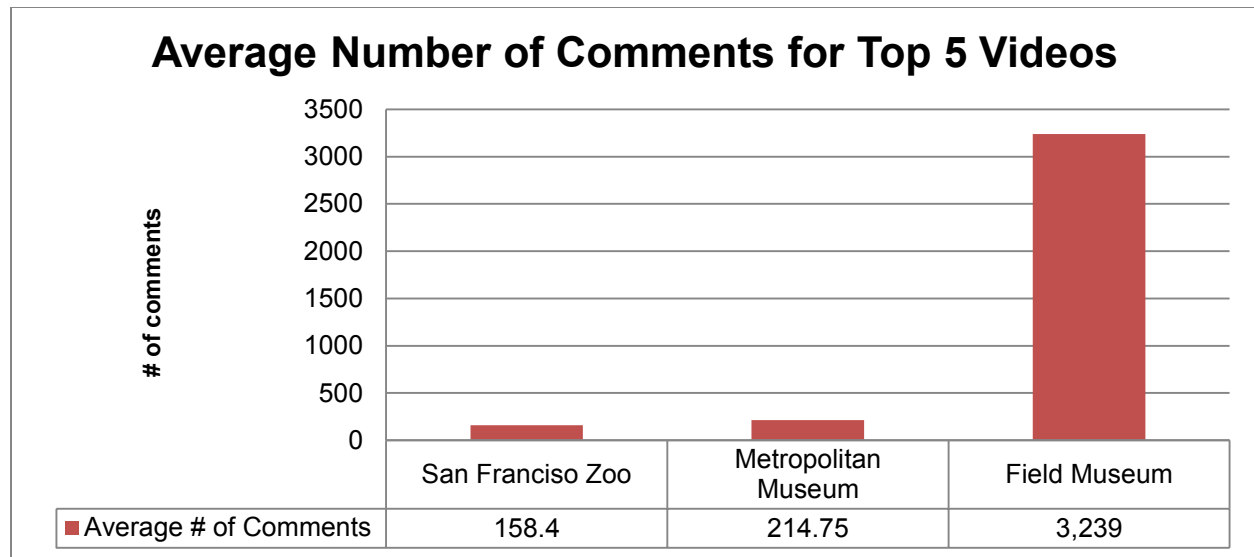


Figure 4: Average number of likes and dislikes per top five video.

Comments are also an indicator of viewer engagement. Once again there was a significant gap between the average number of comments for the Field Museum’s top five videos compared to both the Metropolitan Museum and San Francisco Zoo. The Field had 15 times the more than the Metropolitan Museum and 20 times more than the San Francisco Zoo. This once again suggests that the Field’s content was more successful at engaging with its online audience.



*Figure 5: Average number of comments per top five video.*

## Discussion

The findings of this study show that the three case studies are engaging with their audiences in different ways. The Metropolitan Museum has taken a more traditional approach to the platform uploading videos such as recordings of live events and interviews with staff. This channel has produced the highest volume of traffic, likely because it is such a well-known institution, but has not engaged with their viewers to the same degree as the other channels in terms of likes, dislikes, comments, and subscriptions. If the goal is to attract and retain these viewers or to generate a response from them, which are the objectives of most non-museum YouTube channels, then the Metropolitan Museum has not been very effective. This channel has one of the slowest growing subscriber base and the smallest average number of views per video.

The San Francisco Zoo has taken a more expository approach describing and giving information on specific animals and programs available at the Zoo. This channel has also engaged in traditional practices with its video advertising their March of the

Penguins event. Publishing updates on the status of animals has made some viewers invested enough to subscribe to the channel. Animal videos are particularly popular on YouTube and most likely at least partially responsible for this channel's views. The San Francisco Zoo has adapted to the culture of the platform more than the Metropolitan Museum in the informal way their videos speak to their viewers. While viewers seem to enjoy this channel's content according to their rate of likes versus dislikes, this channel has not been as effective in retaining viewers through subscriptions, though it does average more views per video than the Metropolitan Museum. It also has the lowest average number of likes and comments.

The Field Museum is the institution that best exemplifies the idea of moving museum activities into the digital space out of the three in this study. The channel focuses on interpreting its collections and teaching STEM concepts through its YouTube channel, activities articulated in the museum's mission statement. Furthermore it is the channel that most aligns with Clough's best practices. The channel was launched and developed in collaboration with two established content creators. The videos have consistency and the tone of the videos is light and humorous through which Graslie is able to connect with the viewers. This channel is also the most successful at engaging with its audience according to the platform's key performance indicators. The channel has the largest and most rapidly growing digital audience of the three channels, as well as the highest level of engagement according to likes, dislikes, views, and comments. It has the largest average number of comments and likes, the highest ratio of likes to dislikes, and the highest average number of views per video. The numbers suggest that

this type of content presented with Clough's suggested practices it the most successful at engaging with the users of this platform.

### Endnotes

<sup>1</sup> The two videos that show the dissection, *Skinning the Wolf* and *Gutting the Wolf*, were not filmed at the Field. These episodes were filmed before the channel moved to the Field Museum; however, since the channel has operated out of this institution there have been similar videos showing the preparation and dissection of specimens in the Field's collection.

<sup>2</sup> The Field's most viewed video, *Where My Ladies At?*, received a higher amount of attention because of the topic the video addresses. In it Graslie speaks about the misogynistic comments she receives and the lack of female YouTubers creating content about the STEM fields. This video sparked a conversation with many other YouTubers as well as gaining the attention of mainstream media, and was therefore shared more frequently than the channel's other videos. In the case of the Metropolitan Museum and the San Francisco Zoo, their most viewed videos likely received a higher amount of attention for more traditional reasons. The Zoo's video about a baby gorilla is very appropriate for the platform and the Metropolitan Museum's video about Roentgens' intricate secretary desk as a luxurious oddity likely drives viewers to share it with other.

## CHAPTER 5: Conclusion

The purpose of this study was to explore and describe museums' content on YouTube and how it is being used to engage with their audiences. It poses the questions what are the characteristics of this content, how do they align with the practices developed by the platform's users, and to what extent it is engaging with the users on the site. Using the channels of the San Francisco Zoo, the Metropolitan Museum of Art, and the Field Museum of Natural History as case studies, this study analyzes a sample of museum YouTube videos and how they were received based on the hard infrastructure feedback system built into the platform.

The findings suggest that content with similarities to more popular channels created by professional YouTubers or vloggers is more likely to generate a larger and more engaged audience. There is also the possibility that museums could diversify their audience by interacting with new demographic groups and people who are not in a position to visit the physical museum. The practical benefits of building these larger audiences present many opportunities for museums. A large audience that is invested in the museum creates a larger donor pool with a possibility of crowdfunding various projects. It could also drive more visitors to exhibitions and programs, as well as recruit more volunteers.

There are limitations to this study. The small number of case studies prevents the results from being generalizable. The methodology only takes into account the channels' statistics and there isn't an official set of best practices to compare content to. Other methods could better evaluate audience engagement with YouTube such as a analysis of comments that incorporates their tone, opinions, and conversations to better

understand the audience's reaction to the content and the nature of the dialogue it has fostered. Surveys or interviews of viewers could also be used to better understand how successful the content is at engaging with audience and the effect it is having on the rest of the museum. This study also doesn't include other types of museum content on the platform. Other museum uses of YouTube include projects such as the Brooklyn Museum's visitor-generated content that they incorporated into several of their exhibitions. The Guggenheim partnered with YouTube to host a video contest with an awards ceremony that was livestreamed on the platform. Inclusion of these types of content could have an effect our knowledge about this topic.

**Future Research.** More research on this topic and YouTube in general is needed. Social media and the internet in general is an ephemeral, ever-changing phenomenon making it difficult to maintain our understanding of it. There isn't a strong body of literature about YouTube culture or its video content. This lack of a foundation makes it difficult to build a definitive methodology for museums and academics to conduct their own research; however, if the field invests the time and resources necessary to understand the platform and its viewers better museums could build larger, actively engaged audiences that could be leveraged to their institution's benefit. This research may encourage museums to take their YouTube channels more seriously and consider the possibilities this website and other social media platforms have to offer.

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### Appendix: Video Information

Video Title	Description	Date Uploaded	Length	# of View	# of Likes	# of Dislikes	# of Comments
<b>San Francisco Zoo</b>							
<i>It's a Gorilla! Baby Gorilla Update</i>	Video of infant gorilla being cared for while off exhibit	12/18/2008	1:05	1643899	393	490	18
<i>Two Giraffe Calves born at the San Francisco Zoo</i>	Video about two giraffe calves born at the Zoo including footage of one of the births	8/5/2006	2:50	282528	112	226	13
<i>Penguin Knocks Over Camera</i>	Footage of a group of penguins followed by an advertisement for an upcoming event	8/3/2010	0:19	242359	126	239	8
<i>Wildlife Theater</i>	Behind the scenes footage of a program offered at the Zoo including interviews with staff	7/24/2007	4:16	237914	41	83	38
<i>Baby Gorilla &amp; New Mom!</i>	Video about introducing infant gorilla to surrogate mother	5/4/2009	2:16	180,369	120	217	12

Video Title	Description	Date Uploaded	Length	# of View	# of Likes	# of Dislikes	# of Comments
<b>Metropolitan Museum of Art</b>							
<i>The Roentgens' Berlin Secretary Cabinet</i>	Footage showing a complex object and its many details from one of the museum's exhibits	10/25/2012	2:20	4800577	DISABLED	9620	1835
<i>Masterpieces of Chinese Music: A Musical Performance by Music from China</i>	Recording of a live performance organized in conjunction with an exhibit	1/19/2010	1:13:49	688630	428	2913	126
<i>Stradivari violin, "The Antonius," played by Eric Grossman - Part 1 of 2</i>	Recording of a live performance in which the performer plays an instrument from the collection	12/8/2008	8:16	250031	329	583	58
<i>Abraham Roentgen's Writing Desk</i>	Footage showing a complex object and its many details from one of the museum's exhibits	10/25/2012	2:07	112415	40	DISABLED	DISABLED
<i>The Harvesters</i>	Interview with several of the museum's staff about one of the objects in the museum's collections that was on exhibit at the time	7/19/2010	5:25	87191	62	112	32

Video Title	Description	Date Uploaded	Length	# of View	# of Likes	# of Dislikes	# of Comments
<b>Field Museum of Natural History</b>							
<i>Where My Ladies At?</i>	Vlog style video about the host's receipt of misogynistic comments and her lack of female peers in other STEM field YouTube channels	11/27/2013	6:00	797985	5445	19612	394
<i>Skinning the Wolf</i>	First part of the preparation of a specimen to be added to the permanent collection	2/5/2013	14:53	358747	4674	9940	640
<i>Gutting the Wolf</i>	Second part of the preparation of a specimen to be added to the permanent collection	2/12/2013	14:39	236646	3562	6832	92
<i>Horns vs. Antlers</i>	Educational video describing the difference between horns and antlers using specimens from the collection	3/18/2013	1:56	171536	1062	171536	45
<i>Welcome to The Field Museum</i>	Video introducing the Field Museum, its collections, and exhibitions to the audience after the channel was brought to the museum	8/21/2013	2:59	170891	1452	6486	16