

# **The Spread of Internet Memes**

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## **Abstract**

Internet memes are an effective mode of spreading information today. We interviewed twelve individuals and gathered statistical information from an online survey about people's experiences with Internet memes, which led us to an understanding of how Internet memes evolve and circulate, as well as to what makes an Internet meme "popular". This knowledge gave us the ability to generate future perspectives for the dissemination of information online. We precede these studies with discussing categories of Internet memes and what makes an Internet meme "popular" or "viral".

## **Introduction**

The term "meme" is Greek in its origin, meaning to imitate, or to copy (Oxford, 2010). Defined by Richard Dawkins in 1976, a meme can be described as "tunes, ideas, catch-phrase, clothes fashions, ways of making pots, or of building arches" that are spread from person to person, such as how "[an] idea catches on, it can be said to propagate itself, spreading from to brain to brain" (Dawkins, 1989). Andrew Chesterman takes this idea to the next level in his article, *Memes of Translation: The Spread of Ideas in Translation Theory*, by linking the spread of memes to sociobiology: "...ideas spread, replicate themselves, like genes... [they] spread and change as they are translated, just as biological evolution involves mutations" (Chesterman, 1997). This is especially true for Internet memes.

According to Ienco et al.'s *The Meme Ranking Problem*, an *Internet* meme is defined as any type of information (in the form of video, image, text, etc) that is propagated through the Internet. For our research we concentrated on popular, or viral, Internet memes, which we define

to be well-known comics, videos, or images that are spread throughout the Internet through imitation. For example, Rebecca Black's "Friday" music video is a meme because it started as a viral video and now has parodies and user-generated comics referencing it. Internet memes go "viral" when they evolve and spread rapidly through many information sharing websites (Facebook, YouTube, Tumblr, etc). In this paper where we refer to "memes" or "information", we mean viral Internet memes unless otherwise noted.

In Marshall's *The Internet and Memetics*, he discusses his notion that the main purpose of the Internet is to foster communication. He relates this to the concept of memes by saying, "In this role [supporting communication through the Internet], and especially as a carrier of e-mail messages, it serves to disperse memes, spreading them across the network rapidly and accurately" (Marshall, 1998). In 1998, when this article was written, Marshall observed a transition occurring. The primary use of the Internet was changing from email to the World Wide Web, which led to more emphasis on the storage of interrelated documents, as opposed to just transporting messages. He viewed this shift as a way to ensure a more permanent, enduring existence of memes and to connect ones that were similar and related. "...the Internet is, for its users, an ideal medium for the spread, replication and storage of memes" (Marshall, 1998). Related to this, Marshall explained how using the Internet to share memes allows them to appear simultaneously in various parts of the world without being constricted by geographic or cultural boundaries.

We knew that the properties of the Internet allowed for easy dispersal, but we wanted to go more in-depth to see how and where exactly people were creating, finding and sharing these memes. Marshall was correct in the longevity of memes, the Internet's role in easy dispersal and ability to bypass geographic and cultural limitations. That is why memes have so much potential

– to influence, to inform, to educate, etc. For now, most of the memes we are looking at were created with the purpose of entertaining viewers. However, we have also started to see memes becoming slightly more political (like in the Occupy movement), which is another reason we found this topic so important. Learning about the dispersal patterns and reach that memes can have might be very beneficial in the near future.

In addition to political potential, memes could also be incorporated into various marketing campaigns. In his article, *Modest Web Site is Behind a Bevy of Memes*, Jamin Brophy-Warren defines a meme as, "...a unit of cultural information -- an idea, a practice, a phrase, or an online video --that's passed on virally" (Brophy-Warren, 2008). An example of a brand that has been used in memes is Old Spice. The commercials they made containing Isaiah Mustafa as "The Old Spice Guy" was recently turned into a meme and spread via various meme-sharing sites such as Quickmeme.com.

Scott Atran sums up the importance of studying memes in his article, *The Trouble With Memes: Inference Versus Imitation in Cultural Creation*, by stating, "With Internet and globalization of information transmission, the evolutionary rate of memetic change appears to be once again on the verge of exponential takeoff, with unforeseeable evolutionary consequences" (Atran, 2001). For this and aforementioned reasons, the widespread reach of memes in combination with their outstanding future potential makes meme creation, finding and dispersal patterns a valuable research topic.

## **Research Questions**

For our research we asked the following questions: Why are Internet memes popular? What types of Internet memes are most popular, and why? We wanted to observe the effective properties of specific online communities to see which promote the sharing of memes, how

so, and what types of memes are shared most often. Knowing the most effective manner of dispersing information helps to better online communities because the communities whose memes are best known or are most widespread are more connected to the world and to each other.

## **Methods**

The first step we took toward our research goal required getting a better understanding of what memes are around today. We chose to focus on four different websites: Facebook, YouTube, Tumblr, and reddit. Each group member chose one site to probe individually for the presence of memes, as well as collectively observing Facebook. This decision was made because we each had our own experience with the individual communities, but all shared experience with Facebook. We chose to focus on these four websites because of our prior experiences and knowledge of them being popular and easily accessible resources for viewing, sharing, and browsing Internet memes. On each website we looked for the most viewed or shared types of Internet memes in order to categorize the types that we later used in our online questionnaire.

In order to understand people's experiences with Internet memes, we created an online questionnaire and a set of questions for face-to-face interviews (see appendix).

We chose to do questionnaires to get mass results. We asked questions concerning what communities the participants use and what memes they are aware of making sure to reach a common ground on what a meme is as we explained above in our introduction. We also showed examples of memes to find out a few specifics on what memes are most popular. Here we define meme "popularity" as a meme that is well-known and has a high rate of recognition around the Internet. Because some Internet memes contain perverse, controversial, or inappropriate content, we made sure to only show memes without such content.

The results of the online survey were recorded anonymously because it was unnecessary to ask participants for their identity. For precautions, we made started the questionnaire with a consent form illustrating what information we planned to gather and how we will use the answers we receive, allowing the individual to choose whether they accept and want to take the questionnaire, or do not accept and will therefore be taken to the end. After creating a questionnaire on Cornell Qualtrics, we posted it online to the communities we are researching and asked people both in person and online to take the questionnaire. We gathered participants by posting the URL to our questionnaire on the four online communities mentioned above (Facebook, YouTube, Tumblr, and reddit) in order to get as many widespread results as possible.

In November 2011, twelve interviews were conducted for in-depth details on Internet meme experiences. Instead of asking simpler quantitative questions as was done in the online questionnaire, we asked people where, when, and why they spread Internet memes, as well as asked them how they defined Internet memes and what they know of them. Face-to-face interviews gave us the basics of the expanded data that we needed in order to accompany the quantitative questionnaires. Although our research questions rely more on the quantitative results from the online questionnaire, we decided that face-to-face interviews would allow for better recognition of what we are looking at in terms of Internet meme awareness. Participants were those we knew who use online communities such as the ones we looked at, so as to receive better responses to our questions. Before beginning each interview we gave consent forms to each participant to make sure they understood that their answers are confidential and they may feel free to say as much or as little about each question as they wished.

We analyzed our questionnaire data by compiling percentages of which meme categories were most well-known (popular, viral) and viewing which social networks were used most

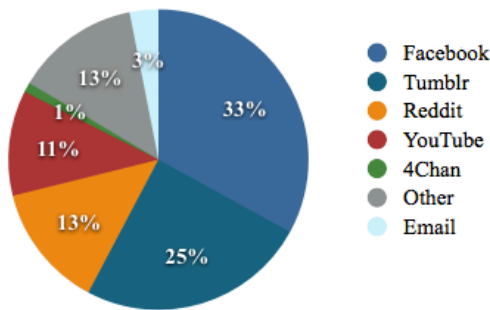
commonly for viewing or sharing memes, and where people found the most memes. Finding out which memes are most popular would directly answer one of our research questions, while finding where they were most popular and examining which memes are popular (what type of memes they are, where they originated from) would help answer why they are popular. The responses to our face-to-face interviews were analyzed based on how much the participant knew about memes, to narrow down what made memes popular in general (asking the participant's definition of a meme, asking which memes they knew and which were their favorites).

## Results

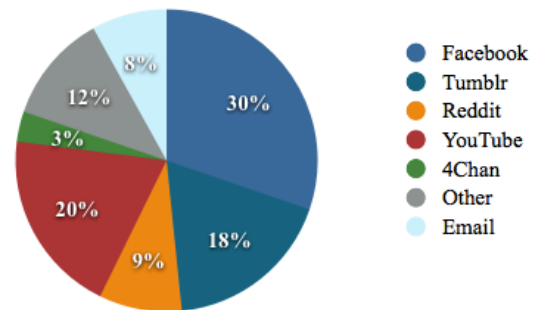
The results from observing four online communities gave us a selection of 28 popular meme categories, including but not limited to *Advice Animals*, *Rebecca Black*, *Double Rainbow*, and *Ragetoons*. Some of these were memes specific to their website of origin. For example, the meme *Nobody's perf-* was created by users of Tumblr, which had limited its online presence to that one community.

From the online survey, we learned the popularity of different Internet memes in relationship to the usage of web applications and users' levels of participation. The general conclusions from about 100 participants was that Facebook was the most commonly used web application, being accessed daily. YouTube followed in popularity of usage and access, but we found that people contributed less content on this site. Tumblr was third in terms of usage and access, but had a high rate of daily contribution in terms of content sharing. The implications of these findings are addressed further in the Discussions section. The visual representation for where people come across Internet memes can be seen in the graph below on the left, followed by a graph on the right representing the communities where participants find the most of their memes.

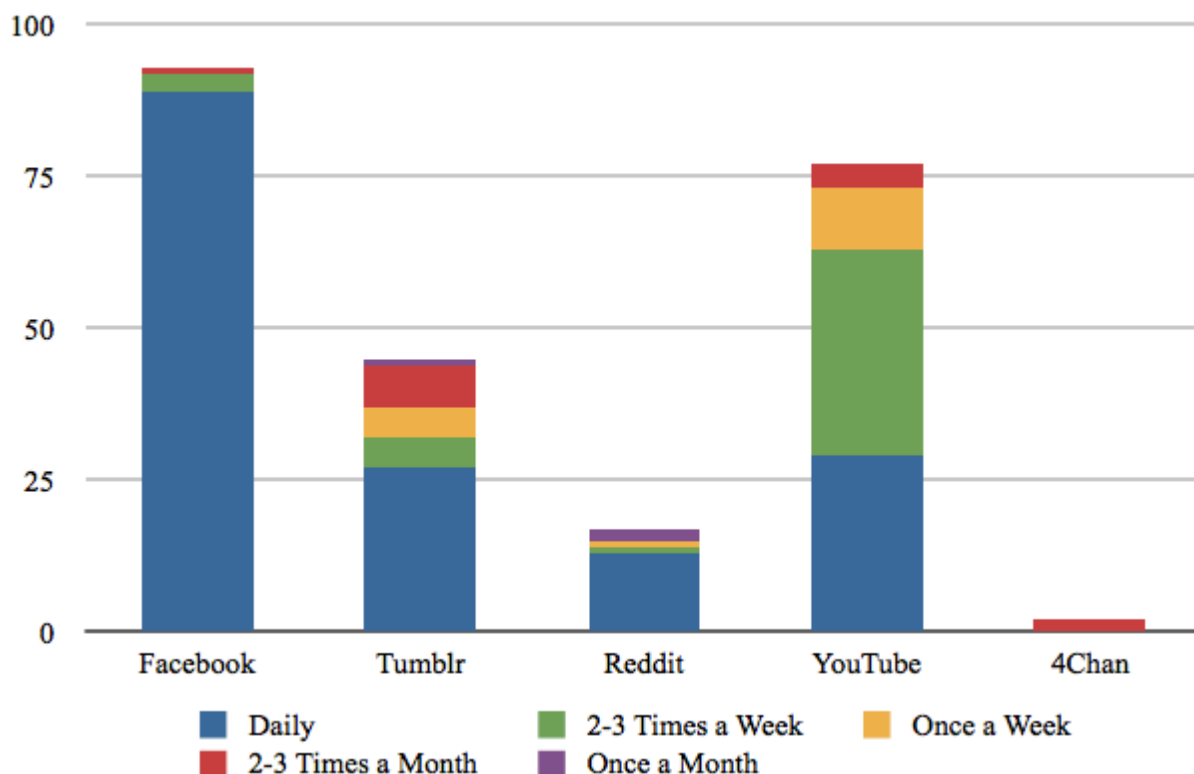
**Where do people find memes the most online?**



**Where do people come across Internet memes?**



**How often do users access select web applications?**



Using the 28 examples of meme categories found in our initial research, the online survey asked participants whether or not they recognized these various memes (see appendix graphic of results). The four examples with highest recognition originated from YouTube videos. However, cross examining these results with that of where users find Internet memes, we found that even though most participants had greater awareness for memes with YouTube origin, they

found the memes on either Facebook or Tumblr. A low percentage of these users found their memes on YouTube. The same can explain the results of meme examples such as *Pedobear*, which originated in the 4chan forums, but only three participants frequented that website. These results draw attention toward our second research goal, which was to figure out which memes are most popular, and why.

The face-to-face interview gave us several results. All participants had heard of Internet memes and had a decent idea of pinpointing exactly what Internet memes are. When asked for a definition of Internet memes, we had answers ranging from simplistic responses like “something that gets spread around very, very quickly and that most people tend to accept into the Internet culture very quickly” and “something you see everywhere on the Internet”, to more in-depth definitions like “in cognitive psychology, a meme is a piece of information that travels through generations which is kind of like a cell line but in modern days memes are pictures or phrases that people frequently associate with the same thing, like *Asian Father*, and everyone knows the underlying connotation.” One response did get very close to our definition: “An idea spread over the Internet that could either spread rapidly or slowly and could change over time.” We found that people who spent longer hours browsing the Internet per day knew a more accurate definition of what we define to be an Internet meme. We also asked participants why and where they shared memes, and most responded with similar answers to the online questionnaires, though all participants went further to explain they shared memes either because they were funny, or because they knew somebody else who would appreciate it (generally via email, Facebook, or Tumblr). These results help to answer our research question on why memes are popular.

All but one person who we interviewed had a list of memes that they knew, and during



our interviews some of them brought up new memes that we had not thought of to ask people about during the online questionnaire, such as a meme known as *Over 9000*. The one person who did not have a list of memes that she knew about only knew one meme, which was *Rebecca Black*, a response that emphasized the accuracy of our online questionnaire's popular-meme results.

## **Discussion**

Our first research question asked: Why are memes popular? From the findings of our research, we found from our face-to-face interviews that most people shared memes whenever they found one that was funny or one that they knew a specific person or group of people in particular would enjoy. This suggests that memes are generally interesting enough to be shared and passed on from person to person. In our observations of memes, we found most of the popular Internet memes changed from one medium to the next, from a video, to a comic, and to further variations of images over time. The more an Internet meme has evolved over time, the more popular it is, and the more people appear to know of it. Therefore memes appear to be popular because they are short and fun pieces of information that are easy to share, and the better-known a meme is, the easier it is to share, because it's more likely that an individual who views the meme will know somebody else who would understand and appreciate it.

The second research question we asked was: Which memes are most popular, and why? From our online questionnaire we found that the most popular memes, as aforementioned, were all originally YouTube videos: Rebecca Black, NyanCat, Rick Roll, and Antoine Dodson. Tied in fifth place with a non-video meme was the Old Spice Guy, who was also a video meme although he became popularized by his spot as a television commercial before hitting the Internet. Because these top five well-known viral Internet memes are all videos, and the

top four started becoming rapidly widespread off YouTube, we can infer that the most popular memes begin as videos. YouTube was found to be used by almost 80% of those who took our online questionnaires, and everyone who we interviewed face-to-face knew what it was. The implications we can draw from this information is that YouTube videos are more interesting to watch and easily spread.

YouTube allows for the embedding of videos on other websites, and in 2008, YouTube announced on its blog that almost half of all video views were coming from these embedded videos. This emphasizes the importance of Internet memes being spread from websites that are not their point of origin, which leads into the results we gathered for how/why these Internet memes became so popular. The results, as described above, showed that Facebook and Tumblr were the most commonly used online communities for sharing and finding memes. We infer from this information that they are the most effective means of sharing and finding memes, and that they have the lowest cost: it is easy to follow friends or favorite topics on both Facebook and Tumblr, unlike on YouTube, where one can only watch videos or follow your favorite channels who make videos, which are higher-cost memes. On Facebook and Tumblr, one can make or share anything: video clips, music clips, images, comics, etc. YouTube videos have an evidently strong impact on the types of memes that are shared, whether the video itself is shared or memes based on the video are created.

Our research provided data that successfully answered our research questions. Our research has the capacity of implicating video clips as the preferred means of viewing interesting information. This may be correlated with television, movies, and other types of video footage, to be the best sources for interesting, meme-worthy information, over that of text or plain music files such as listening to a CD or reading the paper, which is something that we believe we

helped promote to the world through this project.

## **Conclusion**

At the beginning of this study, we hypothesized that most people would know of Internet memes, but we did not know why memes were popular, which ones were popular, and why those were so successful. We wanted to learn more of the spread of information today in online mediums such as Facebook, YouTube, Tumblr, and reddit. We found that many people did know what memes were, and the four most popular, or viral, memes (which are the memes that are most well-known, results which we took from our survey) were originally videos found on YouTube. This suggests that the most popular types of memes are videos, which suggests that once the video is up online, it is easy to watch and develop more memes (in the form of text, comics, and so on) to spread on other websites. The most common places to find memes were discovered to be Facebook and Tumblr, which suggests that they are much lower-cost sharing networks than YouTube.

Ideally our online questionnaire would have been circulated beyond those who saw the URL posted on the four websites, where we gathered about 100 responses. It would also been more effective if we showed about a hundred memes that we found, or even more memes, on the online questionnaire. However, we wanted to make the questionnaire as quick as possible while still maintaining reasonable results, so that people had less reasons to skip over it.

For future research with the results of our study, we could go on to examine the browsing properties in YouTube to see which memes spread most there and why. We could ask: what gets people to keep viewing videos? What type of person starts at one video and then clicks on suggested videos for hours? What types of videos are most popular, and why? We could examine video lengths, quality, and topics to narrow down exactly why YouTube videos are the most

well-known types of Internet memes.

The data we collected during this study has potential worth in further exploring how information both on and offline can be spread in today's society, spreading news, politics, and other media, to examine how most people may get their information in the future. This may have design implications for online communities to promote user sharing and content circulation.

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## Appendix

### Online Questionnaire

1. How old are you?
  - a. Under 18
  - b. 18-22
  - c. 23-30
  - d. Older than 30
2. What is your gender?
  - a. Male
  - b. Female
  - c. I prefer not to disclose
3. What social web applications do you use? [Choose multiple if required]  
Facebook  
Tumblr  
Reddit  
YouTube  
4chan  
Other:
  4. How often do you access [selected social application]?
    - a. Less than Once a Month
    - b. Once a Month
    - c. 2-3 Times a Month
    - d. Once a Week
    - e. 2-3 Times a Week
    - f. Daily
  5. How often do you post on [selected web application]?
    - a. Never
    - b. Less than Once a Month
    - c. 2-3 Times a Month
    - d. Once a Week
    - e. 2-3 Times a Week
    - f. Daily
  6. Wikipedia definition of a meme:

"An Internet meme is an idea that is propagated through the World Wide Web. The idea may take the form of a hyperlink, video, picture, website, hashtag, or just a word or phrase, such as intentionally misspelling the word 'more' as 'moar' or 'the' as 'teh'. The meme may spread from person to person via social networks, blogs, direct email, news sources, or other web-based services.

An Internet meme may stay the same or may evolve over time, by chance or through commentary, imitations, parody, or by incorporating news accounts about itself. Internet memes can evolve and spread extremely rapidly, sometimes reaching world-wide popularity and vanishing within a few days."

For our research purposes, we have defined memes to be comics, videos, or images that are spread throughout the Internet through imitation. For example, Rebecca

Black's "Friday" is a meme because it started as a viral video, has video parodies, and user generated comics and images made about it.

Do you know what a meme is?

a. Yes

b. No

7. Where do you come across memes? [Multiple Selection]

Facebook

Tumblr

Reddit

YouTube

4chan

Email

Other

8. Where do you see memes the most?

a. Facebook

b. Tumblr

c. Reddit

d. YouTube

e. 4chan

f. Email

g. Other:

9. Have you made something for a meme? Such as making a lolcat, imitation of a viral video, a comic like a "RageToon", or a photo with text on it?

a. Yes

b. No

10. Have you ever shared a meme, such as finding a Lolcat on Reddit and sharing it with your friends on Facebook?

a. Yes

b. No

11. Are you familiar with these memes? Select the type of memes you are familiar with or have seen before:

James Van Der Memes

RageToons

PokeDads

Deal With It

Haters Gonna Hate

Advice Animals

Chemistry Cat

Pedobear

Double Rainbow

Charlie the Unicorn

Friday by Rebecca Black

Forever Alone

Come at Me Bro

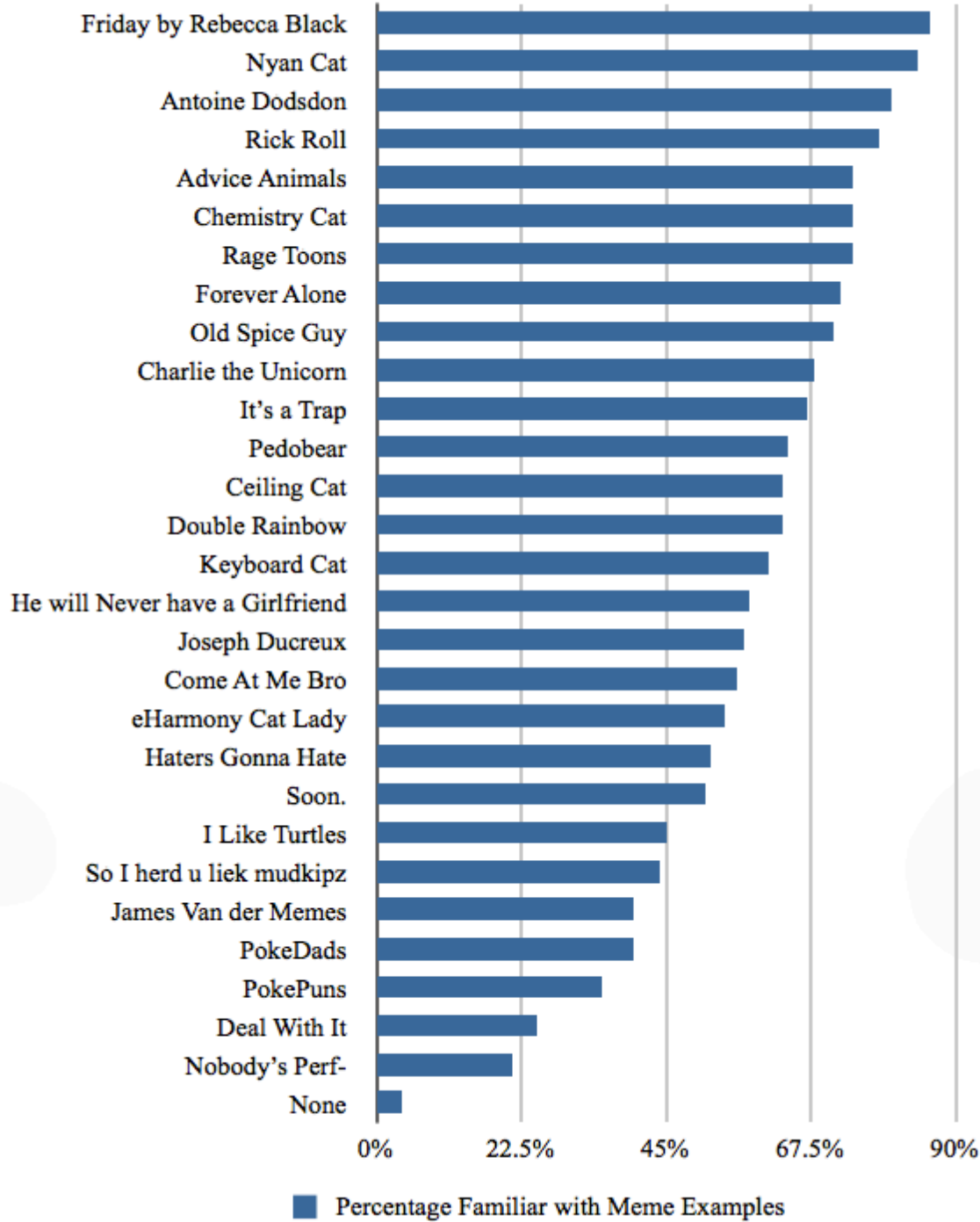
PokePuns

Nobody's Perf-

Joseph Ducreux  
So I herd u liek mudkipz  
Ceiling Cat  
He will Never have a Girlfriend  
Soon.  
Rick Roll  
Old Spice Guy  
I Like Turtles  
Keyboard Cat  
Nyan Cat  
Antoine Dodson  
eHarmony Cat Lady  
It's a Trap  
I have never seen these images or videos before



### Are you familiar with these types of Internet Memes?



1. How much time do you spend surfing the internet on average per day?
2. What social web applications (ie Facebook, tumblr, reddit, youtube, etc) do you use?  
How often do you use each of these?
3. What is your definition of a meme?
4. How often do you re-post things you have seen?
  - a. Do you ever re-post things to a website that is not the website you found the meme on?
  - b. What places do you re-post things from?
  - c. Where do you re-post to?
5. Why do you share memes? (ie for friends, because they're funny, to build up reputation for posting good memes & get for followers on tumblr, for yourself, to save them and remember you had posted them on tumblr)
6. What is your preferred means of sharing memes to friends?
7. What memes do you know off the top of your head? Where have you seen them? Which are your favorites?
8. Do you ever post original content on these websites? On which sites? What do you post? Why? How often? How many people comment or re-post your original content? Have you ever created a meme? Was it original, or was it based off another type of meme you saw?
9. Where do you see the most internet memes? Do you think where you see them is different from where they originate from (in other words, do you think that the meme you saw originated on the site that you found it, or do you think it came from another website)?

### Questionnaire Consent Form

#### Introduction:

This is a simple survey being conducted by Cornell students. As part of our course, Online Communities at Cornell University, we will be conducting this survey to gather information for research on Internet memes.

#### Study Purpose:

The purpose of this survey is to find which memes are most popular with different web applications, such as reddit, Facebook, Tumblr, and YouTube. With the results from this survey, our student group of researchers shall be studying the information for our research paper. It shall not be published, nor will have the opportunity to do so.

#### Study Risks:

There are no physical or psychological risks to participating in this survey, and we hope you will not be offended by the meme examples we have provided. In order to avoid this risk, we have presented image examples that are non-offensive.

#### Benefits:

We hope you find yourself laughing to the meme examples provided in the survey, and will be delighted to participate. You're doing us a great honor by volunteering for this survey.

#### Confidentiality:

We will not be asking for any more personal information beyond your age and gender. This information will help us develop our research conclusions, and do not mean to pry into your privacy. Please note this information will not be published, nor made public; it shall only be viewed by the researchers and its advisor.

Statement of Consent:

By selecting "Yes" below, you will be agreeing to the participation of this survey and the interpretation of the information you will be providing. This survey information will not be published, but will be shared between the researchers and its advisor. You understand that your selection of "Yes" is voluntary and you have read over the information above.

By selecting "No", you will be brought to the end of the survey without any information recorded.

We hope you will help us fulfill this research assignment, and have a bit of fun. We thank you for your participation.

Face-To-Face Consent Form

Our names are Karli Scott, Katherine Verbeck and Melissa Panasci. We are undergraduate students conducting a survey as part of an assignment for Professor Leshed's COMM/INFO 3460 Online Communities course.

You are being asked to take part in a research study about your experience with Internet memes. This interview is the second part of our research study, which also included an online survey that you have already completed. Your participation is completely voluntary, and your responses will be completely anonymous. The only identifying information we will ask you to provide is your gender. When/if some of your answers are referenced in our project paper for COMM 3460, we will create pseudonyms so you will not be identifiable. You do not have to answer any question you'd rather not answer. There are no consequences if you decide not to complete the interview. If at any point you want to skip a question or stop the interview, just let us know.

Please keep this letter for your records. Thank you for your participation.

Your Signature \_\_\_\_\_ Date \_\_\_\_\_

Your Name (printed)

\_\_\_\_\_