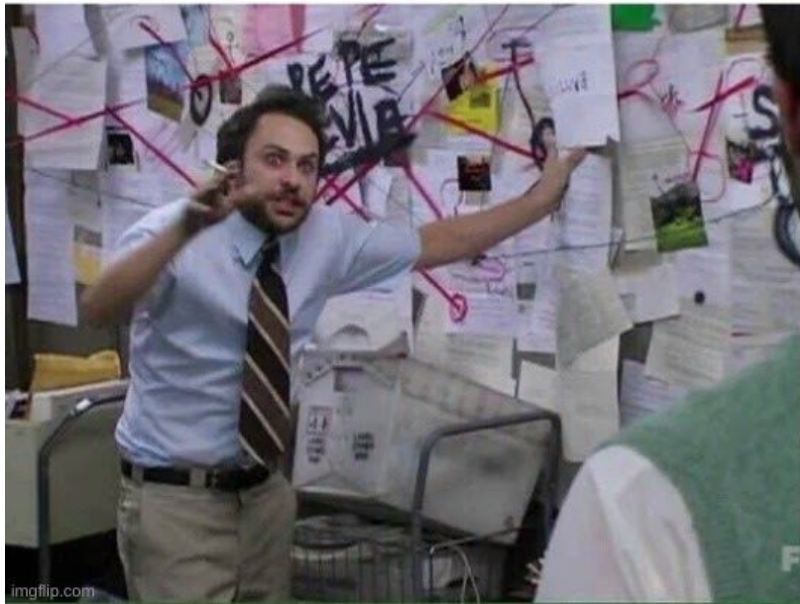


One Does Not Simply Define Memes:

A Prototypical Theory to Understanding Internet Memes

Me trying to explain how we understand
memes and their cultural, political,
psychological, and philosophical importance:



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Abstract:

Memes are humorous digital content shared from person to person on the internet. They can be images, texts, gifs, videos, or any combination of the above. They evolve quickly, have a short lifespan, and an ability to convey a variety of conversational subjects. There is no clear definition of what a meme is and we don't know how we are able to distinguish memes from other kinds of digital content. This paper proposes that instead of a definition, we have a prototypical concept of what a meme is. Instances of digital content are compared to a list of features common in typical memes. The more common features the content has, the more likely it would be considered a meme. To test this, I created an online survey with 28 images found on the internet. Participants were asked if these images were memes, if they would share them on social media, and if they thought the images were funny. Images that were considered memes by most participants looked like prototypical memes while images that were not considered memes had fewer common features. Images that caused disagreements between participants had some features of typical memes but were missing a key feature or blurred the lines between feature boundaries.

If you don't know what memes are, you're probably over the age of 40 or have been living under a rock for the past 15 years. Memes are relatable interpretations of the world with funny images and texts that spread like wildfire. They are new communication devices that occur solely on the internet and are popular with a younger generation of internet users. From smoke signals to printing presses, language and communication evolves due to the nature of the tools humans have available. Computers and the internet are the most powerful tools we have created in our entire human history. Computers allow us to connect to anyone in the world in a matter of minutes. Whether it's email, video conferencing, content streaming, or reading the news, the internet facilitates communication and entertainment faster than ever before. As a product of this, memes have emerged as a jocular way for people to connect about individual and collective experiences.

Thanks to online meme generators and social media, memes are easy to produce and share. People take an image out of context and use text to describe a situation where the image would make sense. Memes often use implicit information to get their messages across. Each meme needs a tailored audience and a set of unspoken rules to understand it. If you're in the outgroup, the meme is nonsense. But, if you're part of the ingroup, memes are as easy as language to understand.

The research question in this study is how are we able to recognize and understand memes? How do we take limited linguistic content, images, gifs, and videos and create meaning out of them? Is there something special about memes that make them different than other kinds of digital content? I propose that memes are special communication devices. We have a prototypical concept of what memes are with a list of features that make them unique from other

kinds of content. If an image has most of these typical features, we consider it a meme. If it does not, it is not a meme. Like language, memes require a lot of unconscious effort that users take for granted when scrolling through their timelines. They are powerful devices and have influences that affect the real world. By investigating how we understand memes, we can gain some psychological and philosophical understanding of human communication.

Research Background:

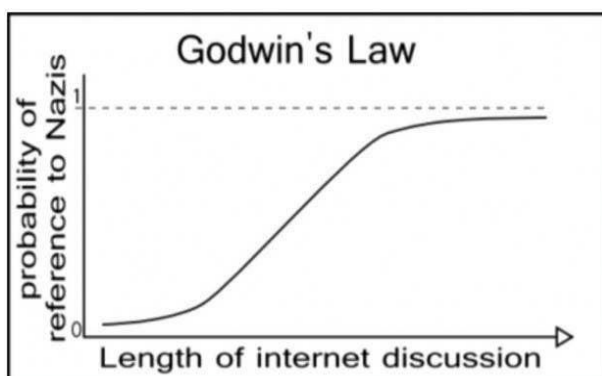
The term meme originates from Richard Dawkins' 1976 book The Selfish Gene. It describes the evolution of human culture with competition and natural selection at its center. Like genes, memes contain units of information that are copied and replicated with slight variations. Instead of being passed down genetically through DNA, memes replicate through imitation. Memes are infectious ideas, viruses that jump from mind to mind. However, every meme cannot be entertained because of human cognitive limitations. Therefore, each meme competes with the other to successfully reproduce through imitation. A meme that lasts a long time with more variation is a meme with a strong evolutionary advantage.

Evolutionary memes have occurred long before the internet. Farming, religion, cultural norms, fashion, and fads are just a few examples of evolutionary memes. Ruth Millikan claims that memes have a purpose for which they are being selected for. The meme's purpose can coincide with the purpose of the mechanism replicating it, like furthering its evolutionary advantage. One meme that has proliferated through imitation is language. Although some philosophers believe we are hardwired to understand and use language, a child's ability to acquire language is largely due to the imitation of their parent's and peer's behavior. Language is a meme that has helped both cultural and biological evolution. Our use of language helps in

selecting the right mate, warning others of danger, and learning how to use tools. The language meme is always evolving, creating neologisms and sayings in every generation.

Sometimes, the gene replicator and meme replicator are in a state of conflict. Daniel Dennett described dangerous memes, ideas that go against our evolutionary need to reproduce. These are ideas of freedom, God, money, country, and duty. These memes are so powerful that humans start wars and die for them, limiting their ability to replicate their genes. Other less dangerous but ineffective memes are catchy pop songs or advertisement jingles. They serve no biological or psychological advantage, yet they reproduce themselves in the minds of different people.

The development of new tools helps the creation and proliferation of new memes. No other invention has industrialized the production of memes quite like the internet. It provides a space in which people from all over the world can discuss and spread their ideas. However, after a while, internet memes took a life of their own, changing the very meaning of what a meme is. Internet memes were first introduced by Mike Godwin on *Wired Magazine* in 1994. Godwin noticed that in almost every internet discussion forum, there would be a point when someone's idea gets compared to Nazism. The longer the discussion went, the higher the chances of being compared to a Nazi increased. This first internet meme is now known as Godwin's law.



Memes have naturally evolved since 1994. In the late 2000s to early 2010s, memes were only a handful of images circulated around with varying text captions. Each image was a template with a specific context and use. Some examples of these were Bad Luck Brian, Overly Attached Girlfriend and Grumpy Cat. However, these days, anything can be a meme. The strict definition of what can be a meme has been pushed to encapsulate all sorts of images, texts, videos, and gifs. As the internet evolves, so do the memes. Although most ideas spread on the internet are considered evolutionary memes, only humorous images and texts are considered internet memes.

Internet memes are interesting communication devices because they are understood by people with little to no effort. They are digital units of information that are passed from person to person. Most memes are trying to illicit a reaction like amusement, confusion, or nostalgia. Like language, they express an infinite variety of subjects using sparse linguistic content and images. Each meme has a specific structure that has been agreed upon by the internet community. Violations of this structure are as obvious as violations of the Cooperative Principle. Memes require attention, individual and collective memory recall, syntactic parsing, semantic understanding, and pragmatic interpretation in order to get them. They tell us a lot about how we use our brains to understand signs and what we expect other people to remember and understand as well. Because internet memes occur as digital content, we can trace their evolution as communication devices. But, with a constantly evolving definition of what internet memes are, how can we tell what is a meme and what is not? 20th-century ideas about language and understanding might be the key to knowing what a meme really is.

In Philosophical Investigations, Ludwig Wittgenstein posited a theory of how we come to understand language and the meaning of words. Coming from a logical positivist background, Wittgenstein's theory revolutionized ideas in the philosophy of language by saying we do not create necessary and sufficient definitions of words to understand language. Instead, we rely on how the linguistic community *uses* words to understand their meaning. When a child is learning to use ordinary language, it is taught by its parents, peers, teachers, and relatives to associate an utterance with an object or action of some kind. These associations create a prototype for the concept with a list of features each use of the word contains. For example, water bottles come in all sorts of shapes, colors, and sizes. However, they are all containers that carry water around. A prototypical idea of water bottles is stored in our heads as a reference. So, every time we come across something that resembles this list of features we've stored, we can come to understand an object like a water bottle. Wittgenstein calls this family resemblance.

Internet memes can also be understood using this idea of family resemblance. The word meme was first used to describe traditional internet memes, ones with a specific image and caption template. Traditional memes delivered a joke or an observation of the human condition through an explicit medium. However, as more and more people began creating meme-like content, without using the previous templates, the use of the word began to proliferate and vary, becoming a meme in itself. Today, a meme can be a traditional meme, a simple tweet, a "deep-fried" meme, a surreal meme, and many other categories that can only be understood by recognizing the underlying prototypical features they all have in common.

Another Wittgensteinian idea that can be applied to memes is language games. A game is something that is played by a set of players with specific rules of instructions. Language is no

different. Each interaction and use of language is a series of games that we play with people in particular environments. For example, telling a joke is one language game while defending a thesis is a different language game. Memes are also language games. Every meme needs an appropriate audience and background knowledge to understand what the meme intends to convey. Two memes about the same subject can have different audience and context requirements.



Meme A

Meme B

For example, Meme A and Meme B have the same template and are about the effects of the Coronavirus on society. Meme A is a typical example of this Boardroom Meeting Suggestion template including a boss and three workers. The boss always asks the question and the three workers give their suggestions. The third worker is always the controversial one so he gets thrown out of the window. Meme A jokes about the chaos around toilet paper consumption out

of fear for the Coronavirus. The meme does not need a lot of context to understand since the news about the panic has spread quickly. Anyone can understand this meme if they have a basic idea of what is going on and why the worker is being thrown out of the window.

On the other hand, Meme B needs a lot more context and an audience of meme enthusiasts to understand. The audience needs to recognize that this is a Boardroom Meeting Suggestions template but there are no characters in the meme. Without using linguistic content, the meme implies that due to the Coronavirus, everyone is working remotely so there is no boardroom meeting to make fun of. Although these memes are similar in many ways, Meme B is more complicated and needs different requirements to come to understanding.

There are different levels of processing that need to be achieved to understand a meme. First, a person needs to have a basic understanding of social media, the Internet, and how to interact through a computer-mediated communication device. Without access to the internet, a social media account, or knowledge of internet culture, one can go a lifetime without encountering an internet meme. To understand a specific meme, one has to have a general prototypical concept of a meme. Following Wittgenstien's theory, one does not simply understand memes by knowing their definition. Memes are understood through family resemblance or according Eleanor Rosch, categorized by prototypes. Memes, like all concepts, are prototypes, a list of features that show up in most instances of memes. To create a prototype, a person has to be introduced and taught what is considered to be a meme and what is not. By multiple introductions to memes, a common list of features start to become prominent.

One of these common features is the syntax of memes. Each meme has a syntactic structure that must be read in order to understand. Traditional memes have a top text that set the

premise of the joke and bottom text that deliver the punchline in accordance with the context of the meme, appendix 3 is an example of a traditional meme. The image is essential to gathering an understanding of the meme as it notes a reaction or sets the context in which the joke is being made. Memes that invoke an ascription of belief, desire, or intent to an object often use colons. For example, “No One: Me:...” is a popular belief ascription in memes to depict that the joke coming afterwards is unprovoked by the public or random. There are many syntactic differences between different kinds of memes, making it difficult to build a consistent syntax model. An easier way to understand how people interpret memes is through speech act theory. Speech act theory is an idea under pragmatics, the study of how people interpret signs. Unlike syntax and semantics, pragmatics studies the underlying implicature interpreters need to get what a sign is saying. Memes are complicated signs. Interpreters need to jump through several inferential hoops before understanding.

For example, appendix 5 is a typical meme that includes both text and an image. There are three pragmatic interpretations needed to understand this meme: the syntax implication, the image implication, and the overall implication. The text requires knowledge of meme syntax to understand “Me:” and “My brain:” as ascriptions of content to two different entities. The sentence “*washing a big knife*” implies an action that the person is doing while “stab yourself” indicates a thought the brain comes up with. The interpreter must also recognize the image as the popular meme Blinking White Guy. This meme is used to imply something is surprising or unbelievable. Blinking White Guy was originally a gif where viewers actually see the man blinking in disbelief. The meme requires the mental recall of that video since the image only uses three screenshots of the gif.

Finally, to interpret this meme correctly, the reader must have also experienced the call of the void. Jean-Paul Sartre wrote that we are condemned to be free. At any point, including while washing a big knife, we are free to hurt ourselves if we wish to do so. Interpreters don't need to read existential philosophy to understand this meme. They just need to experience the call of the void and recall the memory of that experience when interpreting. This meme is an expression of the call to the void in an amusing and relatable way. Yet, if any of these steps in interpretation are missing, the sign is uninterpretable.

Memes are speech acts because they usually rely on felicitous conditions. They are preformative acts that use illocutionary or implied acts to get their meanings across. The locutionary act of the meme will determine its illocutionary force. As seen previously in Meme B, the locutionary act doesn't even need to be linguistic. Sometimes, an image is all that is needed to make a statement. Memes are expressive acts that take everyday phenomena or world events and turn them into strange, creative jokes. The perlocutionary act of memes is to make the interpreter laugh or at least be amused. Another perlocutionary act is to gain social approval. All memes occur on social media platforms. Facebook, Instagram, Reddit, and Tumblr allow interpreters to upvote and share the memes that they enjoyed. If many people like or share your meme, it's a sign of social approval and status. The more relatable and relevant the meme is, the higher the chances of getting a like or share from another person.

All speech acts are heavily dependent on context. Same locutionary utterances carry different illocutionary forces based on the context and who is saying it. In *Speaking For, Speaking With, and Shutting up*, Mark Lance and Rebecca Kukla write about different kinds of advocacy for minorities affected by hardships like police brutality. They make the case that a

white male academic advocating for minorities using the same locutionary utterances as minorities advocating for themselves is a different illocutionary act. When speaking for or speaking with an affected minority group, advocates are reinforcing systemic and epistemic injustice by letting their personal testimonies of hardship be disregarded or less regarded as a reliable source of information. By shutting up and giving minorities the resources to advocate for themselves, advocates can eliminate epistemic injustice by recognizing them as worthy interlocutors.

Since memes are speech acts, the same ideas apply. When producing a meme, the creator is recognizing the internet community as a worthy interlocutor. Posting the meme on the internet is an act of engaging in a conversation with the linguistic community. Memes are cross-cultural and come in varieties of languages. The person creating or sharing the meme is also important in considering what the meme's illocutionary act is. Before social media, the only way to communicate with the masses were through newspapers and television. But, the internet is a platform for the average person to share whatever they please. When memes are appropriated by companies, advertisements, or other non-person objects such as appendix 21, they carry a different illocutionary force and are seen as a farce. Memes made for any purpose other than amusement violate the felicitous conditions of the speech act. Age also influences the effectiveness of a meme. Mature people have a different idea of what a meme is than younger generations, making their sense of humor awkward to the younger users. A meme is said to die once your mom has shared it. Finally, the preformative act of memes serve as setting a conversational agenda. Appendix 5 sets the agenda to talk about the call of the void while appendix 9 sets the agenda to talk about the English royal family. This is a very important aspect

of memes. People use memes in times of stress to reduce anxiety about the state of affairs. This is clear in the “Jeffrey Epstein Didn’t Kill Himself” and “WW3” memes. These memes set a controversial conversational agenda that might otherwise be ignored by major media corporations.

With so many factors that go into understanding a single meme, there are many individual differences in how we interpret memes. Younger users of the internet have an advantage over mature users because they grew up with the internet. Life experience, gender, sexual orientation, languages spoken, and personal interests can limit the amount of memes one can understand. In this study, I wanted to test if different people with diverse backgrounds have more or less the same prototypical concept of a meme. Internet images with more common features of prototypical memes should have a higher consensus among different users than other images that have less features.

Methods

Participants:

There were 85 participants in total who filled out the survey. They did not receive financial or other incentives for their participation. Their ages range from 18 to 53, with 22.37 being the average age of participants. Participants were samples from all over the world with most located in California and The Netherlands. On average, each participant was active on 2.61 social media accounts with Facebook, Instagram, and Snapchat being the most popular ones.

Materials and Procedure:

I created an online survey so I could gather participants who had a basic understanding of the internet and computer mediated communication. The survey was distributed in several Facebook groups that were familiar with the concept of memes. In the survey, participants were asked for their demographics, including their age, country of origin, number of active social media accounts, and hours spent on the internet per week. They gave their intuitive definition of memes which was compared to a list of eight common concept features: humor, virality, images, videos/gif, shared, internet/social media, caption/ text, and relatability/context. Their familiarity with memes was measured on how often, from 1 to 7, they quoted meme-like content in their daily lives.

They were also shown 28 randomized images found on the internet (appendix 1-28). These images were a mix of pictures considered definitely memes, definitely not memes, and potentially memes. They were asked to rate these images as memes or not memes. They were also asked if they would share the images on their social media accounts and if they thought the

images were funny. If the prototypical theory of memes is true, there should be agreement between people on the images that are definitely memes and definitely not memes. The potential meme-like images should have varied opinions as they stray away from the prototypical meme.

I coded each participant's age, number of social media accounts, number of meme features listed in their personal definitions, and ratings of meme familiarity into Google Sheets. Then, I ran a correlation study to see how demographics can influence intuitions and familiarity with memes. In addition, I coded each internet image and the percentage of people who considered them memes or not, were willing to share them on their social media accounts or not, as well as if they were considered funny or not. Participants were allowed to answer "maybe" to images they considered sharing or thought were funny. They were also given a free answer option under the question "Is this funny?" if they had differing intuitions about its humor. These ratings were compared to each other to see if there is any correlation between them.

Results

Age had a weak negative correlation with the number of social media accounts participants were active on (SM) $r=-0.23$ as well as how familiar they were with memes (MF) $r=-0.21$ (figure 1) . The older the participant was, the less social media accounts they used and the less likely they were to quote meme-like content in daily lives. A participants age had no correlation to the number of meme concept features (CF) in their intuitive definitions $r=0.03$. Surprisingly, the number of social media accounts participants were active on had a weak negative correlation with number of concept features in intuitions $r= -0.28$. Meme familiarity also had a weak negative correlation with concept features $r= -0.18$.

As expected, the percentage of images participants had considered memes had a moderate positive correlation with the percentage of people who said they would share it $r= 0.46$ and a moderate negative correlation with percentage of people who would not $r= -0.40$ (figure 2). The percentage of people who had considered sharing the image but had reservations had a weak positive correlation with the percentage of people who had considered the images memes $r= 0.13$. The more meme-like an image is, the more likely participants considered sharing it on a social media account. Images that were considered memes had a strong positive correlation with the percentage of people who thought they were funny $r=0.75$ and a strong negative correlation with the percentage of people who did not think they were funny $r= -0.80$. They also had a moderate positive correlation with the percentage of people who thought they were potentially funny $r=0.50$. Since humor is a core quality of memes, the funnier the image is, the more likely it will be considered a meme. Images that were not considered memes had inverted correlates with images that were considered memes.

In addition, the images that were considered funny had a strong positive correlation with the percentage of people who would share them $r=0.73$, a strong negative correlation with people would not consider sharing them $r=-0.70$, and a moderate positive correlation with people who would maybe share them $r=0.39$. The funnier an image is, the more likely people would share it or consider maybe sharing it to their friends. On the other hand, images that were not considered funny had a moderate negative relationship with the percentage of people who would share them $r=-0.56$, a moderate positive relationship with people who said they would not share them $r=0.54$, and a moderate negative relationship with people said maybe to sharing the image $r=-0.32$. Predictably, if participants didn't think the image was funny, they were less likely to share it. But, they were less likely to even consider sharing the image than if the image was humorous.

Finally, images that were maybe funny to participants had a weak negative correlation with the percentage of people who would share the image $r=-0.13$, no correlation to people who would maybe share the image $r=-0.08$ and a weak positive correlation with people who would not share the image $r=0.13$. Participants were less likely to share an image if there were doubts about whether it was conveying humorous content.

There were nine images that over 80% of participants agreed to be memes: appendix 3, appendix 5, appendix 9, appendix 15, appendix 17, appendix 18, appendix 24, appendix 25, and appendix 27. Seven images had over 80% of participants agree they were not memes. These images were appendix 8, appendix 10, appendix 13, appendix 19, appendix 23, appendix 26, and appendix 28. When considering images that did not gain consensus as memes or not memes, there were three subcategories. There were images that leaned toward being memes with over

60% of participants saying they were memes, images that leaned towards not being memes with over 60% of participants saying there were not memes, and images that split intuitions almost 50/50. Appendix 7, 14, and 21 were images that leaned toward being memes. Appendix 4, 6 11, and 20 were images that leaned away from being memes. Appendix 1, 2, 12, 16, and 22 were images that split the intuitions of the participants.

	Age	SM	CF	MF
Age	1			
SM	-0.23337887 93	1		
CF	0.037474980 88	-0.27792802 39		
MF	-0.21266399 9	0.252186932 7	-0.18087144 49	1

Figure 1

	% Yes	%No	%share yes	%share no	%share maybe	%funny yes	%funny no	%funny maybe
% Yes	1							
%No	-1	1						
%share yes	0.45662 28301	-0.45662 28301	1					
%share no	-0.40114 82074	0.40114 82074	-0.97251 18504	1				
%share maybe	0.12630 06638	-0.12630 06638	0.60436 71009	-0.77314 74064	1			
%funny yes	0.74501 02038	-0.74501 02038	0.73086 05963	-0.69532 53687	0.38577 03666	1		
%funny no	-0.79857 84801	0.79857 84801	-0.56292 53676	0.54157 35256	-0.31609 04253	-0.93943 74687	1	
%funny maybe	0.50486 23865	-0.50486 23865	-0.13162 32267	0.12537 15631	-0.07558 139659	0.31313 53304	-0.61439 29867	1

Figure 2

Discussion

Demographics and Memes:

Several interesting pictures about memes are painted from these correlations. First, age had a weak negative correlation with the number of social media accounts one was active on. This makes sense since the survey was posted on Facebook. Less internet savvy people use Facebook more often than other platforms like Snapchat, Reddit, or Instagram. This correlation could also have come from volunteer bias. This study was about memes so it attracted more younger participants, around 18-24, than more senior participants. With a larger sample of the population, this correlation might be stronger than what this study showed.

More importantly, participants who had more social media accounts had less meme-like concepts in their intuitive definitions. This might be because the more exposed they are to memes, the less strict they will be with their ideas of what a meme constitutes. They could also be familiar with the biological definition of a meme and root their intuitions of internet memes in that definition. This explanation is also shown in the negative correlation between ratings of meme familiarity and number of concept features included in the intuitive definitions.

Definite Memes:

As the results show, images that were considered to be memes were not only more likely to be funny and shared by participants who said yes to those questions, but more likely to be considered funny and shared by participants who said maybe. The images that participants agreed to be memes were appendix 3, appendix 5, appendix 9, appendix 15, appendix 17, appendix 18, appendix 24, appendix 25, and appendix 27. All of these images had a list of typical features that would be in a prototypical meme. They were found on the internet, went

viral on a social media platform, are able to represent a variety of conversational topics, were funny, and had a syntactic structure about them that included both text and image. Appendix 3, 5, 9, 24, 25, and 27 were images that were consistently rated as memes with over 90% of participants agreeing.

Appendix 3 is an example of a traditional meme with The Most Interesting Man in the World being its template. The image is from a 2006 Dos Equis beer commercial that resonated with viewers because of the catch phrase “I don’t always drink beer, but when I do, I prefer Dos Equis”. Since this is an old meme, most of the participants were able to recognize its content as well as its syntactic structure. All variations of this meme use the phrase “I don’t always... but when I do...” to convey actions people always do in a certain situation. In this variation of the meme, the action is kicking an ice cube under the refrigerator instead of picking it up. This is a common action in a common situation, making the meme relatable to a lot of the participants. However, participants who thought this was only maybe funny noted that this meme is too old to have any relevance today. Although 95.3% of participants agreed this was a meme, only 17.6% said they would share it and 32.9% said it was funny.

Appendix 5, 9, 24, and 25 have very similar features regardless of their content. They all set up the premise of the meme using text and deliver the punchline through their images. As discussed previously, appendix 5 conveys the unbelievable call of the void. Participants did not have to know existential philosophy to get this meme because it’s experiential. The experience of thinking about the freedom to hurt yourself is enough to understand what the meme conveys. Like The Most Interesting Man in the World, Blinking White Guy is a versatile and popular

memes template. Some templates have more versatility than others making them stronger memes that lead to more variation and replication.

On the other hand, the embedded image in appendix 9 is inflexible but central to the entire meme. This meme is about world events, a common motif among memes since the public is most likely informed about happenings. This particular meme is about the departure of Prince Harry and Megan Markle from the British Royal Family. The locutionary act of the meme uses the same syntactic structure as previously discussed. It says “No one:-” to imply that the most of the public is not affected by the sudden departure of the couple. But, it also reinforces that this news is important to the royal family. The meme attributes the embedded image to them by saying “The entire British royal family right now:-”. The image is from the popular Nickelodeon TV show Drake and Josh, which features their mischievous little sister Megan. Josh is captured in this image saying “Megan” in a suspicious and disappointed tone. The meme triggers memories of Josh’s contempt for his sister and attributes it to the royal family blaming Megan Markle for the couple’s departure. As this is relatively recent news, 78.8% of participants thought this was funny and 58.7% considered sharing it to their friends.

Appendix 24 and 25 are similar to appendix 9, they both use images to attribute reactions to the subjects introduced in the textual premise. Appendix 24 attributes willful determination to customers who go to stores during severe weather, much to the surprise of retail workers. Meanwhile, appendix 25 attributes annoyed disbelief to Native Americans for the hypocritical rhetoric of ignorant Americans. The former is relatable to many people who have worked customer service jobs while the latter uses basic knowledge of US History to make its point.

Because they depict jokes that anyone with basic meme knowledge can understand, these memes do not need a lot of context.

In contrast, appendix 27 needs multiple levels of implied interpretations to understand the whole meme. As the internet started evolving, more and more internet users realized that Internet Explorer is an agonizingly slow web browser. As a result, an Internet Explorer meme was born, making fun of how slow it is. In addition, a meme in early 2019 surfaced claiming that if a mass of people stormed Area 51, the military could not stop them all. Area 51 is famously rumored to be a military base where the government harbors extraterrestrial beings that have landed on Earth. The meme was a call for people to show up at the base on September 20, 2019 to storm the area and see aliens. The event actually occurred with many people being greeted at the base with armed soldiers. But, since then, the meme has died off. Appendix 27 brings it back to life with Internet Explorer on its way to go to an event that has already passed. This meme was found on Tumblr, a social media platform, with the caption “The longer it takes for this to come across your dash the funnier it is”. Since the survey was conducted in February 2020, about 77% of the participants consider it funny or maybe funny. This meme shows two features about memes in general. First, people can mix and match different memes to create an infinite number of new memes. Second, memes do not die, they only grow stale until they’re revived through a different context. Memes are the Frankenstein’s monster of the internet community.

On the lower end of the meme agreement spectrum were appendix 15, 17, and 18. Appendix 15 is a meme gone wrong. It is a twitter post that attempts to describe a reaction when a flirt is required. But, the creator of the post placed the wrong image for the meme. Pragmatically, the meme makes no sense since it is a picture of South America. But, it follows

the syntactic family resemblance of a prototypical meme. Although there was some disagreement, 80% of participants considered this a meme. This was because this image was taken out of context. In a later post, the creator explains that they accidentally used the wrong image for the meme. But, since the participants didn't know that, 82.4% of them said they would not share it to their friends and commented "I don't get it" multiple times. This result suggests that we recognize the structure of the meme first before trying to gain semantic or pragmatic understanding.

Appendix 17 is a humorous image with text but there was some disagreement on whether it was a meme or not. This is because the image is a visual pun, not an image that can be changed and circulated around with variations of content. There were many people who didn't understand the pun of "gray v" on the mashed potatoes. But, even with those who did, 70% of people said they would not share the image and only 48.2% considered it funny.

Appendix 18 is a meme about meme culture. Oftentimes, when a *meme connaisseur* comes across a good meme, it's in bad taste to share the meme without giving a reaction to the original person who shared it. This goes back to the perlocutionary act of sharing a meme. The expectation is that you make people laugh and you receive social approval. This image shows Indiana Jones taking a good meme and replacing it with a "haha" reaction to take it in a socially acceptable way. If participants know about memes but don't realize this unspoken rule, they would miss out on understanding this meme. 85.9% of participants considered this meme but only 12.9% said they would share it.

In the last three examples, understanding is obstructed in some kind of way. Appendix 3 has the wrong image, appendix 17 is a visual pun, while appendix 18 requires insider knowledge

of meme culture. Regardless, over 75% of participants recognized these as memes, even if they did not fully understand them. They were able to identify the intent behind the images even if they did not gain semantic understanding. So, if people consider images they did not understand as memes, how do memes differ from images that are not memes?

Not Memes:

Out of the 28 images, only seven had over 80% of participants agree they were not memes. Appendix 8, appendix 10, appendix 13, appendix 19, appendix 23, appendix 26, and appendix 28 were consistently rated not memes. These images were similar to memes in some key ways: they were either images found on the internet, ideas shared from person to person, or included linguistic content as well as images to accompany them. However, each image is missing some key feature of what makes a meme, most likely a humorous intent or lack of versatility. For example, appendix 8 is an image of the ocean with a quote about waves. The image and the caption are directly related but, the intent behind the image is to inspire, not amuse. 97.6% of participants said this image is not a meme. 100% of the participants did not think it was funny because it was not intended to be. The same applies for appendix 10. Appendix 10 visually represents the devastating effects of climate change using a match as a metaphor. The reality of the image is quite sad which is why 95.2% of participants thought this was not funny and 92.9% said it was not a meme.

Appendix 13 is not a meme but a cursed image. Cursed images are similar to memes in that they are internet images, shared from person to person, with the intent of making the interpreter feel something. While the perlocutionary act of memes is to cause amusement, cursed images cause discomfort and uncanniness. The room in this image causes an unsettling feeling in

the viewer because it does not make sense and looks uncomfortable. 77% of participants stated they would not share this image with their friends. On the opposite end of the spectrum, appendix 26 is an image of a cute fluffy dog. It's no secret that humans love dogs. But, this image of a dog is not a meme because there is no meaning behind it. It is shared solely for the purpose of being adorable. When asked if this picture was funny, many participants opted to say "it's super cute" instead of answering the question.

Appendix 19 is another type of image found on the internet. Images like these are also preformative acts. Instead of expressives like memes, they are requests. This particular one is a request to type the poster of the image as a Disney princess. There are many potential variations of this kind of act, making this a meme in the evolutionary sense but not an internet meme. There is nothing humorous about this image which is why 88.2% of participants categorized it as not funny. Sharing this image is also a face threatening act. By sharing this, people are exposed to their followers judging their personality based on what the follower thinks they are like. This exposure can be potentially face threatening if the poster does not agree with the opinions the follower or if no one responds at all. This could explain why only 8.3% of the participants said they would share this image on their social media accounts.

Finally, appendix 26 and 28 are memes that did not originate on the internet. Appendix 26 is an image of "Cool S", a popular graffiti meme that is usually passed down from child to child in school. The origins of this S is unknown but it spreads through imitation and teaching. The Cool S is a meme in an evolutionary sense but, 97.6% of participants said it was not an internet meme. There is no meaning or intent in this image but to depict what the Cool S looks like. Even if most participants recognized the figure, only 23.5% would share it on their social

media accounts and 3.5% thought it was funny. Appendix 28 is also a meme that originated outside of the internet. Keep Calm and Carry On was a motivational poster created in 1939 by the UK government. It was used at the start of World War 2 to prepare the English citizens for the troubles of war. Though the poster was a meme during its time, only 20% of participants considered it a meme today. Only 3.5% of participants considered sharing it and 1.2% of participants considered it funny.

By analyzing images people do not consider memes, we can start to see some features that are critical to recognizing memes. First, there has to be the right intent. An image should not be meaningless or have another intention than to amuse the interpreter. Second, the image should be expressive and only have the perlocutionary act of gaining reactions. It should not request the reader to do anything but like and share. Third, it should originate mostly on the internet. Memes in the evolutionary sense do not automatically qualify to be internet memes. There is a significant distinction between memes that occur online than in the real world. When most of these factors are missing, it's easy to distinguish images as not memes. But, because of the prototypical theory of memes, some images might blur the lines between these boundaries. When this happens, there are disagreements between people on whether the images are memes or not.

Potential Memes:

Potential memes were images that caused disagreements between participants on whether they were memes or not. These images have some typical features of memes but not enough to gain the consensus of the majority of participants. Disagreements could have happened for many reasons. The image could have no context, no structure, no related image, or not be humorous. But, they had enough meme-like qualities to gain at least 25% of the votes as memes. The

potential meme images can be broken up into several categories. There were no-text images, text-only images, political images, and images with ambiguous intentions.

Image only:

Appendix 1 is a screenshot from the 1987 music video *Never Gonna Give You Up* by Rick Astley. Rickrolling is a meme and internet prank from the late 2000s. Internet users would bait other unsuspecting users with an unrelated hyperlink and switch them over to Rick Astley's music video. This prank was popular with peak rickrolling on April Fool's day. This image has no linguistic content to set up a premise but since rickrolling was very popular in its time, 58.8% of users said it was a meme while 41.2% disagreed. Interestingly, when asked if this image was funny, participants emphasized the importance of its context and how unexpected it was. They did not consider the image itself as a meme but the *act* and delivery of rickrolling as the meme. Evolutionary memes include actions like farming but apparently, actions can also be internet memes. Rickrolling isn't as popular as it used to be. But, again, with the right context any meme can be revived.

Just as any meme can be revived with the right context, any image can be created into a meme with the right context. Appendix 2 is an image of a koi fish sucking on a pacifier. The image elicits many reactions like amusement, confusion, and adoring. It is very strange and as one participant put it "neutral chaos". Participants were split on whether this was a meme with 52.4% saying it was not and 47.6% saying it was. The confusion is clear since the image blurs the lines between features needed in a prototypical meme. It has an intent to amuse the interpreter but uses no context to do it. It's an image that doesn't use text but it's still humorous. It is attributing a behavior to an entity but it doesn't do it like a typical meme. Still, 36.5% of

participants thought it was funny and some noted it could be a decent meme template with the right context.

Text only:

In the survey, participants were also shown images that only used text to see if they would be enough to be considered memes. Appendix 6 is a math joke with a gray background. The image says “A pie without 3.14159 is only 2.71828” substituting 3.14 for pi and 2.71 for e. This joke was taken off the I Love Mathematics Facebook page which caters to a specific audience. Although there are more complicated math memes on the internet, participants with a high school maths education should understand the implied joke. But, only 34.1% considered this image a meme while 22.4% thought it was funny. This could be for two reasons. Either this is a meme that was shown to an inappropriate audience. Or, this is not a meme because it did not have enough prototypical features to be considered one. Perhaps if this text was originally a tweet, it would be considered a meme by more people.

Appendix 22 is another text only joke that originated on Twitter. Like appendix 6, it is humorous content but difficult to understand because it is an ambiguous garden path sentence. Garden path sentences are grammatically correct sentences that lead a parser to an incorrect interpretation of the sentence. The tweet says “The y in your boyfriend is silent”. Participants can parse this as “your boyfriend” which is the incorrect conclusion or parse it as “our boyfriend” which is the point of the joke. Like appendix 6, it was more difficult to access the meaning of the joke than a typical meme. But, since this occurred on a social media, the comment below the original tweet gives context to guide the reader to the correct conclusion. 41.2% of the

participants considered this a meme while 58.8% disagreed. Only 34.1% considered this image not funny showing that most participants were able to come to the right interpretation.

Compared to appendix 6 and 22, appendix 16 has more prototypical meme features. It occurs on social media, it requires context to understand it, and it's humorous in nature. There are two implied contexts participants needed to understand this tweet. First, they need to know Existentialism as a French school of philosophical thought. They also need to have basic understanding about what existentialists believed in, mostly an idea of existence before essence. Second, they need to know the region of Champagne, France where all champagne is created. Any bubbly created outside of the region is called sparkling wine. The creator takes these two facts and generates a post that is both relatable and amusing. Because of these features, the image split the intuitions of the participants with 48.6% agreeing it is a meme and 51.4% disagreeing. This text-only image had a lot of meme features but had the biggest disagreement between participants. So, embedded images must be a central feature in recognizing something as a meme.

This idea of images being critical for memes can be seen in appendix 14. Appendix 14 came close to being considered a definite meme with 78.8% of people agreeing that it was. This image is an example of a surreal meme. The internet is a weird place and once in a while, people come across memes that are not only amusing but bizarre. Like cursed images, surreal memes are not made to be relatable. Unlike cursed images, surreal memes are not intended to make the interpreter uncomfortable. Appendix 14 shows a shark in the ocean crying while thinking about Pringles. The text above the shark corroborates the image by saying "The saddest part of being a shark is never being able to experience the crispness of a Pringle". This meme is not supposed to

be relatable because it is attributing a desire to a shark. It's amusing because of its absurdness. The absurdity of the meme combined with its text and image format was enough for most participants to think this was a meme.

Political Images:

Appendix 7 is another screenshot of a text-only twitter post. This tweet made in January 2020, around the time Iranian general Qasem Soleimani was assassinated by the US military. This news shocked the nation since many citizens did not even know who Soleimani was. It wasn't long before people started creating WW3 memes with the US and Iran spearheading the war. In times of great stress and uncertainty, humor and memes are a medium to dissolve anxiety. This is shown by an influx of WW3 memes in January 2020, Australian fire memes in February 2020, and Coronavirus memes in March 2020.

This simple tweet is actually a complicated joke that, like typical memes, requires context and an appropriate audience to understand. On a basic level, participants must understand what the tweet is saying. Some participants couldn't understand abbreviations like "mfs" or "lmfao". The twitter says, in an incredulous tone, that he can't believe some people think one person getting assassinated can start a world war. But, to understand the joke, interpreters must notice the account is registered to Archduke Franz Ferdinand. The assassination of Franz Ferdinand in 1914 was the catalyst for World War 1. This statement coming from the Archduke is ironic and a statement about the possible start of WW3 due to the assassination of Soleimani. 60% of participants thought this was a meme and 58.8% of participants thought it was funny. This tweet leaned towards being a meme but perhaps due to lack of understanding or a lack of an image, 40% of participants did not agree it was a meme.

Memes are often used to make political statements in creative ways that would otherwise be boring or ridiculous in a different medium of communication. Their political influences are clear when considering the 2016 election. In a poll done by Public Policy Polling, 38% of Floridan voters believed Ted Cruz was maybe the Zodiac Killer. Ted Cruz is the Zodiac Killer was a popular meme in 2016 about the Texan presidential candidate. This suggestion is impossible since Cruz was about 2 years old when the Zodiac Killer emerged. But, the constant replication of the meme embedded the idea in voters' minds. Although the meme did not directly lead to him dropping out the race, it sure didn't help his campaign.

Speaking of Ted Cruz, appendix 11 is a picture of Ted Cruz at a dairy farm in Iowa. This picture was taken off of Ted Cruz's Facebook page without the caption "Wow, a cow made of butter. My girls would love it. In fact, the first sentence Caroline ever said was 'I like butter'". Taken out of the context Cruz himself set up, 68.2% of participants did not consider this image to be a meme. But, with the caption, we can predict that participants will say this is a meme or at least split their intuitions closer to 50/50. Many content creators have already parodied this image by placing different objects as the cow made of butter, including making Ted Cruz out of butter and having the cow comment on him. The context provided by this caption is central to whether the image was a meme or not.

Appendix 20 was another political image shown to participants. This image is called *Drag- Johnson and Mao* by Jim Dine. It shows Lyndon B Johnson and Mao Zedong in colorful makeup. This image is political art with no text or caption to set up a context. Although it's humorous in nature, 74.1% of participants said this was not a meme and 60% did not think it was

funny. This image might have been provocative during its time but the world has changed since 1967.

Ambiguous Intention:

Finally, there were three images that were potential memes but had the wrong or ambiguous intent. Appendix 4 is an image that uses the top-text bottom-text format of traditional memes. It shows the before and after picture of a man cleaning up a beach. 69.4% of participants thought this image was not a meme. The structure is there but the intent behind the image is not humorous but inspiring. Appendix 12 was an image that split intuitions closer to 50/50. The creator writes “owls have long legs. goodbye” and posts a picture of an owl lying down. The humor in this post seems epiphenomenal. The real intent is to inform the public that owl really do have long legs. Participants couldn’t decide if the unintentional humor was enough to categorize this image as a meme with 51.8% saying yes and 48.2% saying no. Appendix 22 is an image that breaks the felicitous condition of memes. This is an billboard sign on the sign of the road that takes advantage of the “Y U No?” meme. But, some participants were confused on what Hipchat meant and may not have realized it was an advertisement. Still, 58.8% said it was not a meme and 70.6% said they would not share this image on their social media.

Conclusion and Future Studies:

The prototypical theory of concepts claims humans understand a concept by creating a prototype with a list of features. This prototype is compared with each instance of an object to see whether that object fits in with a concept or not. This study shows that we understand memes using a prototypical concept of memes in mind. If we see an image on the internet, occurring on a social media platform, with an intent to amuse us, uses both text and a related image, and needs

context for interpretation, it is most likely a meme. Images that do not include most of these features are automatically disqualified as not memes. But, there is a spectrum of internet images where we're not really sure if they are memes or not. They might be missing one feature or blur the lines between boundaries. This makes sense under the prototype theory. If images were easily agreed upon as memes or not memes, there would be a necessary and sufficient definition of what memes are. But, as this study shows, there's disagreements between different people.

The list of features needed for a prototypical meme is also hard to define. Demographics, life experiences, amount of internet experience, and exposure to memes cause individual differences in prototype creation. But, once people see a meme, it's not hard to recognize. Like language, memes are easier to understand than explain how and why they are understood.

Human language and communication coevolves alongside the tools we have invented. The internet has opened the lines of instant communication with almost anyone around the world. But, as humans, we still have our basic needs for affiliation and status. Memes are new communication devices that take advantage of the internet to fulfil our basic needs for connection, social approval, and laughter. The academic study of memes is only beginning. 100 years in the future, there will be meme historians tracking our digital evolution as well as our historical evolution. But, we don't have to wait 100 years to study the effects memes have on us today.

A future experiment on the prototypical theory of memes can have participants come into a lab and measure their reaction time to see how fast they answer whether something is a meme or not. If the image has many or few typical features, it should take faster for participants to say yes and no, respectively. But, if the image is a potential meme, it should take participants longer

to answer the question of whether it is a meme. Memes can also be studied under political science. As shown in the Ted Cruz example, memes have real world political influences. Representations of political candidates using different memes can have a bias in media attention, voter manipulation, and dog whistle rhetoric. Memes use several psychological modules to get their messages across. Cognitive scientists studying attention, social remembering, and language can use memes to see how we understand and remember signs. Finally, future researchers can study why violating meme templates as obvious as violating Gricean maxims. Slight changes in meme templates create different intentions and messages. A meta-meme analysis can shed some light into how images are being used to communicate different things and what rules drive the production of memes.

Memes are silly and funny images that occur on the internet. But, they are also impressive communication devices with cultural, political, psychological, and philosophical significance. Academia needs to start researching how memes work and why because memes are here and they're build to last well into the future.

References

- Austin, John L. *How to Do Things with Words*. Oxford Univ. Press, 2009.
- Dawkins, Clinton Richard. *The Selfish Gene*. Oxford University Press, 2016.
- Dennett, Daniel. "Dangerous Memes." *TED*, 2002,
www.ted.com/talks/dan_dennett_dangerous_memes/up-next?language=en.
- Godwin, Mike. "Meme, Counter-Meme." *Wired*, Conde Nast, 1 Oct. 1994,
www.wired.com/1994/10/godwin-if-2/.
- Jensen, Tom. "Is Ted Cruz the Zodiac Killer? Maybe, Say 38 Percent of Florida Voters." *Public Policy Polling*, 29 Feb. 2016,
www.publicpolicypolling.com/news/is-ted-cruz-the-zodiac-killer-maybe-say-38-percent-of-florida-voters/.
- Lance, Mark, and Rebecca Kukla. *Speaking For, Speaking With, and Shutting Up: Models of Solidarity and the Pragmatics of Truth Telling*. 2020.
- "Purposes and Cross-Purposes of Memes." *Varieties of Meaning: the 2002 Jean Nicod Lectures*, by Ruth Garrett. Millikan, MIT Press, 2014, pp. 15–27.
- Rosch, Eleanor H. "Natural Categories." *Cognitive Psychology*, Academic Press, 30 Aug. 2004,
www.sciencedirect.com/science/article/abs/pii/0010028573900170.
- Wittgenstein, Ludwig, and Peter M. S. Hacker. *Philosophische Untersuchungen = Philosophical Investigations*. Wiley-Blackwell, 2010.

Appendix 1



Appendix 2



Appendix 3



Appendix 4



Appendix 5



Appendix 6

A pie without 3.14159...
is only 2.71828...

Appendix 7



Archduke Franz Ferdinand 



Archdukefranzi

Mfs really act like one guy getting
assasinated is gonna start a World
War Imfao

10:17 PM. Jan 2, 2020 [.Twitter for Adroid](#)

Appendix 8



Appendix 9

No one:-
The entire British royal
family right now:-

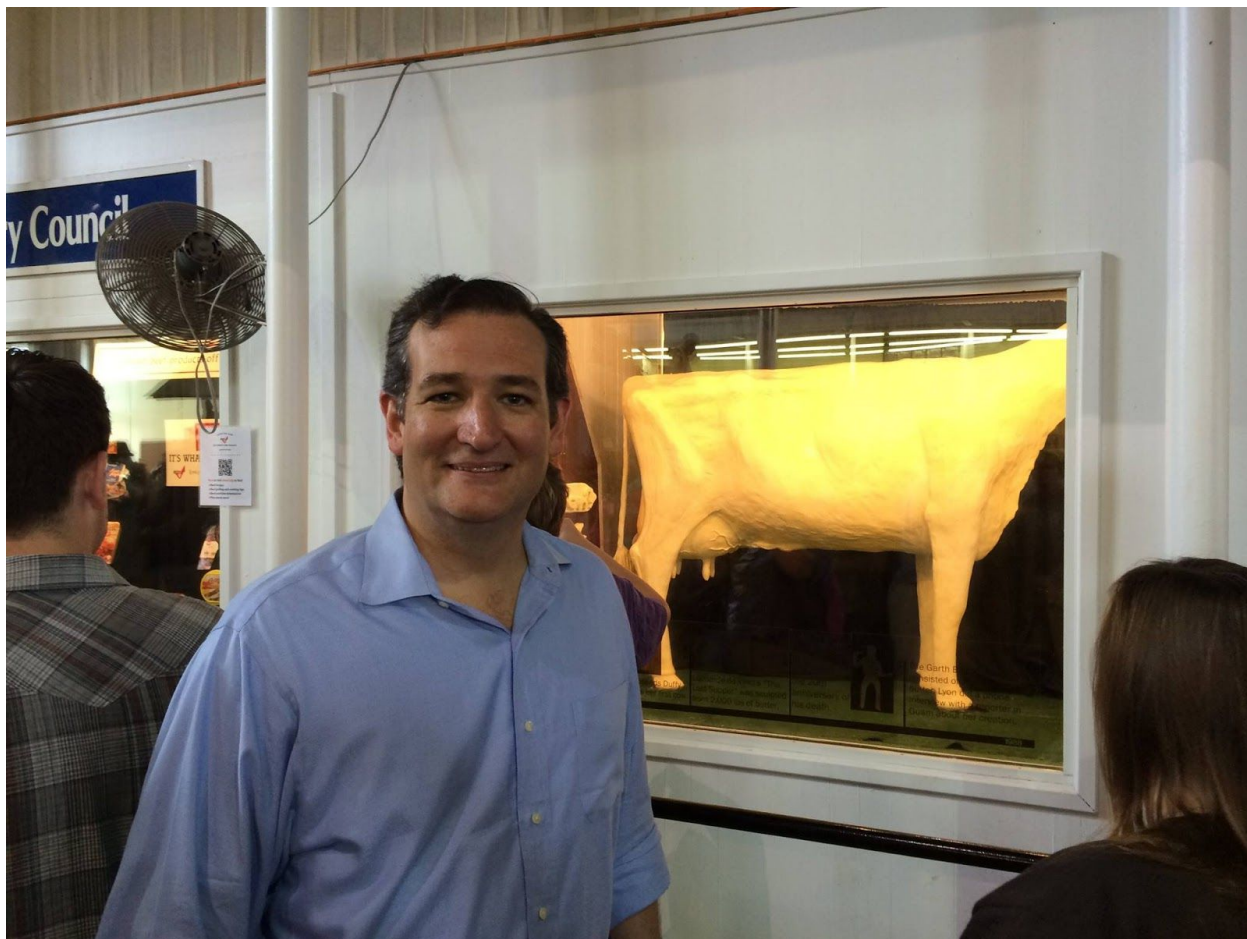


Appendix 10



COSTA A

Appendix 11



Appendix 12



rayan
@batsbarnes



owls have long legs. goodbye

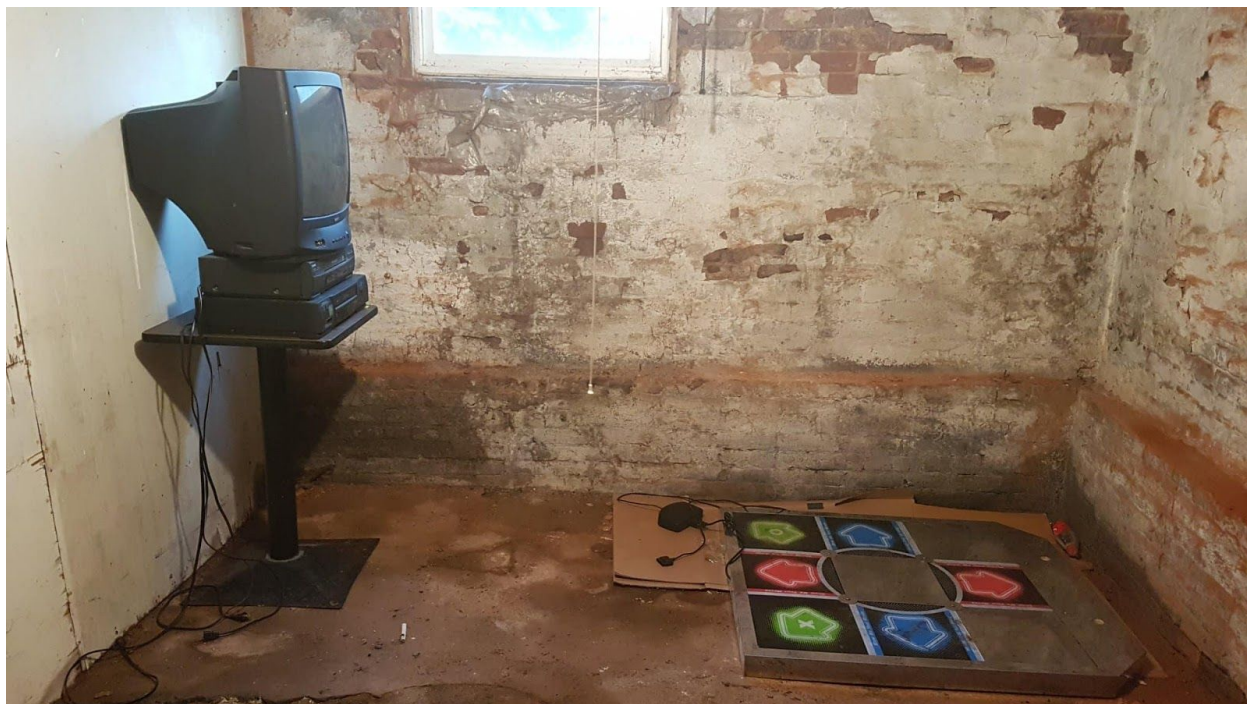


sara
@bimbolover

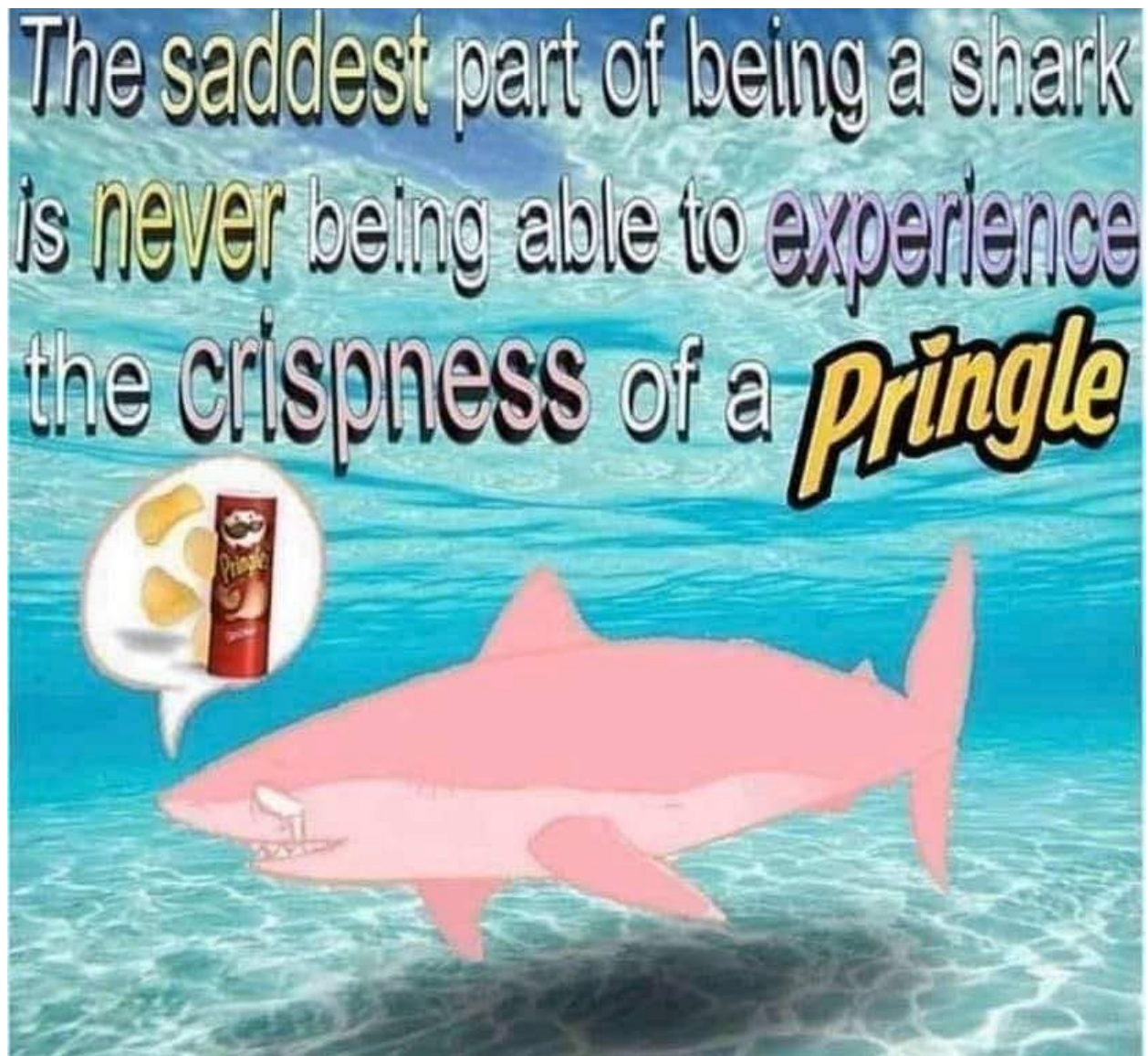


why.....is it just lying down like that

Appendix 13



Appendix 14



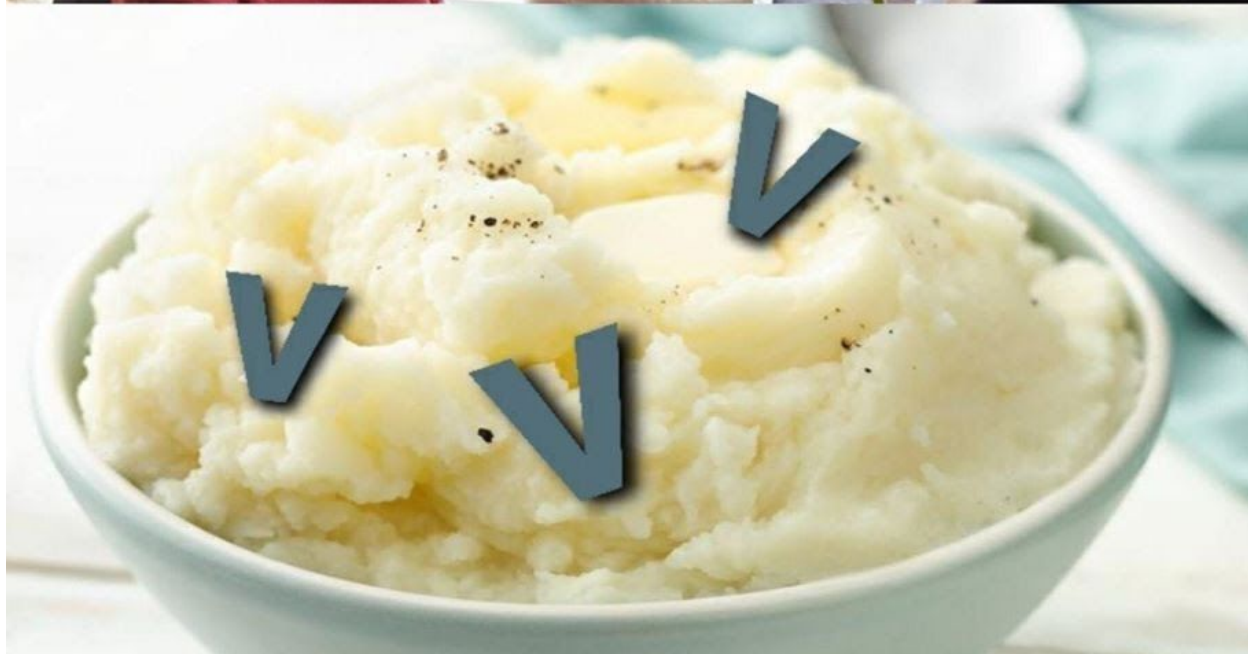
Appendix 15



Appendix 16



Appendix 17



Appendix 18



Appendix 19

alright who do y'all see me as based
on looks/personality/vibe/whatever



Appendix 20



Appendix 21



Appendix 22

**Officially Jaded**

@savvysavageee



The "y" in your boyfriend is silent

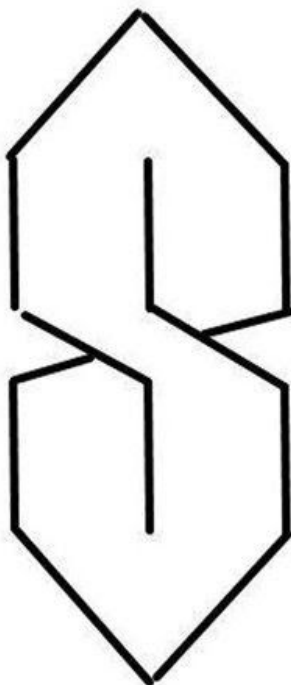
**Semi;** ❄️

@NotAFrancoBro



My stupid ass is over here thinking
"bofriend"

Appendix 23



Appendix 24

Me: "I don't think any customers will come in this weather"

The customers:



Appendix 25

Americans: "You foreigners stay where you are
and keep your viruses to yourselves."

Native Americans:



Appendix 26



Appendix 27



killowave



supremeshogunrj

The longer it takes for this to come
across your dash the funnier it is

Appendix 28

