G20 Report

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1 Introduction

Our social media have been flooded with vines and trending challenge videos but most especially by memes. It is a fact that when chatting online, netizens tend to use a lot of retro memes and emojis like the penguin from Tencent (a Chinese tech giant), these kind of low-fidelity, blurry memes are gaining its popularity once again in China, which makes us think, is meme like a circle that keeps coming back? We explored around this and found similar patterns around the globe, for example the 'Successful kid', or 'the distracted boyfriend', they would pop into the public view every so often. As well as paintings from the renaissance period would be re-purposed as memes.

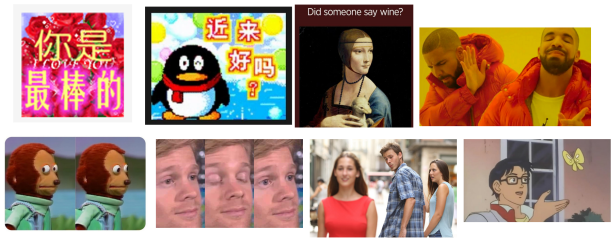

Figure 1: Memes that keep coming back

2 Research

2.1 Definition of meme

To truly understand this question, one must first clarify on the definition of memes. Historically, "meme" was first introduced by evolutionary biologist, Richard Dawkins, in 1976 [2]. "Meme" comes from the Greek word "mimeme" which means "something imitated". The Encyclopedia Britannica then defines 'meme' as a unit of cultural information spread by imitation. In the 21st century, a meme is a separate "package of culture" that would travel via word, usually as a mesmerizing story, a joke, or an expression of speech. Today, according to Dr. Mike Watson, a theorist and critic focused on the relation between culture and new media, memes are "an image, video, piece of text, etc., typically humorous in nature, that is copied and spread rapidly by Internet users."[7]

After understanding the origin of meme, further explanation is needed as in what assertions we are making that certain memes keep coming back. Our inspiration is the fact that when chatting online, the millennial tend to use numerous retro memes and emojis, at least in the context of Internet in China.

2.1.1 Cultural Circle

To broaden our perspective, we review what the inventor of the word-meme, has anything to say. It turns out that Richard has declared that cultural ideas replicate in an imitating fashion. The second argument he made was that meme is a combination of gene and mimeme, which means it has the attribute of gene, that it can pass on, and it's imitated in nature, which in turn proves that memes are in fact cultural ideas, which can be anything. Hence, the definition of meme got widened and that is what we base our notion of Cultural Circle on. In a sentence, everything is a meme. However, this issue is too big to analyze efficiently, hence we focus once again on memes, which we deem the very representative among Culture Circle.

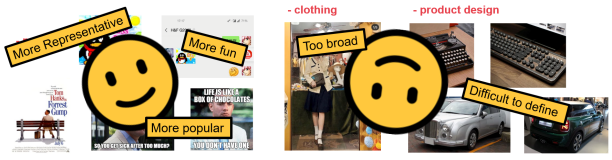

Figure 2: The notion of Culture Circle

2.1.2 Meme-related Term

The article published by Amelia Acker et al. [1] defined the term of meme. They divided a meme instance as base meme image and the alternate text on the top of the base meme image. Then investigated the impact of popularity separately. The format of base images affect the popularity. Nissenbaum and Shifman [4] conducted that cartoon meme base image is easier to spread in Asia.

2.2 Meme Transmission and Sigmoid Function

In 2019, Wang [6] and other proposed an article showing that the similarity between disease transmission model and meme circular model. They came up with a conclusion that the meme actives users follow the Sigmoid function. Initially, the meme only spread in small circles, so it spread very slowly. As the number of users gradually grew, the popularity began to explode. When a certain amount is reached, popularity enters the platform phase.

2.3 Nostalgia

In 2012, Xinyue Zhou et al.[10] put forward the notion that mankind tend to be nostalgic when they are cold, and if they are nostalgic, they can withstand coldness better. Robert M. Schindler et al. conducted several experiments where studies of music, motion pictures and fashion products are tested, and have shown

that styles popular during a consumer's youth can influence their lifelong preferences where male are more nostalgic than female. The latest discoveries are made by Kentaro Oba et al.[5], indicating this issue on a matter of neuro-science, that the two dimensions of nostalgic experiences—emotional and personal significance and chronological remoteness—have differential neural correlates. In 2008, Xinyue Zhou et al.[9] proposed that nostalgia is a psychological resource that protects and fosters mental health. All of which research mentioned above, one particularly interesting paper by Constantine Sedikides et al.[8] implicated that Nostalgia is triggered by dysphoric states such as negative mood and loneliness, which has also correlations to next part of out literature review.

2.4 Negativity

Kate M Miltner. [3] introduced on her passage that negativity is easy to circulate through the internet. Based on this research, Asaf Nissenbaum and Limor Shifman [4] explored more emotions: anger, sadness, happiness, and got the same conclusion.

2.5 Positivity

Positive memes can inspire and motivate people. They help us connect and feel like we belong, can serve as conversation starters and can even help you smooth over a conflict or make a point. But netizens prefer to complain rather than cheer themselves up on social media platforms.

2.6 User Research

Ten young people between the age of 18 and 27 who love using online social media platforms were interviewed. Their pain points is that they are not clear about the reason of meme's popularity but really need his/her memes to be used by more people. In the process of user interviews, games were found to be a good choice for popularising knowledge about memes. This is because young Internet users are receptive to new things and are more accepting of games as a way to teach and have fun.

3 Engagement with Theory, Mechanism

3.1 Transmission Mechanism Related to Sigmoid

Inspired by the Sigmoid function in former research [6], we adjust the horizontal axis to indicates the time in the game, the vertical axis indicates the number meme user as a proportion of the global population. Based on this, we decided the winning conditions for the game: Take over the **world faster**. Specifically, the player should find the strategy made his/her chosen meme spread faster than others, and also try to active the people around the whole world to become the meme user. This is reflected functionally as a greater slope and a greater asymptotic value on Sigmoid.

Basically we have chosen three attributes that we want to express to players and have rather solid literature review to back up. The three attributes are positivity, negativity and nostalgia. Next step, we allocated those messages on the Sigmoid (Figure 3).

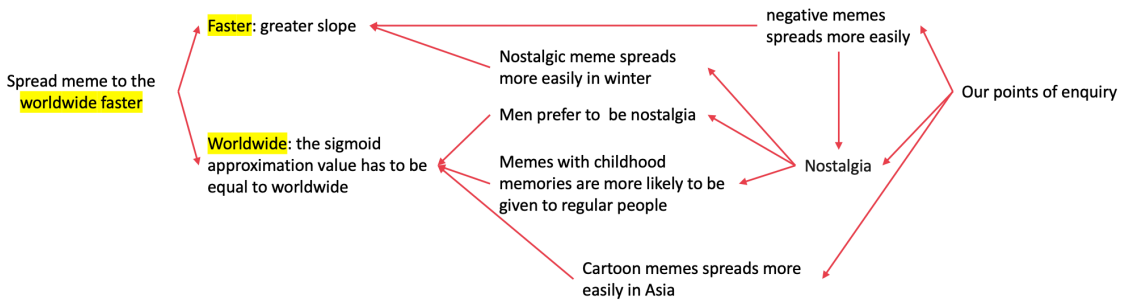

Figure 3: Game mechanism related to Sigmoid

3.2 Greater Slope

The researches involved easier spread is categorised in greater slope. After the player making an action, the transmission will be greater (Figure 4).

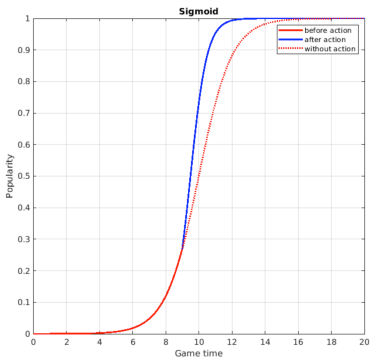

Figure 4: Faster

The corresponding researches are negative and the relationship between winter and nostalgia. On the table below, we also include the details in the game, like the game action and the final report we want to show at the end of the game. (Figure 5).

3.3 Greater Asymptotic Value

Similarity, the researches related to involving more users are categorised in greater asymptotic value (Figure 6).

The researches focus on nostalgia target users are inside this section. Besides, the discovery of image style format is also included (Figure 7).

Research	Mechanisms	Action	Report Text	Reference
Negative memes are easier to spread	The higher the negative (>50), the faster the increase in popularity!	Change to negative emotion text.	On 12 January 2023 you changed the text so that the negative emotion increased. In addition to this, you did 10 actions on negativity, which increased the level of negative points from 10 to 88.You chose a more negative meme, and the negative emotion helped your meme to spread!	Kate M Miltner. ""There's no place for lulz on LOL Cats": The role of genre, gender, and group identity in the interpretation and enjoyment of an Internet meme". In: First Monday(2014) Sedikides, C. et al. (2008)'Nostalgia: Past, Present, and Future', Current Directions in Psychological Science, 17(5), pp. 304-307. doi: 10.1111/j.1467-8721.2008.00595.x.
Nostalgic meme spreads more easily in winter	Chance cards for nostalgic memes as we head into the winter months.		Have you noticed an increase in your meme propagation rate during the winter months? An average of 4,325 people per day, the most of any of the four seasons. This is because people are more nostalgic in winter and like to spread the old meme!	Xinyue Zhou et al. "Heartwarming memories: Nostalgia maintains physiological comfort." In:Emotion12.4 (2012), p. 678

Figure 5: Research engagement - faster

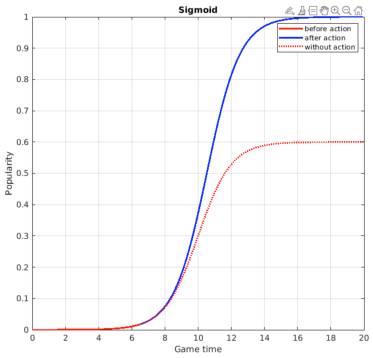

Figure 6: Wider

Research	Mechanisms	Action	Report Text	Reference
Asians prefer to spread cartoon meme	Take action to change meme into comics so that popularity in Asia increased.		On 12 March 2024 you changed the format from photo into cartoon. Cartoon memes spread wider and faster in Asia!	Asaf Nissenbaum and Limor Shifman. "Meme templates as expressive repertoires in a globalizing world: A cross-linguistic study". In: Journal of Computer-Mediated Communication23.5 (2018), pp. 294–310.
Old memes spread more easily compared with meme of other attributes.	Each meme has its own age, and when the age of the meme is the player's childhood adolescence, the popularity grows 1.2 times its original size.		You chose a meme that is relatively the same age as you, and did you notice that it also spreads to your peers very quickly? That is because old memes spread faster to certain age group.	Kentaro Oba et al. "Memory and reward systems coproduce 'nostalgic' experiences in the brain". In: Social cognitive and affective neuroscience11.7 (2016), pp. 1069–1077
Compared to women, men are more likely to nostalgia.			Your meme has been forwarded by men mostly. This is because compared to women, men are more likely to nostalgia.	Robert M Schindler and Morris B Holbrook. "Nostalgia for early experience as a determinant of consumer preferences". In: Psychology & Marketing20.4 (2003), pp. 275–302

Figure 7: Research engagement - wider

3.4 Other

Researches related to other mechanics were concluded in this form. Those mechanics are the special part of meme that different from the transmission of the virus. Therefore, can't allocate to Sigmoid. For example, the chaos of meme spread (Figure 8).

Research	Mechanisms	Action	Report Text	Reference
Meme needs a proper promotion strategy to go viral	The more action taken on promoting the faster increase in popularity	Promoting memes by celebrities or influencers.	On February 26th, 2022, You licensed the images to various advertisers. Your meme have the image put on t-shirts sold by Hot Topic. Smart publicity strategy makes your meme successful quickly.	Inspired by the case of famous meme "successful kid".
Meme spread like virus to some extend	The more popular the meme, the more gem user have, the more chances they have to edit meme(action).		Have you noticed that your meme spreads quite rapidly in the middle of the game? That is because memes follow a transmission route like the one of virus!	Le-Zhi Wang et al. "A model for meme popularity growth in social networking systems based on biological principle and human-interest dynamics". In: Chaos: An Interdisciplinary Journal of Nonlinear Science29.2 (2019), p. 023136.
The spread of meme is unpredictable.	Create sudden fluctuations in popularity points with the chance card		Your meme suffered a lot of setbacks in spreading the word and the fame points sometimes plummeted, but you didn't give up, and that's why it worked.	Susan Blackmore and Susan J Blackmore. The meme machine. Vol. 25. Oxford Paperbacks, 2000.
Nostalgia is triggered by dysphoric states such as negative mood and loneliness.	Nostalgia is associated with negativity.			Sedikides, C. et al. (2008)'Nostalgia: Past, Present, and Future', Current Directions in Psychological Science, 17(5), pp. 304–307. doi: 10.1111/j.1467-8721.2008.00595.x.

Figure 8: Research engagement - others

3.5 Game process

A typical round of this game lasts around 10 minutes, with users required to anticipate the world of memes in ten years from now(Figure 9). Each player will be shown at least 3 chance cards that will teach them something about how memes spread. Each new meme's 'negativity', 'positivity' and 'nostalgia' are judged by the panel of 4 voters. As this releases a message that the game itself is not providing an overly strong message on these attributes.

4 Reflection

4.1 Iteration

4.1.1 Increasing randomness

Compared with disease transmission, memes are much more complicated in terms of the mechanisms of transmission. Many factors need to be taken into account. It is therefore impossible to simply modify a disease transmission model, but rather to add some randomness.

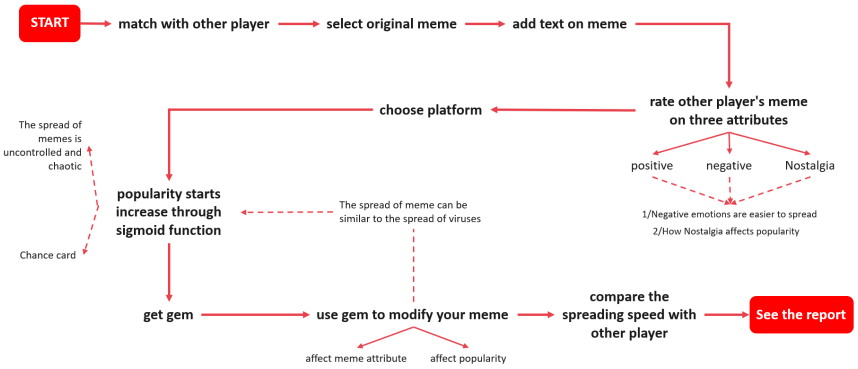

Figure 9: Process of the game

4.1.2 Players rate themselves

To better understanding of what different players think about different memes, at the beginning of the game, a section where players rate each other's meme is added.

4.1.3 Visualisation

In the final report including a data visualisation, which players can see their own summaries and records from this round of play.This help users better understand why their memes can go viral.

4.2 future work

In this project, there remains several issues among which the following three being the most thought-provoking. First, the attributes that we have chosen as Negativity, Positivity and Nostalgia. However, this research fell short in providing a systematic methodology proving that these three attributes are in fact the determinant factors when it comes to the come-back of a meme. Last, the problem of how we assign each action to a specific change in three attributes given that different actions may have aroused different emotions of different people and are thus extremely subjective. The resolving this problem requires extensive prior user research and touches also psychology and many facets.

References

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