

# Research on the Effects of Meme Usage from the Perspective of Media Ecology School: The Case of the Popular Qatar Little Prince Memes (Post-print)

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## Abstract

With the rapid development of intelligent technology, immersive screen consumption is becoming increasingly popular, and memes as symbolic forms have appeared frequently in online chat conversations. During the 2022 Qatar World Cup, the young prince of the host country, Qatar, quickly became popular on social platforms with a meme that resembled the mascot of this World Cup, “La’eeb”. Compared to text and video, why has the meme format become widely known in Qatar? This article will explore the communication effects of memes from the perspective of the media ecology school.

## Full Text

### Preamble

**Research on the Communicative Effects of Memes from the Perspective of Media Ecology: A Case Study of the Qatar Little Prince Meme’s Popularity**

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**Abstract:** With the rapid development of intelligent technology, immersive screen consumption has become increasingly prevalent, and memes have emerged as a frequent symbolic presence in online conversations. During the 2022 Qatar World Cup, the little prince of host nation Qatar rapidly gained popularity across social platforms through a meme resembling the tournament mascot “La’eeb.” Why did this meme format achieve widespread recognition in

Qatar compared to text and video? This article explores the communicative effects of memes through the theoretical lens of the media ecology school.

**Keywords:** Media ecology school, Meme narrative, Hot and cold media

## Introduction

With the continuous evolution of the Internet and social media, memes—having emerged as a new form of popular culture in recent years—have gradually become an indispensable means for expressing specific emotions in online communication. Emoticon culture represents a mainstream phenomenon that has arisen alongside increased online social interaction, often revealing a person’s hidden authentic self. At times, memes convey genuine thoughts and feelings that cannot be expressed through words alone, occupying the space where traditional language and writing fall short. Their widespread dissemination stems from their ability to compensate for the weaknesses of tedious written communication and imprecise attitude expression, thereby effectively improving communication efficiency. With the ubiquitous adoption of smartphones and extensive use of social applications, emoticons have become increasingly prevalent in online chat conversations. During the 2022 Qatar World Cup, Qatar’s little prince quickly became popular on social platforms through a meme resembling the tournament mascot “La’eeb.” We observed that textual introductions rarely helped people understand the Qatar little prince, yet when a meme—seemingly containing less content than text—appeared, his image was immediately understood across the entire network. This phenomenon raises several questions: Why did textual and video communications from the Qatar region not achieve viral spread previously, while meme-based content attained excellent communicative effects? What mechanisms underlie this phenomenon? What role have memes played in enhancing perception of Qatar’s national image?

## 2.1 Literature Review on Meme Culture Phenomena

In recent years, Chinese scholars have conducted multi-dimensional research on meme culture. In a 2022 article, Zhang Wenna from Northwest University explored the application of semiotics in online expression design, summarizing general developmental patterns from semiotic and artistic design perspectives. Shen Hang, Lu Shiyu, and Kong Didi from Nanjing University of Technology, in their 2022 study “Research on Connotation Perception Differences and Design Trends of Social Memes—Taking the ‘Smile’ Meme as an Example,” investigated cognitive differences among various user groups regarding emoticons based on graphical symbols. Yuan Fei and Yu Qian from Harbin Engineering University, in their 2022 work “Postmodernity Criticism and Order Reconstruction of Network Memes in the Context of New Media,” situated memes within the framework of Habermas’s communicative action theory and the principle of effectiveness, categorizing them within the life-world of communication theory.

## 2.2 Literature Review on Media Ecology School

The media ecology school, commonly known as the technology school, does not advocate “technological determinism”—the view that technology plays a fundamentally decisive role. Instead, it posits that technology forms a “media environment,” acknowledging technology’s significant role while rejecting it as the sole determining factor. This school emphasizes that the media environment can continuously and imperceptibly influence people’s cognition, attitudes, and behaviors, subsequently affecting all aspects of human society. Marshall McLuhan stands as a representative figure of this school, with his primary contribution being the theory of “hot and cold media.” This theory categorizes media into hot and cold types: “hot media” convey clear information with low recipient participation (e.g., pictures, radio, movies), while “cold media” transmit ambiguous information requiring high recipient participation (e.g., text, television, telephone). Since its proposal by McLuhan in 1964, this theory has attracted scholarly attention worldwide and generated numerous research findings. In 2015, Wang Zheng from Southwest Jiaotong University published “On the Functional Differentiation of Paper Media and Online Electronic Media under the Trend of Media Convergence—Based on McLuhan’s ‘Hot and Cold Media Theory,’” examining how media can maximize communicative effects amid media convergence. Liang Ce from Bohai University published “The Expansion of McLuhan’s Hot and Cold Media Theory in Communication Theory” in 2020, extending the theory by studying involvement levels in interpersonal communication. In 2018, Wang Lingxuan from Fuzhou University published “The Impact of Animation Symbols on New Media: Thinking Based on the Theory of ‘Hot and Cold Media,’” which integrated the development of animation symbols and new media in China with hot and cold media theory, arguing that “animation symbols, with their production freedom and broad extension space, meet the diverse visual mobilization demands of different ‘hot’ messages, thus becoming the most universal research object and primary symbolic resource for new media communication.”

However, these studies have not examined meme usage effects from a media ecology perspective, nor have they addressed why memes achieve strong communicative effects or elucidated their underlying mechanisms. Additionally, they have not comparatively measured the communicative effects of different formats—such as text versus memes—in enhancing public awareness of specific topics.

## 2.3 Research Questions

Therefore, this article departs from McLuhan’s “hot and cold media” theory and uses the Qatar little prince meme as a case study to analyze how its communicative power compares with that of text and how it contributes to enhancing public perception of Qatar’s image.

### 3.1.1 Hypothesis Development

To address the gap in research on meme effects from a media ecology perspective, we employed an audience survey methodology. Based on questions regarding comparative communicative power and image perception enhancement, we propose the following hypotheses:

**H1:** Memes possess stronger communicative power than textual content.

**H2:** Memes can enhance public perception of Qatar's national image more effectively than textual content.

To test these hypotheses, this study utilizes a questionnaire survey with questions designed across different dimensions.

### 3.1.2 Sampling Method

The target population for this study comprises internet users who employ memes on online platforms. We first conducted representative sampling of this group, selecting residents from the author's residential community as the study population. Second, we compiled a comprehensive sampling frame based on building and house numbers within the community. Third, we performed hierarchical multi-level sampling on this frame with a 95% confidence interval and 3% sampling error, selecting 200 individuals as our sample. When encountering access denial, we sequentially sought the next available participant to maintain the sample size.

We designed a "Questionnaire on the Use Effect of the Qatar Little Prince Meme" on the Questionnaire Star platform (see appendix) and distributed it through QQ, WeChat, and offline channels. The survey completed data collection, collation, and analysis on February 4, 2023. The instrument focused on open and closed-ended questions, totaling ten items covering: (1) basic demographic information including gender, age, and education (six questions); (2) investigation of the Qatar little prince meme's dissemination (three questions, including two Likert-scale items measuring willingness to like, comment, and repost text versus meme content about Qatar); and (3) assessment of Qatar's national image perception through questions spanning political, economic, and cultural dimensions.

## 4.1 Sample Characteristics

The survey collected 207 valid questionnaires. The sample consisted of 81.16% female respondents, 95.65% aged 18-36, 80.68% holding bachelor's degrees, and 94.69% who tended to use facial memes when communicating with family and friends. Regarding usage frequency, two categories accounted for the largest proportions: 32.37% used facial memes 1-10 times per week, while 49.76% used them more than 20 times weekly. Among all respondents, 86.47% reported encountering the Qatar little prince meme on social platforms.

We selected a 600-word article from third-party media on Weibo during the 2022 Qatar World Cup focusing on tournament expenditure information. Only 6.28% of respondents disagreed that “this text clearly conveys that the Qatar World Cup cost substantial money,” while merely 11.11% disagreed that “this text saved me time in understanding the Qatar World Cup cost information.” The vast majority acknowledged the text’s richness. However, willingness to comment on, like, and repost the text remained quite low at 29.47%, 35.36%, and 16.42%, respectively.

In contrast, only 35.75% believed the Qatar little prince meme clearly conveyed information, and only 35.74% felt it saved time in learning about the little prince. Nevertheless, 40.1%, 46.38%, and 42.03% of respondents expressed willingness to comment on, like, and repost the meme, respectively—significantly higher than the corresponding figures for text-only content.

Regarding Qatar’s national image perception, we included questions with relatively fixed expected answers, such as “Qatar is a wealthy and rapidly developing country,” “Qatar has abundant oil and natural gas resources,” and “Qatar has a well-developed football industry and is a sports powerhouse.” More than half of respondents selected our anticipated answers, with agreement rates of 56.04%, 67.64%, and 22.22%, respectively (the predicted response for the “developed football career” question was “Disagree”).

## 4.2 Meme Communicative Power and National Image

The questionnaire yielded 207 valid responses. Questions related to textual material were summed and averaged to create the variable “text communication power,” while those related to meme material were processed similarly to generate “meme communication power.” “Communication power” encompassed willingness to like, repost, and comment on content, as well as perceived interest, comprehensibility, and information clarity. Descriptive analysis revealed that meme transmission power exceeded that of text, with mean scores of 3.2 and 3.3, respectively. These differences proved statistically significant at a 95% confidence interval, indicating that the Qatar little prince meme possessed stronger communicative power than textual content. Consequently, **H1: Memes have stronger transmission power than text** is supported.

Pearson correlation analysis examining relationships between “text communication power,” “meme communication power,” and “national image” revealed that both text and meme communication power correlated significantly and positively with national image ( $r = 0.468, p < 0.01$ ;  $r = 0.588, p < 0.01$ ). However, the correlation coefficient was stronger for meme communication power, demonstrating that memes more effectively enhance public perception of Qatar’s national image compared to text. Therefore, **H2: Memes can enhance public perception of Qatar’s national image more than text** is supported.

According to McLuhan’s “hot and cold media” theory, different media affect people differently, producing distinct psychological and behavioral responses.

Through comparative study of cold media (represented by text) and hot digital media (represented by memes), we found that meme narrative, unlike textual symbol narration, compresses language's imaginative space and reduces the time required to express equivalent meaning. Memes are received directly through visual senses via intuitive imagery, classifying them as hot media. Consequently, memes emphasize emotional expression more than text, fulfilling their etymological mission of “expressing inner thoughts and feelings through facial or postural changes”—essentially a form of “body + emotion” expression. Memes' advantages center on their unique social attributes; their high participation rates facilitate more efficient user interaction while maintaining lower production costs. This combination sparks heated discussions among netizens on meme-related topics. Within this online communication space, the “Prince of Qatar” meme functions like a password, introducing new discussion topics to social groups through highly interactive means.

### **5.1 The High Communicative Power of Memes Can Effectively Enhance Overall National Image Perception**

This study investigated the popularity of the Qatar little prince meme through questionnaire survey methodology, analyzing the effects of meme usage and its contribution to enhancing public perception of national image. Findings indicate that memes emphasize emotional expression, offering greater intuitiveness than text while remaining interesting and lively. Most memes integrate current internet hotspots—a quality known as “you geng” (the ability to grasp and utilize trending topics for humorous effect)—making them more popular with audiences. This generates stronger communicative power than text-only content, motivating audiences to learn about Qatar through richer text, video, and other formats in the future. Memes can enhance overall perception of Qatar's national image by combining political, economic, and cultural dimensions, thereby facilitating cultural exchange and dissemination. In short, an interesting meme serves as a threshold that encourages audience willingness to understand a particular culture. Although not as content-rich as text or video, its role in attracting audience interest is immeasurable.

### **5.2 Memes as a Critical Component in Reducing Online Communication Difficulty and Achieving Effective Information Transmission**

As a popular medium, memes demonstrate stronger communicative power than textual content and can enhance public perception of Qatar's national image more effectively than text. This study demonstrates that the “hot and cold media” theory remains applicable to meme usage. Meme popularity enables precise linking of information and emotions among people, achieving effective transmission of both. Since both parties in online communication are separated by screens, accurately conveying intentions and tone through text alone proves dif-

difficult and often leads to misunderstandings. Memes' concise content effectively compensates for these shortcomings in textual communication, allowing people to express aspirations and emotions across screens in more personalized and precise ways, thereby meeting diverse communication needs in modern society. Even when different users interpret the same meme differently, users sharing similar age, cultural background, and education level tend to develop consistent or similar understandings, thus reducing online communication difficulty.

Albert Mehrabian, a specialist in nonverbal symbols, proposed that language and vocal tone account for 45% of communication, while facial and postural expressions comprise 55%. This underscores the importance of facial and bodily expressions in communication processes. While facial expressions and body posture cannot be transmitted across screens, the combination of graphics and text in memes provides an effective substitute, enhancing the interactive quality of online social communication.

### 5.3 Reflection on Meme Overuse

However, excessive meme usage warrants concern, as it can trigger pan-entertainment tendencies. People engage in endless pranks and slanders against positive images, leading not only to the phenomenon of “worn-out jokes” but also deteriorating language expression skills among young people. For instance, after a video of a Chinese artist playing basketball in suspenders during his trainee period went viral, platforms such as Bilibili became saturated with various spoof videos. Many popular content creators intentionally or unintentionally incorporated jokes about the artist to increase user engagement and platform stickiness. Simultaneously, many users took pleasure in these jokes regardless of context, sparking online flame wars that hinder the creation of a clean network environment. Similarly, a photo of a Chinese singer engaged in public welfare work—helping sanitation workers sweep floors—was spoofed by netizens who assigned it the connotation that “XX wants to beat you after hearing this.” The singer publicly stated that young people's values are being distorted and that no one is contemplating the underlying issues. Behind the entertainment of such public welfare initiatives lies actual devaluation.

The rise of meme culture stems from its novelty, humor, and more efficient meaning expression compared to words, reflecting the individuality and innovative vitality of the younger generation under liberalism's influence. Meme culture is gradually influencing mainstream culture. Spoof celebrity memes consistently demonstrate greater market vitality due to celebrities' high popularity and the dilution of portrait rights by their public attributes. Objectively speaking, moderate use of humorous expressions can appropriately convey opinions and emotions while providing emotional release and should not be regarded as inherently harmful. However, if the virtual nature of the internet, the low cost of irresponsible behavior, and the banner of “entertainment supremacy” transcend the bottom line constrained by social ethics without restraint, this pan-liberalism may create “online mobs” and potentially extend internet rage

into real society.

Conversely, while we acknowledge the convenience of facial memes in online communication, excessive use can diminish language organization and communication skills, affecting real-life interactions. Overuse of memes increases communication inertia and can lead to loss of expressive ability. Matters that could be resolved through memes may no longer be expressed through language, subsequently impacting real-life expressive capabilities and resulting in so-called “text poverty” and “thought poverty.”

## 5.4 Conclusion

In future research, communication scholars should pay greater attention to the communicative effects of this emerging network culture. Through investigation of network communication phenomena, researchers can enrich and develop classic communication theories and apply them to guide various network communication practices.

## References

- [1] Zhang Wenna (2022). Exploring the Application of Semiotics in Network Expression Design. *Media Forum* (21), 97-99. (in Chinese)
- [2] Shen Hang, Lu Shiyu & Kong Didi (2022). Research on the differences in content perception and design trends of social memes—Taking the meme “smile” as an example. *Beauty and the Times (Part 1)* (07), 27-29. (in Chinese)
- [3] Yuan Fei & Yu Qian (2022). Post modernity criticism and order reconstruction of network memes in the context of new media. *Journal of Nanjing University of Posts and Telecommunications (Social Science Edition)* (03), 52-60. (in Chinese)
- [4] Liang Ce (2020). The expansion of McLuhan’s hot and cold media theory in communication theory. *Introduction to News Research* (05), 61-62+114. (in Chinese)
- [5] Sun Yixiao (2020). Analysis of the transmission mechanism of facial memes as an interactive interface—take the facial memes of “urging elders to wear masks” in the COVID-19 period as an example. *News Communication* (03), 41-43. (in Chinese)
- [6] Wu Di (2019). Research on Network Communication of memes from a Postmodern Perspective. In School of Culture, Industry, and Tourism, Xiamen Institute of Technology (eds.) *Cross Strait Creative Economy Research Report (2019)* (pp. 173-185). *Cross Strait Creative Economy Research Report (2019)* (in Chinese)
- [7] Kim Mi Kyung, Lee Yoon Kyung & Yim Eun Hyuk. (2018). Semiotic Characteristics of Emoji Communication in the Changed Fashion Media Contents. *Journal of the Korean Society of Costume*(7), 74-89
- [8] Hesse Biber Sharlene & Flowers Hilary. (2018). When You Change the Mode, You Change the Message: Insights From Marshall McLuhan’s Medium

Theory and Impacts on the Overall Research Process and Mixed Methods Inquiry. *INTERNATIONAL JOURNAL OF MULTIPLE RESEARCH APPROACHES*(1), 124-135

[9] Wang Lingxuan (2018). The Impact of Animation Symbols on New Media: Thinking Based on the Theory of “Hot and Cold Media.” *Modern Communication (Journal of Communication University of China)* (01), 123-127. (in Chinese)

[10] Wang Zheng (2015). On the functional differentiation of paper media and online electronic media under the trend of media convergence—based on McLuhan’s “hot and cold media” theory. *Journal of Chengdu Textile College* (03), 141-143. (in Chinese)

[11] Moon Jung-Pil. (2012). A Study in the Media Message of Jacques Herzog & Pierre de Meuron’s Architectural Skin—Focused on the Media Theory of Marshall McLuhan. *JOURNAL OF THE ARCHITECTURAL INSTITUTE OF KOREA Planning & Design*(8), 131

## Appendix: Questionnaire on the Use Effect of the Qatar Prince’s Memes

### 1. Basic Information

1. What is your gender?
  - A. Male
  - B. Female
2. What is your age?
  - A. Under 18 years of age
  - B. 18-36 years of age
  - C. 36 to 59 years of age
  - D. 60 years of age and above
3. What is your educational background?
  - A. Postgraduate and above
  - B. Undergraduate
  - C. Junior college and below
4. Have you ever used facial memes on social media such as Weibo, Tiktok and Xiaohongshu?
5. If you have ever used an emoticon pack, what are the scenarios you use?
  - A. Communicate with family and friends
  - B. Communicate with unfamiliar netizens
  - C. Comment on news reports and other content
  - D. Other

### 6. How often do you use facial memes?

- A. 1-10 times a week
- B. 11-20 times a week
- C. More than 20 times a week

## 2. Investigation on the Communication Power of the memes of the little prince of Qatar

7. Did you see the meme of the little prince of Qatar when browsing related content of the 2022 Qatar World Cup on social platforms?
8. Please browse the following paragraph and answer the question.  
(1=strongly opposed, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

\*#The World Cup that burns the most money in history # [# Qatar's 1.2 times GDP creates the World Cup #, Qatar is so "entrenched"?] # The World Cup that is surging # This World Cup is unprecedented. Not only was it the curtain call for star players such as Messi and Ronaldo, but it was also the first time it was held in Qatar, a desert country that had not yet reached the World Cup finals. It was also the most expensive World Cup in history. In order to welcome the arrival of the World Cup, the host Qatar and FIFA seem to be incarnated as "loose money children," with the funding and participation bonuses reaching new highs. According to the United States sports business media Front Office Sports, the Qatar World Cup is expected to cost \$220 billion since its preparation. What is the concept of plunging \$220 billion? This is almost enough for Russia to host another 19 World Cups. The total expenditure of the past seven World Cups has been approximately \$44.3 billion, which is only less than 20% of its total. The World Bank disclosed that Qatar's GDP in 2021 was \$179.57 billion, nearly \$40.5 billion less than the cost of this World Cup.

In order to make it easier for fans to watch football back and forth, Qatar spent \$16 billion on expanding the airport with a flick of its left hand, and \$36 billion on building three subway lines that are more than 70 kilometers long with a flick of its right hand. Not only that, the city where the Qatar World Cup home stadium is located, Lusser, was almost built from scratch. Originally a small village, it is now a modern city with complete facilities such as hotels, parks, docks, and shopping centers.

It is difficult to predict the impact of a major event that has attracted worldwide attention on the host country, but Qatar officials are confident in this economic account. According to Qatar News Agency, Nasser Al Hart, CEO of the Qatar World Cup Organizing Committee, said that the current infrastructure construction of the World Cup itself has cost approximately \$8 billion. However, during the World Cup, nearly 1 million people will visit Qatar, and it is expected that the economic benefits brought by the World Cup to Qatar can reach 17 billion US dollars, which is more than twice the investment.\*

- (1) I would like to comment on this paragraph.

1 2 3 4 5

- (2) I would like to give this passage some praise.

1 2 3 4 5

- (3) I am willing to forward this paragraph.  
1 2 3 4 5
- (4) I think this passage clearly conveys the message that the Qatar World Cup is expensive.  
1 2 3 4 5
- (5) I think this passage is interesting.  
1 2 3 4 5
- (6) I think this passage saved me time understanding the cost information of the Qatar World Cup.  
1 2 3 4 5
9. Please browse the meme below and answer the questions. (1=strongly opposed, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)
- (1) I would like to comment on this emoticon pack.  
1 2 3 4 5
- (2) I would like to give this expression a little praise.  
1 2 3 4 5
- (3) I am willing to forward this emoticon package.  
1 2 3 4 5
- (4) I think this meme clearly conveys the message of the little prince of Qatar.  
1 2 3 4 5
- (5) I think this meme is interesting.  
1 2 3 4 5
- (6) I think this meme saved me time getting to know the little prince of Qatar.  
1 2 3 4 5

### 3. Qatar National Image Awareness Survey

10. Please answer the following questions about Qatar's national image perception. (1=strongly opposed, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

#### (I) Overall image

- (1) Qatar is a country with good governance, social harmony and stability.  
1 2 3 4 5
- (2) Qatar is a wealthy and rapidly developing country.  
1 2 3 4 5

#### (II) Political image

- (3) Qatar has a good national image and a high international status.  
1 2 3 4 5

**(III) Economic image**

(4) Qatar's economic development is conducive to global economic development.

1 2 3 4 5

(5) Qatar has a high level of national consumption and strong consumption capacity.

1 2 3 4 5

(6) Qatar has numerous oil and natural gas resources.

1 2 3 4 5

**(IV) Cultural image**

(7) Qatar's culture is rich and diverse.

1 2 3 4 5

(8) Qatar's culture is advanced and inclusive.

1 2 3 4 5

(9) Qatar's contemporary culture is full of vitality.

1 2 3 4 5

(10) The relevant culture of the Qatari royal family is interesting.

1 2 3 4 5

(11) Qatar's scientific and technological level is leading in the world.

1 2 3 4 5

(12) Qatar has a developed football industry and is a major sports country.

1 2 3 4 5

**(V) Social image**

(13) Qatar has good social security.

1 2 3 4 5

(14) Qatar has diverse consumption patterns and rich commodities.

1 2 3 4 5

(15) Qatar has very convenient transportation.

1 2 3 4 5

*Note: Figure translations are in progress. See original paper for figures.*

*Source: ChinaXiv — Machine translation. Verify with original.*