

A Case Study: The Effect of Traffic Police Mascot (CPSP) in Promoting Pedestrian Crossing Habits

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Abstract: *The Macao Public Security Police Force recently introduced a mascot for social media promotion, sparking lively discussions among local netizens. This article examines a traffic accident as a case study to evaluate the impact of the Public Security Police Department's mascot on pedestrian crossing habits. The research findings indicate that residents of Macao have shown improved awareness of traffic safety and adherence to traffic laws. However, it highlights a concerning trend among visitors to Macao who need more understanding of traffic safety protocols, potentially endangering road users. In conclusion, the article recommends the government to employ diverse publicity strategies to educate and enforce compliance with traffic regulations among violators.*

Keywords: *Police mascot; Effect of traffic; Promoting new habits; social media promotion; pedestrian crossing*

1. Introduction

Traffic safety is a critical concern in urban areas worldwide, and the effectiveness of various strategies to improve pedestrian behavior is continually evaluated^[1]. In Macau, a recent initiative by the Macao Public Security Police Force (PSPF) introduced a mascot, known as "Cartoon Sir," to promote traffic safety through social media and public engagement. This initiative sparked significant public discussion, particularly following a traffic accident involving an international student unfamiliar with Macau's traffic rules.

The mascot's deployment aimed to address the observed increase in pedestrian violations and enhance awareness and adherence to traffic laws among both residents and visitors. However, while the initiative received positive feedback for its innovative approach, it also highlighted challenges, especially in effectively reaching tourists who may not be familiar with local traffic regulations.

This study explores the impact of the PSPF's mascot on promoting pedestrian crossing habits and its effectiveness as a communication tool on social media platforms^[2]. By analyzing a specific traffic accident case and conducting interviews with various stakeholders, this research aims to provide insights into the potential of mascots as a means of public safety promotion and their role in shaping pedestrian behavior in Macau. The findings will inform future strategies for improving traffic safety and enhancing the communication efforts of law enforcement agencies.

2. Background of the study

The traffic accident that took place in Macau on November 16, 2023, involved an international student from Chinese mainland who was struck by a car while crossing the road on his way home^[3]. This is the starting point of this paper.

In Macau, traffic rules stipulate driving on the left side, while in Chinese mainland, right-hand driving rules are followed. The student was accustomed to the traffic rules in Chinese mainland. She did not use the designated crossing facilities. She instinctively looked to the left to look at the car and stepped into the lane in the middle of the car, causing a collision with a vehicle coming from the right. This incident sparked extensive discussion online, with some netizens (drivers) sharing their own experiences and expressing various opinions about the event.

Following the accident, social media continued to be flooded with photos and videos of pedestrians violating regulations in other places in Macau on social media. Although police are aware of the problem, their response has been limited to increasing enforcement of pedestrian violations without addressing

underlying pedestrian behavior patterns. To improve pedestrians' awareness of law-abiding and compliance with relevant laws and regulations, the police filmed educational video advertisements with a police mascot on main streets to remind pedestrians to abide by the relevant regulations when crossing the road. However, on the day of the shooting, the police mascot was photographed by netizens and uploaded to social media, reigniting the debate over its effectiveness and appropriateness.

Subsequently, at the regular meeting of the Macao Legislative Council, many legislators said that netizens agreed that the police's use of soft publicity was an appropriate measure. "A brand image incorporates multiple images and experiences in the minds of citizens or travelers, symbolizing its promises, benefits or values on which they can rely"^[4]. Therefore, as an officer of the police force, the researcher found a research gap on the use of mascots by local government agencies in Macau. This article will explore the need to find new and creative ways to engage with the public, aiming to establish or maintain relationships through positive messaging embedded in media. It will also examine the effectiveness of the Public Security Police Force mascot in promoting pedestrian traffic habits in Macau and its impact on social media platforms^[5].

It is necessary for the Public Security Police Department to understand the impact of brand image on citizen or traveler interactions^[6]. Because of this, through the above cases, we can better understand whether the message sent by the Public Security Police Force meets the needs of the public or tourists, and whether the relationship between them can benefit Macao as a whole. These findings can be used to provide more reliable data to the Public Security Police Force of Macau of Department. The research will provide insights into the two aspects:

- 1) Police mascots effectively influence the public's (citizens or travelers) road crossing habits.
- 2) Police mascots effectively and widely spread on social media.

3. Mascots

The concept of mascots in our culture has a history of thousands of years^[7], and there are many opinions on its origin. It has different versions, different regions, different characteristics, and different meanings. It has a combination of practicality and beauty, brand and culture. Some refer to "Masco" or "Mascotte" from French, meaning which^[8], some refer to the mascot as being derived from real people or animals or things^[9], and other articles point out, mascots are mainly developed from five origins such as totems, auspicious decorations, Olympic Games, industry shapes, puppets, etc.^[10], and Japan uses Gotouchi Kyara and Kurukyara to define Japanese police mascots.

In China, mascots are an integral part of auspicious culture, rich in artistic forms, and hold an important traditional role. They also serve as cultural symbols and objects with deep cultural significance. Mascots have aesthetic, educational, and regulatory functions that influence people's daily lives^[11]. Since ancient times in China, people have worshiped or offered sacrifices to some natural or cultural items as auspicious concepts, allowing people to develop their own auspicious concepts. In addition to satisfying people's spiritual life, it is also closely related to social organization systems, legal systems, marriage systems, etc., forming a complex religious and cultural system, which played an important role in the initial human society.

Some believe that mascots can establish emotional value, embodying spirit and reflecting the beliefs, politics, economics, and culture of different societies^[12]. Contemporary mascots are representative images, designed with specific concepts, serving as cultural symbols or brand images and acting as effective communication tools in the modern era. A mascot is a form of personification that connects a brand or institution^[13]. Additionally,^[14] outlined the following potential benefits of mascots:

- (1) increase brand awareness,
- (2) improve the brand's communication capabilities.
- (3) enhance consumers' motivation and ability to process information and increase their affinity and love for advertised products.
- (4) Be potentially more convincing and can match the personality of the target users.

Mascot anthropomorphism would be viewed as a form of social compensation^[15], and some evolutionary theories describe anthropomorphism as a way of understanding, describing, and predicting the natural world and recognizing one's connection to all things^[16].

Mascots can be divided into dynamic and static, which are affected by design, technology, physics and tools. Dynamic auspiciousness can allow performers to interact with people and digitally, and can convey more review information; in addition, it can also be static and non-interactive, such as models and images.

The image of Ronald McDonald and the "Golden Arches" logo are symbols of McDonald's global recognition among people of all ages. They are some of the most recognized marketing and media tools. In recent years, mascots have flooded into social media, forming many tools for communicating specific images. Social media can provide a place where mascots can come alive and interact with citizens or tourists. As ^[17] mentioned, "Brand image is created to promote the brand by establishing a brand image and good brand associations... They also help the brand come alive with human qualities such as emotions, thoughts and personality".

4. Traffic conditions in Macau

Macau Law No. 3/2007 was implemented in Macau on October 1, 2007. It stipulates the current "Road Traffic Law". This law has undergone many major revisions over the years and has been implemented by the High Commission for Transport, the Traffic Affairs Bureau and the Public Security Police. The Bureau is the unit that enforces regulations, and the Transportation Bureau is responsible for formulating Macau's transportation policies and setting up traffic signs and signals and all other work related to land transportation. The Public Security Police Force is responsible for executing daily traffic matters in Macau, handling and investigating traffic accidents, etc. Macao's total land area in 2023 will be 33.3 square kilometers, while Macao's total road area will be 349.6 kilometers. The total number of motor vehicles in 2023 will reach 251,867, and the density of motor vehicle use in Macao is relatively high.

In 2003, Hong Kong and Macau were affected by the epidemic. In order to revitalize the economy of Hong Kong and Macau, Chinese mainland launched a free travel policy for mainland residents to Hong Kong and Macau. This advancement boosted Macau's gaming, tourism, and souvenir industries, maintaining a high level of GDP growth. In 2019, with the diversification of Macau's economy, the strategic positioning of 'one center, one platform, and one base' aimed to transform Macau into a tourism training hub for the Greater Bay Area and a talent training base for Chinese and Portuguese professionals. In line with the implementation of the 'Guangdong-Hong Kong-Macao Greater Bay Area' Outline Development Plan, seven higher education institutions in Macau began recruiting high school graduates from mainland cities to enroll in Macau universities. The above three major policies have contributed to an increase in the number of tourists from Chinese mainland coming to Macau and the number of college students coming to Macau to study.

According to data from the Macau Statistics and General Affairs Bureau, in the fourth quarter of 2023, there were 8,284,800 visitors to Macau, 3,990,400 overnight visitors, 4,294,400 same-day visitors, and 5,682,594 visitors from Chinese mainland, accounting for 68.6%, followed by Hong Kong 1,837,015 passengers, accounting for 22.2%, and international passengers were 599,760, accounting for 7.2%. Inbound tourists are mainly from Chinese mainland.

There are many articles on traffic behavior in Chinese mainland, focusing on the research and analysis of pedestrians, including pedestrian behavior, speed, psychology, characteristics, pedestrians and traffic signals, violation communication, safety evaluation, etc. A large number of articles point out that pedestrians, as a vulnerable group in cities, are prone to accidents when crossing the road. The World Health Organization announced on December 13, 2023, that approximately 1.19 million people die in traffic accidents every year, and more than half of them are Pedestrians, cyclists and motorcyclists. Some studies show that pedestrians consider safety, convenience and comfort when making decisions to cross the road. Pedestrians In the traffic environment reviewed, vehicles and pedestrians interact with each other. Pedestrians mostly travel in order to save time and energy and achieve their travel purposes. If there is an emergency, people will run or cross several roads at once, or even cross the road when there are traffic lights, violating traffic rules. ^[18]

The rapid popularity of the Internet and social media has had a profound impact on the world, affecting almost everyone in modern society. With its user-friendly interface, almost everyone has a social media account. Social media was created to facilitate human connections and relationships through mutual interaction and networking.

In addition, social media is the main channel for obtaining information. Users regularly share daily

experiences, news updates, entertainment content and other valuable information. Given that traffic accidents are real-time news, social media is a high-speed medium for disseminating information. Therefore, many companies utilize social media platforms to effectively interact and communicate with consumers^[19].

5. Social media and news

The article pointed out that social media can be traced back thousands of years. With the advancement of science and technology, digital communication technology has promoted the formation of new media forms that strengthen communication and social connections^[20]. The convergence of social interaction and online media began with the emergence of Web 2.0, he further noted, enabling people to actively participate in the creation, shaping, and distribution of news and information, rather than passively consuming content produced by others^{[21][22]}.

Until today in the 22nd century, people's interactions through social media have been closely intertwined and have related characteristics such as participation, openness, dialogue, community and connection.^[23], not just reading news, but also the concept of participatory media culture. It is also an area of continuous development, research, and application, with media outlets around the world accepting social media as a way to spread news and connect with audiences^[24]. The media for Macao's news release is social media, and many netizens also have experience sharing news events on social media. Macau's news industry is accustomed to releasing news at regular intervals, such as the evening news on TV stations and 10 p.m. on newspapers. Some research points out that news is very important to individuals and society^[25], and social media shapes the evolution of news norms and practices. As can be seen from the traffic accident incident above, a traffic accident can attract the attention of the local society and spread rapidly in a short period of time. Social media has become a place for netizens and journalists to publish or obtain information. From the perspective of journalistic practice, social media has raised many conceptual and practical issues for journalists. It has not only changed the relationship between news producers and consumers but also challenges the journalist's authority to determine the value or credibility of the news^[26]. For netizens or citizen journalists who are concerned with news, digital technology is enabling more users to participate in media creation in more ways, extending their information collection, analysis and dissemination capabilities, and they no longer need to rely solely on media organizations to convey information to the general public.^[27] Macau local netizens post surrounding events through the platform, usually with simple descriptions, pictures or videos, and habitually share their information on services such as WeChat or Facebook, and respond to emoticons, comments or discussions in real time. This situation has become commonplace.

Studies have shown that people believe that journalists have greater access to additional news sources when they are at the scene of the incident or not at the scene. They can provide eyewitness photos, videos or narratives. While journalists face strict restrictions during the news production process, editorial control is still maintained^[28]. The audience is described as 'active recipients'^[29], expected to engage when news breaks and respond as it is released^[30]. Since the speed of publishing has always been a critical factor in the journalism industry—whether to meet publication deadlines or broadcast schedules—it is essential to seize news opportunities and stay ahead of competitors. This is one of the differences between citizen journalists.^[31]

6. Police and social media

The police mascots post was published on the Community Policing Page of the Public Security Police Force on Facebook on January 27, 2023 (a total of 41,000 fans). The video was played 25,801 times, liked 1,120 times, and the post was shared 1,431 times. There were 10 comments, mainly praising the police mascot for being cute and proud. The WeChat official account (Macau CPSP Information) had 9,567 views, 98 likes and 2 comments (emoticons).

Police use social media for community-oriented policing, often expressing police ideals rather than carefully planned outcomes^{[32][33]}. However, a police department's top priority for social media must be to attract sufficient public attention in a strategy that justifies the effort and cost involved in its use, given the potential positive impact of social media on police-community relations^[34]. Research has also found that social media can provide assistance to police in solving crime problems^[35].

Many scholars' case studies on the police's use of social media have shown that the following two main approaches can be taken to achieve large-scale "subscriber success" Facebook accounts^{[36][37][38]}:

(1) Treat the department's Facebook page as a personal account page and maintain it to sell police concepts (leader brand)

(2) Write Facebook posts in a friendly, informal dialect, use localized slang terminology, and tell humorous (often suspected derogatory) stories to deliver an engaging message. ^[39]

According to existing literature, social media provides institutions and organizations with the opportunity to connect with users without requiring extensive resources or being restricted by geography, facilitating seamless communication with a wide audience ^[39]. Macao governments and institutions have used this diverse social media as a tool ^[40]. At the same time, in Macau government departments, agencies and organizations are realizing the potential of platforms such as Facebook and WeChat in disseminating messages, promoting products or services, and enhancing brand image. The usage results of social platforms are shown in Table 1

Table 1: Macau residents' use of social platforms in 2022 (top 5)

No.	Social Media Platforms	Percentage
1	We Chat	85%
2	YouTube	72%
3	Facebook	62%
4	WhatsApp	59%
5	Instagram	46%

Ref: 2023 Macau Residents' Internet Usage Trend Report

According to the 2023 Macau Residents' Internet Usage Trend Report, Macau residents' Internet usage has increased significantly, especially popular social media platforms such as WeChat, YouTube, Facebook, WhatsApp, and Instagram. The report highlights that almost all Macau residents use social media for various purposes, including communicating with friends, obtaining news content, watching live broadcasts and participating in discussions. In addition, social media has become an important channel for Macau residents to express their opinions and participate in public affairs. Netizens actively comment and initiate discussions, highlighting the importance of the Macau government and business organizations to establish effective public opinion analysis and response mechanisms.

In recent years, the Macau Public Security Police Force has implemented a multi-faceted communication strategy, utilizing online and offline channels, as well as cooperation with communities, industries and professional associations. This practice aims to organize youth activities, encourage citizen participation, increase understanding of police work and promote public education. Research shows that police forces around the world are increasingly adopting new social media strategies to inform and engage with citizens, ultimately strengthening community relations and solving crime problems. The use of social media has also become part of the interaction with residents ^[41].

The mascot of the Macau Public Security Police Force, "Cartoon Sir", was first launched at the Macau Traffic Safety Carnival in 2017. Later, in 2018, "Cartoon Sir" or "Policy Sir" was designed for the police station's citizen fun day and began to appear in At large events. The mascot was initially used only for promotional purposes and not for social media purposes, but it appeared in a promotional video after a traffic accident in November 2023, attracting widespread attention from the Macau public.

Interestingly, research shows that people tend to attribute a sense of humanity to non-human objects in social media ^[42]. The article highlights the observation that anthropomorphic mascots can evolve into influential characters in the business world ^[43]. For example, mascots, as representatives of institutions or organizations, actively engage with audiences through various media channels. ^[44] elaborates on this point by stating that the 'GEICO Gecko' mascot, with over 50,000 followers on its social media accounts, has become the face of the company and plays a significant role in its promotional activities. This demonstrates GEICO's ability to effectively disseminate promotional messages through such media platforms.

In addition, mascots can also represent city brands, tourism images, and can even be used in government marketing efforts to enhance the brand image of government agencies and fulfill specific missions and goals. It has advantages over real spokespersons, including lower production costs, greater resistance to image damage, and easier management ^[45]. There are also studies showing that mascots are inherently more likely to be successful ^[46]. However, there is still a research gap on the application of mascots within local and government agencies in Macau. ^[47] Research has found that professional tennis players use social media to give their mascots anthropomorphic personalities, thereby enhancing the connection between fans and sports events. In addition, on the Facebook page of the Public Security Police Force, a post about the mascot (including a video) received 2,918 likes, 537 shares, and 375

comments in a single day. Netizens praised the video for its well-made production and the mascot's appeal. It can be seen and inferred that people develop relationships with mascots, affirming the effectiveness of using mascots for publicity to attract attention.

7. Research methods

To learn more about the impact of various promotional strategies, such as police department mascots, on promoting pedestrian crossing habits, this study used qualitative research and interviews to collect data. Use "document analysis method"^[48] to organize relevant academic articles and analyze the relationship between mascots and social media. Finally, conclusions were drawn based on the in-depth interview method.

Interview is an effective tool for directly understanding pedestrians and social media, as well as basic personal information (gender, age, pedestrian crossing experience, education level, etc.). The interviews were conducted in the form of transcripts from November 30 to December 7, 2023, near the Macau tourist area, the university, and the above-mentioned traffic accident location. During the interviews, the researcher provided a video of the accident that day and a promotional video of the police mascot of the Public Security Police Station (title: Follow your own road, traffic safety must be followed @Everything is for you).

The interviewees were as below:

- 1) Public Security Police Department Social Media Editor. (1 male and 1 female)
- 2) 25 Macao residents (10 males and 15 females) who use social media daily
- 3) 26 tourists from Chinese mainland (13 males and 13 females)
- 4) 12 college students (females) from Chinese mainland and studying in Macau at the time of interview.

The age distribution of the interview subjects ranged from 18 to 40 years old.

8. Results of the interviews

A total of 65 interviews were conducted. All of them have pedestrian crossing experience and daily use of social media. For each group of interviewees, here are the results:

1) All Macau residents (25 people) had preliminary or complete knowledge of the occurrence of the above-mentioned traffic accident. The source of the information came from news on social media or discussion posts of individuals or groups on social media, which aroused their attention to the incident.

2) The tourists came from Hangzhou, Beijing, Guangdong, Shanghai and other mainland cities. All of them use "WeChat" as their main social media on a daily basis, followed by the domestic version of "Douyin". They None of them knew the social media accounts of the above-mentioned traffic accident and the Public Security Police Department.

3) Only 4 college students from Chinese mainland studying in Macao know, understand and have seen the relevant mascot promotional videos and their meanings through social media, but the other 8 college students are not aware of it and say they have not paid attention. Macau local news or no attention related social media.

4) All interviewees have a high school diploma or above.

9. Discussion and Analysis

From the statistics of pedestrian violations released by the Public Security Police Department from October 2023 to December 2023, especially before and after the above-mentioned traffic accident, it can be inferred that pedestrian violations have indeed increased. However, it is worth noting However, the relevant data cannot directly show whether the use of mascots by the authorities has affected pedestrians' violations.

Through interviews, participants unanimously agreed that police mascots have an improved role in reflecting the image of the police force. They also increase pedestrians' awareness of law-abiding when

crossing the street through accidents, Internet fermentation, advertisements, etc. Although mascots play a role in publicity and communication, some people still believe that direct enforcement of fines is better than soft publicity and can achieve good results.

However, researchers' observations and local Macao resident interviewees also pointed out that most pedestrian violations in Macau involve tourists from Chinese mainland. The interviewees assessed that they are from Chinese mainland based on their clothing and speech. In addition, interviewees emphasized that although the main social media platforms used by the Public Security Police Force include Facebook and WeChat official accounts to publish relevant promotional videos, tourists from China and college students studying in Macau can only access the WeChat official accounts, and they have very limited access to other social media platforms, but they will still enhance the law-abiding awareness of Macao residents.

Since social media platforms that are frequently used daily mainly use platforms such as Xiaohongshu, Douyin, and WeChat^[49], although it is necessary to educate passengers on the law, they do not know or have not subscribed to the police's WeChat official account, and the relevant local news media have not reported it. Regarding the news about tourists' accidents in Macau, they also did not watch or read the local news in Macau. They would only follow the traffic regulations of their place of origin or the way they passed daily, and admitted that if there was no police enforcement, they would continue to follow their original rules. Some crossing methods (that is, when there are no cars, you can pass at will and cross the road) ignore traffic rules. This behavior is deeply ingrained in Chinese mainland and cannot be changed; it will not change due to the occurrence of traffic accidents and the use of promotional videos dissemination that draws its own attention to the behavior of obeying traffic rules^[50].

10. Conclusion and implication

In this article, we examine the effectiveness of police mascots in promoting safe pedestrian crossing habits, using a specific case example. Anthropomorphic mascots are easy to resonate with people, and this is an area that can be further studied to create more different functions for the police. Although mascots are very common, the functions of police mascots have not been fully utilized.

Based on existing literature, we found that mascots can effectively increase Macao residents' compliance with traffic safety regulations when distributed along with promotional videos on social media^[51]. However, official data and interviews show that the number of tourists or college students coming to Macau far exceeds the number of police officers. When faced with different traffic rules, tourists from Chinese mainland will insist on crossing the road according to their usual practices, putting themselves and other road users in Macau at risk, and there is a lack of relevant traffic safety information.

It was also found that the Public Security Police Department did not have enough communication efforts and channels in this regard, and the broadcasting intensity was not strong enough to fully achieve the publicity effect^[52].

In order to improve the traffic safety awareness of tourists and residents, it is recommended that the Public Security Police Department should cooperate with other domestic and foreign government agencies (such as immigration departments and tourism departments) and use social platforms that are commonly used in Chinese mainland, such as Xiaohongshu and Douyin. Etc. and the media, can effectively publicize and the importance of obeying traffic rules.

Secondly, the Public Security Police Force can also conduct publicity or carnival activities on university campuses, entry and exit ports, etc., so that tourists or college students in Macao know and understand that the traffic rules in Macao are different from those in Chinese mainland, which will help reduce traffic accidents.

To explore more future directions, more interactions through digital technologies can be used to increase the interactive relationship between the police and residents and tourists. In this regard, developed police social media websites usually reflect three core communication goals: (1) disseminating information to the public; (2) collecting information from the public; (3) interacting with the public. There are also cases were posting humorous stories and disseminating engaging messages on Facebook, with some "civilian" elements, helps to humanize the institution.. "Branding" has also been found to be an effective method to improve police use of social media.

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