

Analysis of Image Interaction and Social Motivation in Virtual Communities

-- Take the Example of Tiktok, Instagram Virtual Communities

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Abstract. The purpose of this paper is to explore the relationship between image interaction and social motivation in virtual communities, and take Instagram and TikTok as case studies. First, the conceptual characteristics of virtual communities and the defined forms of image interaction are analysed, and then the classification of social motivation and its impact on user behaviour are explored, as well as the role of image interaction in shaping the social ecosystem, the social atmosphere and the user's social network. In Instagram, image interaction behaviours were found to be positively correlated with user engagement, increasing users' exposure and social influence. In TikTok, on the other hand, social identity based on image interaction was closely related to user satisfaction, promoting user loyalty and stickiness to the platform. In summary, image interaction, as an important form of social behaviour in virtual communities, has a positive impact on the development of the community and the social experience of users, but it also needs to pay attention to issues such as information security and content regulation.

Keywords: Virtual Community; Image Interaction; Social Motivation; Social Experience.

1. Introduction

With the rapid development of Internet technology, virtual communities have become one of the important social platforms in people's daily life. In this virtual social environment, image interaction, as an important form of social behaviour, is having a profound impact on users' social motivation and behaviour. The purpose of this paper is to explore the behaviour of image interaction in virtual communities and its association with social motivation, as a basis for further analysing the shaping of the social ecology of virtual communities and the establishment of users' social networks by image interaction. Firstly, the features and functions of virtual communities as a digital social space are clarified through an overview of the concept and characteristics of virtual communities. Then, the definition, form and current status of the application of image interaction in virtual communities are explored, thus providing a basis for the subsequent analyses. Subsequently, the influence of social motivation on the behaviour of virtual community users and the intrinsic association between image interaction and social motivation are discussed in depth in the light of social motivation theory[1]. Further, the impact of image interaction behaviours on user engagement and social identity and satisfaction in different virtual community platforms is specifically explored through case studies, thus enriching the understanding of the mechanism of the role of image interaction in virtual communities. Ultimately, the paper concludes with conclusions that emphasise the importance of image interaction in virtual communities and provides an outlook on future research directions.

2. Overview of Video Interaction in Virtual Communities

2.1. Concepts and Characteristics of Virtual Communities

A virtual community is an online social platform constructed on the basis of the Internet or other digital technologies, providing a virtual social space in which users can communicate, share, interact and other activities. Its characteristics mainly include the following aspects:

Virtual communities are characterised by virtuality and digitisation. Users' social behaviours in virtual communities are based on the virtual space on the network platform, for example, communication and interaction through digital content such as text, pictures and videos. Virtual community has globalisation and openness[2]. Due to the popularity of the Internet and the influence of globalisation, virtual communities can break through geographical restrictions, allowing users from different regions and cultural backgrounds to communicate and interact across geographical boundaries. Virtual communities are diverse and rich in social functions. Different types of virtual communities provide rich and diverse social functions and application scenarios for different user groups and needs, such as social media platforms, online forums, virtual game worlds and so on. Virtual communities also have the characteristics of networking and immediacy[3]. Users can access and socialise in virtual communities anytime and anywhere through the Internet, realising the need for rapid dissemination of information and instant interaction.

2.2. Definition and Forms of Image Interaction

Image interaction refers to the behaviour of social interaction in virtual communities through pictures, videos and other forms. It is a way of communication and interaction between users based on visual content, with rich forms of expression and interaction. Image interaction can be realised through picture sharing. Users can upload the pictures they have taken or collected in the virtual community and share them with other users, so as to show their personal life, hobbies or creative achievements. Other users can interact with the images by liking and commenting on them to express their views and emotions. Image interaction can also be realised through video sharing[4]. Users can record, edit and share the video content they have created, such as life journal, food sharing, travelling insights, etc., to share and interact with other users. Viewers can participate in the discussion and dissemination of video content through comments and sharing. Video interaction can also be realised through the forwarding and reposting of visual content. Users can forward the image or video content posted by other users in the virtual community to express their love or recognition of the content, and expand the influence and dissemination of the content through sharing, thus strengthening the social connection and interaction among users.

2.3. Current Status of Image Interaction in Virtual Communities



Figure 1. Influential interactions in the tiktok community

Image interaction has become a widely used social behaviour in virtual communities, and various social platforms provide rich and diverse image interaction functions, which promote the social activity and user participation in virtual communities. Social media platforms such as Instagram have become the main place for image interaction[5]. Instagram, as a social platform focusing on photo and video sharing, allows users to post photos and videos to show their lives, hobbies and creative achievements, and interact and communicate with other users. Functions such as liking, commenting and retweeting make it easy to share and interact with image content among users. Short video platforms such as TikTok are also important carriers of image interaction. tikTok attracts a large number of users' attention and participation with its short, vivid, and interesting short video content,

which allows users to express their creativity and ideas, and interact and communicate with other users by making and sharing short videos. Instant messaging apps such as Snapchat also offer interactive video features. Snapchat's "Photo Story" feature allows users to share moments in their lives and create rich content and interactions through text, emojis and other elements, providing users with an instant and easy social platform.

3. Exploring Social Motivation Theory

3.1. Concepts and Classification of Social Motivation

Social motivation refers to the intrinsic factors or drives that drive an individual to engage in social behaviour and encompasses the individual's needs and desires for social communication, interaction and a sense of belonging. Based on research in the fields of psychology and sociology, social motivation can be classified into the following categories:

Cognitive motivation refers to an individual's participation in social behaviour based on the purpose of acquiring information, knowledge or solving problems. In virtual communities, users may engage in social interactions for the purpose of acquiring information, learning knowledge, or solving problems, such as asking questions and discussing issues in online forums or following accounts in professional fields on social media platforms[6]. Emotional motivation refers to individuals engaging in social behaviours based on emotional needs or for the purpose of emotional expression. This includes emotional needs such as seeking emotional support, sharing joy and pleasure, or relieving loneliness and stress through social interactions. In virtual communities, users may seek understanding and support from others by sharing life moments and expressing feelings and emotions. Belonging motivation refers to an individual's participation in social behaviours out of the need for belonging and social identity. Users in a virtual community may join groups, focus on specific topics, or participate in social activities to establish and strengthen connections with others and enhance their sense of belonging and identity in the community[7]. Self-presentation motivation refers to individuals' participation in social behaviours for the purpose of presenting themselves, creating a personal image or gaining recognition. In virtual communities, users may display their lives, skills, or creativity by sharing carefully crafted images, videos, and other image content to gain appreciation and recognition from others.

3.2. The Influence of Social Motivation on the Behaviour of Virtual Community Users

Social motivation has had a profound impact on the behaviour of virtual community users, shaping the way they engage, generate content and patterns of social interaction.

Social motivation influences user engagement and activity. Users with strong social motivation are more inclined to frequently participate in the social activities of virtual communities and actively engage in interactive behaviours such as commenting, liking, and retweeting, thus increasing community activity and user engagement[8]. Social motivation influences users' content generation and sharing behaviours. Social motivation drives users to create and share socially relevant content, such as life sharing, emotional expression, skill demonstration, etc., which enriches the content ecology of the virtual community and attracts more users' attention and participation. Social motivation also influences users' social interaction patterns and behavioural norms. Users with strong social motivation are more inclined to establish and maintain good social relationships, actively participate in community exchanges and interactions, and follow the community's behavioural norms and cultural habits, thus promoting the harmonious development of the community and a good interactive atmosphere among users.

3.3. Association between Image Interaction and Social Motivation

As an important form of social behaviour, image interaction is closely related to social motivation, influencing and promoting each other. Image interaction provides a platform and channel to satisfy

users' social motives[9]. By sharing image content in the form of pictures and videos, users can realise social motives such as emotional expression, belongingness satisfaction, and self-presentation, which promotes users' participation in social interactions in virtual communities. Social motivation drives users to participate in image interaction behaviour. Users with social motivation are more inclined to participate in the generation, sharing and interaction of image content in order to obtain recognition and support from others, and enhance the connection with others and the sense of belonging. Therefore, as a means to satisfy social motivation, image interaction is favoured and widely used by users. Image interaction can also strengthen users' social motivation and behaviour[10]. Through image interaction, users can understand more intuitively the life, emotions and interests of others, deepen their knowledge and understanding of others, and then enhance the social connection and frequency of interaction between users, which promotes the establishment of social ecology in the community and the social network of users.

4. Image Interaction and Virtual Community Social Ecology

4.1. Shaping the Social Ecology of Virtual Communities by Image Interaction

As one of the important social behaviours in virtual communities, image interaction has a profound impact on the social ecology of virtual communities, shaping the atmosphere, culture and development direction of the community[11]. Image interaction enriches the content ecology of virtual communities. Users share pictures, videos and other forms of image content, injecting rich and diverse content into the virtual community, covering all aspects of life, interests, skills, etc., enriching users' social experience and content consumption choices, and promoting the diversified and enriched development of community content. Image interaction promotes the social activity of virtual communities. Through pictures, videos and other forms of visual content, users can communicate and interact with each other more intuitively, enhancing the frequency of communication and interaction among community members, and improving the social activity and user participation in the community. Image interaction shapes the social culture and atmosphere of the virtual community[12]. Users express their emotions, show their lives and share their skills in image interaction, which not only promotes emotional communication and social interaction among users, but also forms a unique social culture and values, and promotes the formation and inheritance of the social atmosphere of the community.

4.2. Impact of Image Interaction on the Social Atmosphere of Virtual Communities

Image interaction plays an important role in virtual communities and has a positive impact on the social atmosphere of the community. Image interaction provides users with a more intuitive and vivid way of socialising. Through pictures, videos and other forms of visual content, users can more intuitively understand the life, emotions and interests of others, which enhances the emotional communication and emotional resonance between users, thus creating a warm and harmonious social atmosphere. Image interaction promotes the emotional connection between users and the cohesion of the community. By sharing their life moments, happy moments, as well as confusions and troubles, users establish a closer emotional connection and enhance their trust and sense of identity. This emotional connection and cohesion helps to build a united and harmonious community atmosphere, and enhances users' sense of belonging and identification with the community. Image interaction also enriches the social activities and cultural connotation of the community. By sharing a variety of pictures and video content, users show their attitudes to life, values and aesthetic interests, injecting fresh vitality and cultural atmosphere into the community, stimulating users' creativity and enthusiasm for participation, enriching the social activities and cultural connotation of the community, and making it an attractive and glamorous social space.



Figure 2. Image interaction creates a warm, congenial social atmosphere

4.3. Image Interaction and Social Networking of Virtual Community Users

Image interaction in virtual communities helps users to build and expand their social networks. Firstly, by sharing image content in the form of pictures and videos of their personal life, hobbies and creative works, users attract more attention and focus, thus expanding their social circle. The likes, comments and sharing of such content by other users promote communication and interaction among users, deepen their understanding and knowledge of each other, and then build a solid social relationship. Image Interactive provides a platform for users to expand their social network. Users can attract each other through pictures and video content related to common interests or life experiences, and establish resonance and connection. In the virtual community, users can easily connect with others through following and private messaging, thus expanding their social network and meeting more like-minded friends and peers. Image interaction also helps users to strengthen their ties with existing social networks. By sharing their experiences and feelings in virtual communities, users can not only keep in touch with their existing social circles, but also deepen their emotional ties and maintain solid social relationships, thus facilitating the strengthening and expansion of their social networks.



Figure 3. Video interaction promotes the establishment of community ecological network

5. Case Studies

5.1. Analysis of the Relationship between Image Interaction Behaviour and User Engagement in Instagram

On social media platforms like Instagram, there is a close relationship between image interaction behaviours and user engagement. Image interaction behaviours such as liking, commenting and sharing are not only a way of interaction between users and posters, but also an expression of users'

recognition and enjoyment of the content. Studies have shown that the frequency of users' interactive behaviours such as liking and commenting on images or videos posted by others is positively correlated with their activity and engagement in social networks. Image interaction behaviours help to increase users' exposure and visibility on social media platforms. When a user likes, comments or shares a piece of content, this behaviour is displayed on his/her personal homepage or in the dynamics of other users, which brings more users' attention to the content and the user himself/herself, thus increasing the user's exposure and social influence. The behaviour of image interaction is also an important way for users to build connections and strengthen relationships with other users. By commenting on and interacting with images or videos posted by others, users can not only express their own views and opinions, but also engage in more in-depth exchanges and interactions with other users and establish closer social relationships.

5.2. Analysis of the Relationship between Social Identity and Satisfaction Based on Image Interaction in TikTok

There is a close relationship between social identity based on image interaction and user satisfaction on a short video platform like TikTok. Image interaction, as one of the main social behaviours of users on the TikTok platform, can strengthen the emotional connection and social identity between users and other users. Through watching, liking, commenting and other forms of image interaction, users can share their happiness and express their support with others, to gain recognition and appreciation from others and enhance their social identity. The act of image interaction also provides important support for users' social experience and satisfaction on the TikTok platform. By participating in image interaction, users can not only communicate and interact with others emotionally, but also discover and meet more like-minded friends and peers, which enriches their social circle and improves the richness and quality of their social experience, thus enhancing their satisfaction with the TikTok platform. Image interaction behaviour can also promote users' loyalty and stickiness to the TikTok platform. When users establish a strong social connection and emotional bond with other users on the TikTok platform, they are more likely to maintain long-term usage behaviours and continue to engage in social interactions, thus increasing users' loyalty and stickiness to the platform, which provides an important support and safeguard for the platform's development and growth.

6. Conclusion

This paper explores the impact of image interaction on the social ecology, social atmosphere, and users' social networks of virtual communities by analysing image interaction and social motivation in virtual communities, as well as case studies on two specific platforms, Instagram and TikTok. It is found that image interaction, as an important form of social behaviour, has a profound impact on the development of virtual communities and users' social experience.

Image interaction enriches the content ecology of the virtual community and promotes the social activity and user participation of the community. Secondly, image interaction creates a warm and cordial social atmosphere, which enhances the emotional connection and social identity among users. Finally, image interaction helps users establish and expand social networks, and enhances users' loyalty and satisfaction with social media platforms. Image interaction plays an important role in virtual communities, providing users with a rich and colourful social experience, and promoting the healthy development of communities and the establishment and development of users' social networks. However, we should also note that the development of image interaction also faces some challenges and problems, such as information security and content regulation, which need to be further strengthened and solved. Therefore, future research should continue to explore in depth the mechanism of the role of image interaction in virtual communities, strengthen platform management and user education, and promote the healthy development of virtual communities and the improvement of users' social experience.

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