

Emoji advertising in social media and its effects on consumer behavior: Assessing purchase intentions and brand metaphorical warmth

Chen, Mingyuan*, Hu, Jiayu**, Yoo, Seungchul***

*Master's Student, Division of Communication & Media, Ewha Womans University, Seoul, Korea

**Master's Student, Division of Communication & Media, Ewha Womans University, Seoul, Korea

***Professor, Division of Communication & Media, Ewha Womans University, Seoul, Korea

*212cmp01@ewhain.net

**hujoy@ewhain.net

***communication@ewha.ac.kr

Abstract

In digital marketing, the strategic use of emojis in social media advertising, particularly on the Xiaohongshu app, significantly influences consumer acceptance and purchase behavior. This study examines the impact of emoji-laden advertisements and the role of brand metaphorical warmth on consumer perceptions. Employing a tailored questionnaire, the research explores how emojis affect brand advertisement reception, filling a gap in empirical research on emoji advertising effectiveness. Findings indicate that emojis, when used judiciously, enhance consumer acceptance and contribute to a positive brand perception. However, excessive use may undermine trust. Brand metaphorical warmth emerges as a crucial factor, suggesting that emojis can effectively convey warmth, fostering a deeper emotional connection with consumers. These insights offer practical implications for refining social media marketing strategies, advocating for a balanced approach to emoji usage in advertisements to optimize engagement and influence consumer behavior.

Keywords : social media platforms, emoji advertising, advertising acceptance, purchase intention, brand metaphorical warmth

1. INTRODUCTION

In today's information age, the public's pace of life is rapidly accelerating, leading to shifts in communication habits. The widespread use of real-time Internet communication platforms has made interpersonal connections more convenient and swifter. Simultaneously, there's a noticeable surge in the demand for both accuracy and swiftness in information dissemination. The surge of modern social media platforms and the swift evolution of advertising have blurred the lines defining advertising communication methods. Among these methods, emoji-based advertisements are emerging as a novel and extensively adopted form of advertising on social media platforms. Textual expressions alone fall short of meeting people's communication needs, prompting

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Corresponding Author: communication@ewha.ac.kr

Tel: +82-02-3277-2240, Fax: +82-02-3277-2240

Professor, Division of Communication & Media, Ewha Womans University, Seoul, Korea

the emergence of "emoticons" to supplement the limitations of text-based communication. Initially, emoticons started as basic symbols, expressions, or drawings, but their rich resources and diverse expressive forms gradually led to commercialization.

Emojis serve the purpose of describing or substituting digitally transmitted text in specific scenarios while offering electronic functionality. Beyond enriching messages, they convey a warmth akin to gestures and face-to-face communication. Currently, there are over 2,600+ emojis, encompassing not only facial expressions (😊, 😭) but also encompassing concepts, weather conditions (⚡, ☁), food (🍔, 🍷), activities like running (🏃), dancing (💃), and more. These emojis are standardized images over the Internet, regulated by a non-profit organization known as Unicode, with members including corporations like Apple, Google, and Microsoft. Users can employ emojis across various platforms such as Android, iOS, Facebook, and Twitter. Emojis have become an integral part of successful branding and marketing strategies, integrating into diverse promotional methods, from celebrity branding to books, music videos, and movie promotions. Retail marketers are adopting emojis as a fresh tactic to captivate potential customers and retain existing ones, thereby enhancing sales [1]. Emojis present brands with unique avenues to boost consumer preferences [2]. This becomes increasingly pertinent as consumers devote more time to mobile devices, necessitating that sales professionals develop innovative marketing campaigns. These campaigns must not only establish a robust brand presence but also effectively captivate and engage consumers. Consequently, this study seeks to enhance understanding of how brands effectively utilize emojis within their marketing strategies. This exploration is essential in adapting to the shifting landscape of consumer engagement and brand interaction in the digital realm.

The swift transformation of social media landscapes has markedly influenced brand marketing dynamics, ushering in a new era of opportunities and complexities. Emojis, now a staple for articulating emotions across these digital platforms, have been adopted by brands aiming to deepen user engagement and bolster brand visibility. Although emojis are prevalent in marketing messages [3, 4, 5], there exists a notable gap in literature concerning their effect on consumers' purchasing decisions. This research seeks to bridge this void by examining how emojis in advertisements affect user acceptance and intentions to purchase, offering actionable insights for their strategic application in social media marketing campaigns. This investigation is pivotal for marketers to refine their communication strategies and maximize the intrinsic benefits of emojis in advertising [3, 4, 5].

2. LITERATURE REVIEW

2.1. Emoji advertising

Originating from Japan, the term 'emoji' combines manga and kanji influences, reflecting its creator, Kurita Taga Kurina Karl's vision to express complex ideas like 'secret' and 'love' through simple characters. Emojis, recognized by the Oxford Dictionary in 2014, aim to universally simplify emotional expression, differing from emoticons in their colorful, diverse, and impactful nature [6, 7]. In digital marketing, emojis have become a powerful tool for direct engagement, resonating with the increasing consumer usage [8, 9]. They strategically enhance brand messaging in the cluttered advertising landscape, offering persuasive communication [10]. Research indicates emojis significantly elevate consumer engagement, with campaigns featuring emojis showing improved interaction metrics. This underscores emojis' critical role in digital advertising as both a response indicator and a sentiment conveyance tool, shaping brand perception in sophisticated marketing strategies.

2.2. Social media platforms and emoji marketing

Users of Social Networking Services (SNS) generally don't dislike ads but pay them little attention amidst abundant content. Yet, ads with vibrant colors, catchy slogans, and engaging designs can attract attention [11]. Intriguing ads, particularly on platforms like Instagram, where 90% of users follow a brand and 70% of brands maintain business accounts, are effective [11]. Emoji marketing, crucial in digital strategies, hinges on the target audience's familiarity with emojis. This approach aligns with findings that billions of emoji-containing messages were sent to over 1 billion users in 2015, with emoji usage increasing by 777% in following years and a monthly growth rate of over 20% in 2016 [9, 12]. On Xiaohongshu, brands vary in emoji use, reflecting the broader trend of emoji integration in online communication, where 92% of internet users and the majority of SNS users like Facebook and Tencent's QQ actively use emojis [13].

2.3. User receptivity to social media advertising

Understanding users' attitudes toward social media advertising is crucial to comprehend their feelings about social media ads. "Advertising attitude" (Lutz, 1985) reflects the relatively consistent sentiments people hold as they regularly encounter advertising information in their daily lives [14]. Contrary to some researchers' views, the use of emojis isn't solely about consumer-product interaction; it's a primary method for brand communication. Numerous studies indicate that the presence of emojis in ads or text enhances consumer engagement and prolongs their attention [15]. Emojis are commonly perceived as intriguing elements, contributing to the perceived enjoyment of an advertising [16].

Given that enjoyment significantly impacts consumer behavior, ads incorporating emojis are likely to garner more positive attitudes from consumers. Emojis are believed to infuse more amusement into product advertisements and social media communications, making them an effective strategy for sales professionals in product tweets [17]. The fun aspect of marketing holds inherent allure for consumers. Consequently, adding emojis to your product tagline is expected to enhance its appeal. This extends to emojis used across various marketing initiatives.

2.4. Emoji advertising and brand metaphorical warmth

Kerbin, Fiske, and Malone have employed the stereotype content model from psychology within the realm of consumer-brand relationships. This application represents a significant stride in understanding consumers' connections to brands, building upon the assertion by Fournier (1998) that people's interactions with brands mirror those with individuals [18]. Studies conducted over the past 14 years have collectively validated the model's applicability, emphasizing that consumers often form emotional bonds with the brands they adore [19, 20]. This attachment can be akin to passionate commitment, reminiscent of loyalty within marital relationships [21, 22]. Media reports suggest that people exhibit loyalty to brands that evoke childhood joy [23]. Various relationship paradigms, such as friendship [24], adversarial interactions [25, 26], investment akin to adversarial relationships [27], struggles akin to the master-slave dynamic [28], and experiences with abusive brands [29], have been observed in consumer-brand relationships.

Moreover, parallels exist between brand and interpersonal relationship dynamics. Similar social norms governing communal and exchange relationships among individuals also guide behavior in brand consumption contexts [30, 31]. Attachment styles prevalent in human interactions, such as avoidant, secure, and insecure attachments, similarly influence interactions with brands [32].

Studies by Kervyn et al. [33] and Aaker et al. [34] corroborate the significance of warmth (intentionality) and competence as fundamental dimensions shaping brand perceptions, akin to their role in shaping

perceptions of individuals, stereotypes, and social groups. Relationship metaphors (Swaminathan & Dommer) have proven to be potent tools in comprehending brands, Utilizing relationship metaphors effectively contributes to understanding brands when appropriately adapted and contextualized.

3. HYPOTHESES

Building on the literature review, this research introduces the following hypotheses:

H1: Emoji acceptance will have a positive impact on the emoji advertising and brand image matching.

H2: Emoji acceptance will have a positive impact on advertising acceptance.

H3: Emoji advertising and brand image matching will have a positive impact on advertising acceptance.

H4: Advertising acceptance will positively affect purchase intention.

RQ1: How does brand metaphorical warmth affect the level of purchase intention?

These hypotheses translated into the following research model:

4. METHODS

4.1. Sample

In this study, we focused on users of the Xiaohongshu platform, primarily involving Chinese participants who interacted with brand emoji advertisements. The participants were segregated into two distinct groups based on their perception of metaphorical warmth associated with the brand. Specifically, 215 individuals were categorized into the high metaphorical warmth group, indicating their recognition and feeling of the brand's metaphorical warmth. Conversely, the remaining 151 participants were allocated to the low metaphorical warmth group, as they did not perceive such warmth in relation to the brand. Subsequently, each group was instructed to view posts from the brand's account on Xiaohongshu and then participate in an online survey. This categorization facilitated a comparative analysis of the responses and attitudes toward the branded posts, taking into account the participants' distinct perceptions of metaphorical warmth.

To evaluate the research model, an online survey was conducted among randomly recruited Chinese SNS users through an online survey company. A total of 418 online questionnaires were collected, yielding 366 valid responses and achieving a validity rate of 87.5%. A basic analysis was conducted on both the collected sample data and the overall population data. Among the respondents, 98 were male (26.8%), and 268 were female (73.2%).

The experiment is designed around a scenario involving posts from food brands, specifically focusing on the context of Xiaohongshu, the current leading social platform in China. Recognizing branded social media as an evolving communication medium, companies are increasingly utilizing platforms like Xiaohongshu to connect with their audience. Nongshim, a Korean food brand, was chosen for its active use of emojis in branded posts, particularly on Xiaohongshu, where users often share their favorite Korean food. To enhance external validity, the study employed actual posts on the Xiaohongshu platform, not operated by Nongshim. Emoticons were introduced into the posts to simulate real-world scenarios. Unlike most studies that compare the effects of using no emojis versus a small number, this research investigated the potential consequences of using a large number of emojis.

Participants were directed to the Nongshim brand account to read a branded post, varying in the use of emojis (no emojis vs. few emojis vs. lots of emojis). Following the exposure, subjects' attitudes toward the

brand and acceptance of the advertisement were assessed. The study further examined the potential impact on consumers' brand evaluations, controlling for variables that might influence these evaluations. To control for potential influencing factors, participants were asked about their usual familiarity with the Nongshim brand, favorability, and acceptance of the brand's use of emoji advertisements. Additionally, questions regarding brand familiarity and favoritism were included in the survey. This comprehensive approach aimed to capture a holistic understanding of the participants' responses to the branded posts with varying emoji usage on the Xiaohongshu platform.



Figure 1. Experimental content conditions

4.2. Measurement items

Measurement items were adapted and revised from previous studies. Variables measured in this study included Emoji Acceptance, Emoji Advertising and Brand Image Matching, acceptance of the advertising, Brand metaphorical warmth, and the dependent variable (purchase intention). Specific Measures, Mean, Standard Deviation, and Cronbach's α as an Indicator of Reliability Table 1 summarizes the specifics of each measure, mean, standard deviation, Cronbach's α as an indicator of reliability.

In this study, Cronbach's alpha coefficients in Table 1 were utilized to gauge item internal consistency. To ensure the reliability of our measurements, we applied the widely accepted threshold of 0.6 for Cronbach's alpha coefficient. The results obtained affirm a high level of reliability, with all coefficients pertaining to the acceptance of emoji, consistency of emoji ads with brand image, acceptance of ads, and purchase intent surpassing the 0.6 threshold. The reliability coefficient value of 0.83 in the table indicates a high reliability of the research data, surpassing the threshold of 0.8. Additionally, the commonality values for all examined items exceeded 0.4, indicating robust correlations with underlying factors and effective information extraction.

Our focus then shifted to evaluating the consistency between factors and individual study items. Satisfactory alignment was considered achieved when factor loading coefficients exceeded 0.4, signifying a significant association between the factors and the specific research items. This rigorous analysis ensures the credibility and robustness of our research findings.

Table 1. Measurement items

Measurement Items	Standardized Loading	AVE	Cronbach's α
Emoji Acceptance			
(EA1) I think branded posts using emoji ads are interesting	0.927	0.849	0.822
(EA2) I think branded posts that use the right amount of emoji advertising can make the message easier to understand	0.916		

Emoji Advertising and Brand Image Matching			
(EABIM1) I think using emoji ads that match the brand image will draw my attention to the brand	0.871	0.749	0.833
(EABIM2) I think using emoji ads that fit the brand image can increase brand awareness	0.858		
(EABIM3) I will engage in branded interactions (likes/comments/retweets) if I think the use of emoji ads is in line with the brand's image	0.867		
Advertising Acceptance			
(AA1) I like brands with emoji advertisements	0.83	0.689	0.909
(AA2) I think brands that use emoji ads are charming	0.829		
(AA3) I think brands that use emoji ads are cute	0.792		
(AA4) I think I can trust brands that use emoji ads	0.838		
(AA5) I think the product or service of a brand that uses emoji ads would be great!	0.851		
(AA6) I would recommend brands with emoji ads to others.	0.839		
Purchase Intention			
(PI1) I will buy products from brands that use emoji ads	0.904	0.811	0.767
(PI2) I think if I buy a brand that uses emoji ads the quality of the product will meet my expectations	0.897		

Notes: AVE = Average variance extracted

Drawing on the methodologies proposed by Hair et al. (2017) and van Riel et al. (2017), the measurement model underwent a comprehensive evaluation, considering discriminant validity, average variance extraction (AVE), Cronbach's alpha (α), and composite reliability (CR). Discriminant validity is often assessed using tests of cross-loading and the Fornell-Lacke criterion [35]. In this study, the Harmon's one-tailed square root of the average variance extracted (HTMT) criterion was adopted as an alternative and superior method for evaluating discriminant validity.

The HTMT criterion, recognized for its robustness and ease of application, has gained widespread usage and recognition, positioning the work of Henseler et al. (2015) as one of the cutting-edge contributions to social science research. As presented in Table 1, the HTMT values between the two reflexive structures were consistently below the threshold of 0.90 [36]. This outcome serves to confirm the discriminant validity of the measurement model, thereby establishing the reliability and distinctiveness of the constructs under consideration.

Correlation analysis, a statistical method employed to evaluate the association between variables, is instrumental in understanding relationships within a dataset. When the significance level of the correlation coefficient is below 0.01, it indicates a statistically significant connection between the variables under consideration. Given that all correlation values in this analysis are below 0.9, a conclusion can be drawn that discriminant validity has been effectively established. The findings are presented comprehensively in Table 2, which outlines the correlation relationships among all variables investigated in this study.

Table 2. Discriminant validity analysis with average variance results

Variable	EA	EABIM	EAA	PI
Emoji Acceptance (EA)	(0.921)	-	-	-

Emoji Advertising and Brand Image Matching (EABIM)	0.726	(0.866)	-	-
Advertising Acceptance (AA)	0.745	0.836	(0.83)	-
Purchase Intention (PI)	0.646	0.75	0.842	0.901

Notes: Diagonals contain AVE. Cells contain squared correlations.
 (): Square Root of AVE

5. RESULTS

The hypothesized relationships in the research model were evaluated using the PLS algorithm bootstrap (5,000 subsamples). The results of hypothesis testing, path coefficients, p-values and t-values for each path are shown in Table 3. As shown in Figure 3, from emoji acceptance and emoji advertising and brand image matching to emoji ad acceptance paths are statistically positively significant (EA→EABIM, $\beta = 0.500$, $t = 1.111$, $p < 0.05$; EA→EAE, $\beta = 0.490$, $t = -1.757$, $p < 0.05$), H1 and H2 are supported. The path from emoji advertising and brand image matching to acceptance of the ads was positively significant (EABIM→AA, $\beta = 1.592$, $t = -0.913$, $p < 0.05$), and acceptance of the ads in turn had a positive and significant effect on purchase intention (AA→PI, 0.822 , $t = 0.328$, $p < 0.05$), therefore, H3 and H4 were supported.

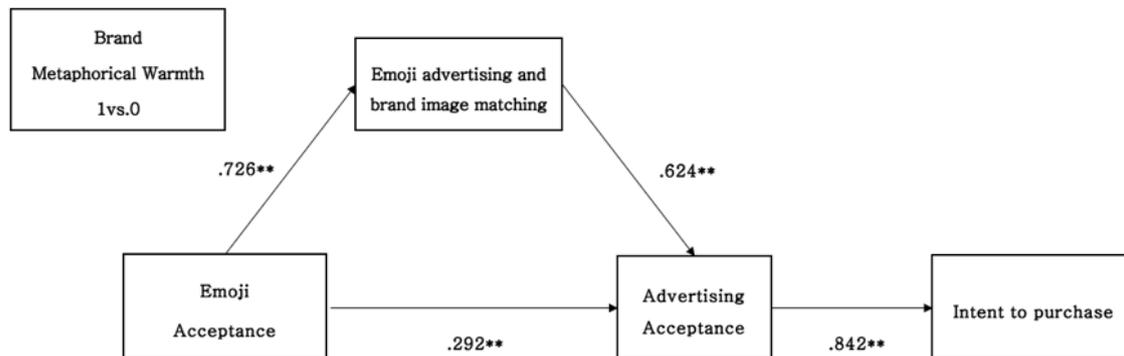


Figure 2. Structural Equation Model for the entire sample

Table 3. Summary of hypothesis tests

Hypothesis	Sign	Standardized path coefficient	Z value	p value 1)	Result
H1. EA -> EABIM	(+)	0.500	3.077	22.79	Supported
H2. EA -> AA	(+)	0.490	3.023	7.474	Supported
H3. EABIM -> AA	(+)	-0.289		16.623	Supported
H4. AA -> PI	(+)	-0.376	-1.236	42.27	Supported
EABIM R ² : 0.953 AA R ² : 0.928 PI R ² : 0.954					

1) One tailed test

An independent t-test was used to investigate the difference between the two groups that felt the metaphorical warmth of the brand (n=215) and The group that did not feel metaphorical warmth of the brand

(n= 151). Specifically, a PLS-MGA was used to compare each bootstrap estimate for one group with the other for the same parameters [37]. According to the PLS-MGA [38,39] guidelines, a percentage above 0.95 and below 0.05 indicates a significant difference in the coefficient of a specific PLS path between groups.

As shown in Table 4, there were significant differences between the groups that perceived to feel the warmth of the brand metaphorically and the group that did not feel metaphorically warmed by the brand , from the path of emoji acceptance to emoji advertising and brand image matching ($t=5.893, p<0.05$) as well as from the path of ad acceptance to purchase intention ($t=3.881, p<0.01$). As for the other paths, there was no significant difference between the groups that perceived feeling the warmth of the brand metaphorically and those that did not.

Table 4. Path coefficients and t-values for metaphorical warmth of the brand groups

Paths	Low Group 1 (n=151)			High Group 2 (n=215)			t-test	
	Path coefficient	t-value	p-value ₁₎	Path coefficient	t-value	p-value ₁₎	t-value	p-value ₂₎
EA →EABIM	0.717	17.009	0	0.508	8.555	0	5.893	0
EA → AA	0.281	4.472	0	0.31	4.55	0	0.533	0.594
EABIM → AA	0.619	9.801	0	0.523	8.729	0	1.812	0.071
AA → PI	0.823	26.523	0	0.722	21.579	0	3.881	0

As shown in Figure 3 and 4, the group that did not find emojis warm connected to ad acceptance through the degree of emoji advertising and brand image matching (Low Group: $\beta = 0.619, t = 9.801, p < 0.05$), whereas the group that found emojis warm perceived that users' acceptance of emojis would directly affect their acceptance of ads (High Group: $\beta = 0.31, t = 4.55, p < 0.05$). The group that did not feel the warmth of emojis felt the purchase intention more strongly once they accepted the advertisement (Low Group: $\beta = 0.823, t = 26.523, p < 0.05$)

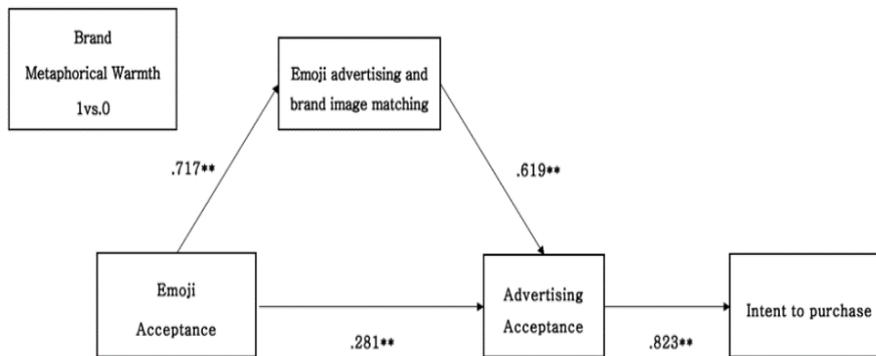


Figure 3. SEM for the group that perceived high levels of metaphorical warmth

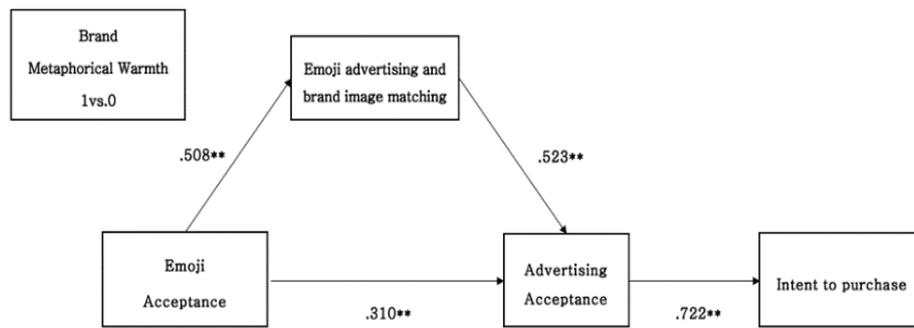


Figure 4. SEM for the group that perceived low levels of metaphorical warmth

6. DISCUSSION AND CONCLUSION

6.1 Discussion

Our study's validation results reveal key insights into emoji advertising's impact. Firstly, user acceptance of emojis aligns with brand image, enhancing ad receptivity. Secondly, this acceptance positively affects purchase intentions, linking emoji acceptance with ad consistency and influencing consumer behavior. However, metaphorical brand warmth didn't significantly alter these outcomes. Our research highlights the nuanced interplay between emoji usage, brand perception, and consumer engagement.

We also investigated emoji quantity in brand posts. Optimal emoji use increases ad enjoyment and brand interest, but excessive emojis can impede readability and credibility. This underscores the delicate balance needed in emoji advertising. Our findings suggest that while emojis convey metaphorical warmth and friendliness, enhancing brand perception, their overuse can detract from the message's clarity.

Conclusively, emojis in social media ads elevate metaphorical warmth, fostering positive brand connections. They are crucial in establishing emotional ties, but their strategic use is imperative to maintain credibility and effectiveness. This study affirms the significant role of emojis in digital marketing, particularly in enhancing consumer engagement and influencing purchase decisions. However, a holistic digital marketing approach, considering brand image, product quality, and pricing, remains essential for driving consumer loyalty.

6.2 Conclusion

As with any research endeavor, this study is not without its limitations, which in turn illuminate avenues for future inquiry. The primary method of data collection in this study was web-based questionnaires, a technique that may not fully capture certain external effects. For instance, variables such as purchasing behavior are best measured in real-world scenarios to ensure accuracy.

Furthermore, the geographic scope of the study's sample was confined to Chinese users, which highlights the need for cross-cultural comparisons in subsequent research endeavors. Future studies should aim to investigate the impact of Emoji Advertisements on ad acceptance and purchase intention across different cultural landscapes. Such research should place a particular emphasis on comparing the emotional role and effects of emojis in advertisements among varied cultural groups. This approach will not only broaden the understanding of emoji usage in digital marketing but also uncover the nuanced differences in emotional response and consumer behavior across diverse cultures.

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