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Research Article



Effects of message, medium, and motivational factors on news engagement and mobile news consumption: Evidence from Malaysia

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ABSTRACT

Received: 14 Dec 2022 Accepted: 22 Mar 2023 This study examined the predictors of news engagement and mobile news consumption in Malaysia. Online consumption and engagement of public affairs news were highlighted by collecting data from an online survey among 520 respondents who consume news online. Resultantly, the message factor is the most influential predictor as news credibility was the only significant predictor for news engagement and mobile consumption of public affairs news in Malaysia. Meanwhile, the relationship between online medium and users' motivation for social utility significantly impact their engagement with public affairs news but not mobile news consumption. Immediacy and information-seeking indicated negligible and insignificant influences. The implications of the study are discussed.

Keywords: news consumers, online news, news engagement, mobile news consumption, public affairs issues, Malaysia

INTRODUCTION

Mobile news consumption is on the rise as highlighted by a recent digital news report by Reuters Institute, where smartphones remain the leading device for daylight news consumption, specifically in Finland, Norway, Spain, and the United Kingdom (Newman, 2022). Similarly, smartphones in Malaysia (Nain, 2022) are among the dominant devices used to access news followed by computers and tablets. Pew Research Center (2021) recently discovered that news outlets had introduced mobile applications to reach news consumers who use iOS and Android platforms.

News media advancement in Malaysia determines the entire news industry in the country. Initial studies revealed that the mainstream print and electronic media were under strict control by the media owner: the Government of Malaysia. An analysis of news flow and reporting in Malaysia suggested that mainstream journalists were more conservative and did not report any sensitive political issues. Nonetheless, the introduction of online news in Malaysia in the mid-1990s (Hashim et al., 2016) as an alternative news source raised opportunities for the media to publish news with less restriction.

Technological advancement allowed news production organizations to alter their distribution platform from offline to online (Widholm, 2016) or in a "dual product" form (print and online) (Hashim et al., 2016). News organizations, such as The Star, New Straits Times, and Berita Harian have now provided online and

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offline news to news consumers (Alivi et al., 2018). Apart from mainstream media, several well-established, independent, alternative news sources are available online, such as Malaysiakini, The Malaysian Insight, Free Malaysia Today, and MalaysiaToday.com.

Recent news digitalization developments have increased the need to further investigate online news consumption trends. The changes in news consumption have raised mobile news research in recent studies. The present study enhances the body of knowledge by addressing several research gaps. Most research (Lee, 2013; Molyneux, 2017) on online news consumption assessed general news consumption, hence this study focused on mobile news consumption in Malaysia. Additionally, the current study addressed the narrow scope of study in past literature. For example, Johnson and Wiedenbeck (2009) emphasized the role of news credibility (message factor) in influencing online news consumption. Sundar et al. (2016) concentrated on the medium factors, while Khan (2017) outlined the motivation factors. To fill this gap, this study developed the 3Ms (message, medium, and motivational factors) in a conceptual model of news engagement and mobile news consumption to obtain a deeper understanding of the predictors. The effects of message (news credibility), medium (interactivity and immediacy), and motivational factors (information-seeking and social utility) on news engagement and the mobile consumption of public affairs news in Malaysia were also examined.

LITERATURE REVIEW

Mobile News Consumption

News consumption has been conceptualized by many scholars since the 2000s. Prior studies often utilized the terms "use" and "consumption" interchangeably. Yang and Patwardhan (2004) described news consumption as the level of news exposure, which specifically examines the frequency and time spent accessing news (d'Haenens et al., 2004). Later research conceptualized news consumption as "active selection" and "habitual behavior" (Chan-Olmsted et al., 2013, p. 130).

The advent of the Internet has permitted news consumers to access via various types of devices, including mobile phones, tablets, computers, and television (Edgerly et al., 2018). Digital news consumption has now shifted to mobile news consumption (Dunaway et al., 2018) as most previous studies (Wei & Lo, 2015) emphasized mobile news consumption and examined how they are accessed via mobile applications (Kosterich & Weber, 2018).

Past studies (Lowenstein-Barkai & Lev-on, 2022; Westlund & Färdigh, 2011) have labelled mobile phones as the seventh mass medium subsequent to print, recordings, cinema, radio, television, and the Internet, respectively. The emergence of the mobile news consumption trend has affected printing presses more than radio and television news providers. Mobile news consumption offers greater advantages (perceived ease of use and usefulness) than other devices, such as notebook or PC, radio, and television (Struckmann & Karnowski, 2016). Hence, this study examined mobile news consumption and online news consumers' access to public affairs issues on their smartphones.

Message Factor in News Engagement and Mobile News Consumption

News credibility

Previous studies have assessed the credibility level of traditional or online news. Go et al. (2016) discovered that online news websites that primarily deliver news and reference information are more credible than those that deliver entertainment-oriented news. Meanwhile, Chung et al. (2010) suggested that independent online news was the least credible. Ng and Omar (2019) also investigated online news consumption and indicated that news credibility significantly predicts online news usage. Additionally, Johnson and Wiedenbeck (2009) emphasized that citizen journalism should determine ways to boost their credibility level to increase the readers' story engagement. Therefore, the following hypotheses are proposed:

H1a. News credibility has a positive effect on news engagement.

H1b. News credibility has a positive effect on mobile news consumption.

Medium Factor in News Engagement and Mobile News Consumption

Interactivity

Online news interactivity enables news consumers to gain active control corresponding to information selection and creates two-way communication between online journalists and news consumers. Chung (2008) and Gladney et al. (2007) analyzed the interactivity features of news engagement. The multidimensional features of social media platforms as a form of interactivity significantly contribute to higher engagement and extensive usage among online users (Zabidi & Wang, 2021). Numerous scholars also indicated that the interactivity factor contributed to increased online news consumption. Chan and Leung (2005) investigated online news and interactivity features to run opinion polls or discussion forums or send electronic mail to publication editors. Moreover, Chan-Olmsted et al. (2013) studied the predictors of mobile news adoption among young adults and revealed that interactivity is part of the advantages contributing to increased mobile news adoption. Hence, the study suggested the following hypotheses:

H2a. Interactivity has a positive effect on news engagement.

H2b. Interactivity has a positive effect on mobile news consumption.

Immediacy

Immediacy is mainly used to distinguish the shift in trends from print to online news media. Immediacy is one of the mobile news advantages that contribute to news adoption (Chan-Olmsted et al., 2013). Numerous studies adopted engagement behaviors by assessing the immediacy effects on consumer engagement behaviors (Perez-Vega et al., 2014) and considering immediacy as one of the news factors that encourage Twitter users to engage in sharing news content through retweets and hashtags (Calder & Malthouse, 2008). Other studies outlined the "immediacy" features of online news that have contributed to higher online news consumption. Previous research (Nguyen, 2012; Nguyen et al., 2005) demonstrated immediacy as an essential feature of online newspapers, which ensures the adopters continuously access the latest news. The following hypotheses were developed based on the abovementioned discussion:

H3a. Immediacy has a positive effect on news engagement.

H3b. Immediacy has a positive effect on mobile news consumption.

Motivational Factors in News Engagement and Mobile News Consumption

Information-seeking

Information-seeking is the acquisition of information from various media sources. Information-seeking is one of the most vital predictors based on the uses and gratifications theory (Case & Given, 2016). Boulianne (2009) underlined "searching for information" as the common use for accessing the Internet, which positively and negatively affects civic and political engagement. de Zúñiga et al. (2012) also assessed the information-seeking process via social networking sites (SNS) and considered the determinants that foster public affairs engagement. le Roux and Maree (2016) discovered that consumer motivations are connected to engagement, such as commenting on posts or engaging in an online discussion. Additionally, Omar et al. (2018) suggested that information-seeking motivation is the strongest predictor of online news consumption of public affairs news in Malaysia. Thus, the following hypotheses are presented:

H4a. Information-seeking has a positive effect on news engagement.

H4b. Information-seeking has a positive effect on mobile news consumption.

Social utility

Social utility is an influential motivation under the uses and gratifications theory, which mainly concerns attachment needs (Katz et al., 1973). Regardless of the media type, social utility connects interpersonal relationships between at least two entities. Social interaction is one of the most common uses when accessing the Internet (Che Ilias et al., 2022), which could positively or negatively impact civic and political engagement (Boulianne, 2009). Korgaonkar and Wolin (1999) investigated the usage of the web and proposed that

socialization enables web users to facilitate interpersonal communication and activities. Thus, the following hypotheses are suggested:

H5a. Social utility has a positive effect on news engagement.

H5b. Social utility has a positive effect on mobile news consumption.

News Engagement

The "engagement" concept revolves around "a sense of involvement" (Calder & Malthouse, 2008). Extensive research (Calder & Malthouse, 2008; Chan-Olmsted & Wolter, 2018) has discussed engagement, which is closely linked to how media users experience (Chan-Olmsted & Wolter, 2018) the favorable or unfavorable attributes of media exposure through websites, television programs, and magazines (Calder & Malthouse, 2008). Online news portals tend to supply more information to their users, which creates a sense of attachment to the online news content known as the sense of engagement component (Lagun & Lalmas, 2016). The engagement level of users can be measured by how they manage online news portals (Lehmann et al., 2017) regardless of the electronic devices used, such as mobile phones, tablets, laptops, computers, or e-readers (Wei & Lo, 2015). The following hypothesis is developed based on the abovementioned discussion:

H6: News engagement has a positive effect on mobile news consumption.

METHOD

Research Method & Data Collection

This study employed an online survey to examine the factors influencing news engagement and mobile news consumption. This method is the most appropriate for social science research involving a large population (Babbie, 2016). A purposive sampling technique was used among 520 respondents using filtered questions to ensure the two inclusion criteria were fulfilled: they must be news consumers and Malaysians. All the data were evaluated using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Four variable groups were examined. Firstly, news credibility as the message factor is "the degree to which politically-interested web users judge information on the Internet to be believable, fair, accurate, and indepth" (Johnson & Kaye, 1998, p. 325). A scale of six items was adopted from Choi and Kim (2017) to measure news credibility.

Secondly, interactivity is "the measure of the potential ability of a media to allow the user exert influence on the content or form of the mediated communication" (Jensen, 1998). Meanwhile, immediacy was "the combination of speedy publication and fresh content" (Lim, 2012). News credibility and interactivity were medium factors. The interactivity measurement was adopted from Liu (2003), while immediacy was based on Gladney et al. (2007).

Thirdly, information-seeking and social utility are users' motivation for news or "the purposive acquisition of information from selected information carriers" (Johnson & Kaye, 1998) and "the consumption of news for social values or interpersonal utilities", respectively (Palmgreen & Rayburn, 1979). The third and fourth measures were adopted from (You et al., 2013). Lastly, news engagement is "the phenomenon where viewers or readers are completely invested in the unfolding of the media content, often oblivious to the surrounding environment" (Oh et al., 2015) with its measurement adopted from Oh et al. (2015) and Sundar et al. (2016). Mobile news consumption is the use of mobile devices to view news and is characterized as frequent and brief check-ups to view the news (Van Damme et al., 2015). This study concentrated on the consumption of public affairs news using smartphones, such as political and international news, opinion and editorial content, and metro, local, and national news.

Table 1. Descriptive analysis of demographic variables

No	Variable	Category	Frequency	Percentage (%)
1	Gender	Male	210	40.4
		Female	310	59.6
2	Age	Below 22	107	20.6
		23-32	212	40.8
		33-42	123	23.7
		43-52	55	10.6
		53 and above	23	4.4
3	Race	Malay	331	63.7
		Chinese	135	26.0
		Indian	48	9.2
		Others	6	1.2
4	Monthly income	No income	103	19.8
		Less than RM 1,500	78	15.0
		RM 1,501-RM 3,000	147	28.3
		RM 3,001-RM 6,000	152	29.2
		RM 6,001-RM 9,000	23	4.4
		More than RM 9,000	17	3.3
5	Highest educational level	SPM and below	101	19.4
		Diploma	134	25.8
		Bachelor's degree	224	43.1
		Postgraduate	52	10.0
		Others	9	1.7
6	Types of living setting	Urban	326	62.7
		Suburban	155	29.8
		Rural	39	7.5

ANALYSIS AND DISCUSSION

Table 1 displays the respondents' demographic profiles. Out of 520 respondents, the number of females (n=310) surpassed the number of males (n=210) where most respondents were between 23 and 32 years old (40.8%). Subsequently, the respondents corresponded with the overall Malaysian population distribution, which comprised Malay (67.4%), Chinese (24.6%), Indian (7.3%), and other races (0.7%) provided by the official portal of the Department of Statistics Malaysia. In the current study, over half of the respondents were Malays (63.7%) followed by Chinese (26.0%), Indians (9.2%), and other races (1.2%). In terms of socio-economic background, most respondents were in the middle-income group with approximately half of them possessing a bachelor's degree (43.1%) as their highest educational qualification. Approximately two-thirds of the respondents lived in urban areas (62.7%) followed by suburban (29.8%) and rural areas (7.5%).

Firstly, the measurement model was tested. Two criteria were used to establish convergent validity where all indicator loadings must exceed 0.700, while average variance extracted (AVE) values must exceed 0.500. The items that are lower than the desired values must be erased if AVE is too low.

Table 2 indicates that the factor loadings of principal components ranged from 0.643 to 0.862, while the AVE values ranged from .505 to .654. Meanwhile, all composite reliability values exceeded 0.700. Thus, the results satisfied the convergent validity and composite reliability criteria.

Table 2. Measurement model analysis

Construct		Loadings	Cronbach's alpha	Composite reliability	AVE
News credibility	CRE1	0.753	0.830	0.877	0.545
	CRE2	0.784			
	CRE3	0.765			
	CRE4	0.747			
	CRE5	0.671			
	CRE6	0.700			
Interactivity	INT1	0.694	0.875	0.877	0.505
	INT2	0.688			
	INT3	0.684			
	INT4	0.749			
	INT5	0.688			

Table 2 (Continued). Measurement model analysis

Construct		Loadings	Cronbach's alpha	Composite reliability	AVE
Interactivity	INT6	0.728	·		
	INT7	0.737			
Immediacy	IMM1	0.694	0.871	0.914	0.604
	IMM2	0.714			
	IMM3	0.762			
	IMM4	0.813			
	IMM5	0.815			
	IMM6	0.809			
	IMM7	0.822			
Information-seeking	INS1	0.817	0.924	0.937	0.651
	INS2	0.862			
	INS3	0.807			
	INS4	0.777			
	INS5	0.797			
	INS6	0.773			
	INS7	0.835			
	INS8	0.785			
Social utility	SUT1	0.788	0.902	0.921	0.595
	SUT2	0.750			
	SUT3	0.796			
	SUT4	0.771			
	SUT5	0.663			
	SUT6	0.778			
	SUT7	0.815			
	SUT8	0.796			
News engagement	ENG1	0.649	0.927	0.937	0.557
	ENG2	0.715			
	ENG3	0.739			
	ENG4	0.682			
	ENG5	0.786			
	ENG6	0.774			
	ENG7	0.767			
	ENG8	0.797			
	ENG9	0.808			
	ENG10	0.794			
	ENG11	0.779			
Mahila nawa nanawa sti sa	ENG12	0.643	0.067	0.004	0.654
Mobile news consumption	MNC1	0.742	0.867	0.904	0.654
	MNC2	0.817			
	MNC3	0.789			
	MNC4	0.837			
	MNC5	0.854			

Table 3. Discriminant validity using Fornell-Larcker criterion

Table of Discriminate variately asing Former Earliest effection								
Variables	1-IMM	2-INS	3-INT	4-CRE	5-MNC	6-SUT	7-ENG	
1-IMM	.7770							
2-INS	.7034	.8074						
3-INT	.6451	.5410	.7107					
4-CRE	.2179	.1297	.4688	.7383				
5-MNC	.2984	.2477	.3729	.3814	.8093			
6-SUT	.4913	.5246	.5311	.3944	.3446	.7714		
7-ENG	.4121	.3876	.5813	.5065	.4504	.6421	.7468	

Note. Diagonals represent square root of AVE while other entries represent correlations; IMM: Immediacy; INS: Information-seeking; INT: Interactivity; CRE: News credibility; MNC: Mobile news consumption; SUT: Social utility; & ENG: News engagement

The cross-factor loading was examined to assess the discriminant validity (**Table 3**) and establish differences between variables when they are depicted to measure different concepts. An acceptable discriminant validity is attained when the diagonal components exceed the off-diagonal components in parallel rows and columns (Teo & Van Schalk, 2009).

Table 4. Discriminant validity using HTMT ratio								
Variables	s 1-IMM	2-INS	3-INT	4-CRE	5-MNC	6-SUT	7-ENG	
1-IMM								
2-INS	0.7874							
	CI.9[0.719; 0.843]							
3-INT	0.7300	0.6111						
	Cl. ₉ [0.660; 0.789]	Cl. ₉ [0524; 0.698]						
4-CRE	0.2397	0.1706	0.5221					
	Cl _{.9} [0.168; 0.321]	Cl _{.9} [0.118; 0.240] (Cl _{.9} [0.409; 0.618]					
5-MNC	0.3151	0.2673	0.4299	0.4286				
	Cl. ₉ [0.215; 0.407]	Cl. ₉ [0.172; 0.356] (Cl. ₉ [0.337; 0.509] C	1.9[0.338; 0.507]				
6-SUT	0.5378	0.5668	0.6050	0.4309	0.3803			
	Cl. ₉ [0.441; 0.622]	Cl. ₉ [0.478; 0.646]	CI. ₉ [0.508; 0.689]C	.l _{.9} [0.337; 0.523]	Cl. ₉ [0.290; 0.460]			
7-ENG	0.4156	0.3981	0.6424	0.5614	0.4968	0.6948		
	Cl _{.9} [0.322; 0.506]	Cl. ₉ [0.302; 0.495] (Cl _{.9} [0.557; 0.716] C	.l _{.9} [0.462; 0.647] (CI. ₉ [0.415; 0.573] C	1.9[0.617; 0.754]		

Note. IMM: Immediacy; INS: Information-seeking; INT: Interactivity; CRE: News credibility; MNC: Mobile news consumption; SUT: Social utility; & ENG: News engagement

Table 5. Hypotheses testing

Lhunathasas	Std. beta (β)	t-value	n value	Sig. level	Bootstrapped CI BC		- Decision
Hypotheses	Stu. beta (þ)	t-value	p-value		2.5% LL	97.5% UL	Decision
H1a	0.221	5.142	0.000	***	0.135	0.304	Accepted
H1b	0.194	4.091	0.000	***	0.098	0.285	Accepted
H2a	0.260	5.423	0.000	***	0.161	0.352	Accepted
H2b	0.046	0.842	0.399	NS	-0.062	0.151	Rejected
НЗа	-0.017	0.375	0.707	NS	-0.109	0.070	Rejected
H3b	0.095	1.644	0.100	NS	-0.020	0.204	Rejected
H4a	0.010	0.219	0.826	NS	-0.077	0.101	Rejected
H4b	0.019	0.396	0.692	NS	-0.078	0.111	Rejected
H5a	0.419	9.191	0.000	***	0.329	0.508	Accepted
H5b	0.013	0.254	0.799	NS	-0.088	0.118	Rejected
H6	0.269	5.196	0.000	***	0.165	0.368	Accepted

Both **Table 3** and **Table 4** assess the discriminant validity using the Fornell-Larcker criterion and heterotrait-monotrait (HTMT) ratio for all the respondents. **Table 3** demonstrates that all the indicators loaded higher on their variable compared to others. The confidence interval results determine the direction and magnitude, and the discriminant validity is further confirmed if the value of 1 does not appear (**Table 4**). Therefore, the criteria for discriminant validity were fulfilled.

The findings established six main hypotheses of direct effects. News credibility (message factor) was the only factor that positively and significantly impacted news engagement and mobile news consumption of public affairs issues. Meanwhile, interactivity (medium factor) and social utility (motivational factor) were significant predictors of news engagement with the exception of mobile news consumption. Furthermore, news engagement (as an accumulation of experiences) significantly increased mobile consumption of public affairs issues in Malaysia (Table 5).

The dynamics in today's news consumption geared by digital technology have increased research interest in news engagement and mobile news consumption. Despite significant attention, studies that incorporate all-inclusive factors in comprehending mobile news consumption remain lacking. To address this gap, the present study outlined the effects of message, medium, and motivational factors on news engagement and mobile consumption of public affairs news. The extent to which the 3Ms (message, medium, and motivational) factors affect news engagement and mobile news consumption was evaluated. Resultantly, news credibility significantly influences news engagement and mobile news consumption, while interactivity and social utility significantly impact news engagement. The study also evaluated the direct effects of news engagement on mobile news consumption, which revealed a significant positive relationship. A conceptual model of news engagement and mobile news consumption was developed, which suggested significant results that contribute to the literature on news research.

CONCLUSION AND IMPLICATIONS FOR FUTURE RESEARCH

In this study, news credibility is the only predictor that significantly influences news engagement and mobile news consumption in Malaysia. Essentially, mainstream media in Malaysia have experienced credibility issues for decades (Mustapha & Wok, 2015) due to media control (Wang, 2001), which restricts their freedom of speech (Omar & Ahrari, 2020). Past research outlined that many Malaysians shifted to online media as they regarded it as more credible than mainstream media, specifically during elections. This trend started during the general election (GE) 12 (Mohd Sani & Zengeni, 2010) and was observed during GE 13 (Mohd Sani, 2014) and GE14 (Mohamed et al., 2019). Hence, consumers tend to seek news from alternative options (Alivi et al., 2018) considering Malaysians' low credibility perception towards mainstream media. This finding suggests that news credibility is crucial to driving engagement and consumption of public affairs news in the present digitally mobile environment.

Interactivity also significantly impacts news engagement in line with previous studies (Chung, 2008; Sundar et al., 2016). The interactive features, such as reciprocal communication and user control while accessing online news have a uniqueness that distinguishes them from traditional news. This feature enables news consumers to exchange information and continuously generate discussion flow or multi-directional flow (Thornburg, 2010) among news consumers. Social media links in online news sources have become effective enablers nowadays. Moreover, online news sources, including online versions of mainstream media or alternative online media in Malaysia have normalized social media in their news delivery to drive engagement. News sharing (Kalsnes & Larsson, 2018) and news commenting trends (Ksiazek, 2018) also enhance engagement among news consumers. Online users often utilize social media networks, such as Facebook to share news online (Kalsnes & Larsson, 2018).

The study outcomes align with past studies (Boulianne, 2009), which associate social utility and engagement among online users. Technology has enabled audiences to gain feedback exponentially as online users can leave visible comments under news articles or videos (Lee & Tandoc Jr, 2017). Chan et al. (2019) ranked Malaysia as having the highest social media news engagement compared to other Asian countries, such as Hong Kong, Japan, Korea, Singapore, and Taiwan. Malaysian youth prefer to promote, discuss, and debate social issues, such as corruption and crime more than Indonesian youth (Warren et al., 2016). This study proposed that social interactions among online news consumers predict news engagement. Such interaction is prevalent in today's news environment as SNSs linked to online news platforms enable two- or multiple-way interactions among online users (Gan & Li, 2018). Furthermore, news engagement is a critical predictor of mobile consumption of public affairs news. People engaged with the news tend to consume news online using their mobile devices at any time or place as long as they are connected to the Internet.

The study highlighted several managerial implications. First, news credibility is key to news business success. This study demonstrated the significance of credibility in driving news engagement and consumption in the mobile news environment. News providers, including news organizations or amateur content creators can thrive by striving to become credible sources that deliver credible messages for public consumption.

Secondly, the role of social media in engaging news audiences should not be overstated as interactivity (medium factor) and social utility (motivational factor) are significant predictors of news engagement but not mobile news consumption. The findings suggest that the demand for greater engagement with the news results from the normalization of social media use in news-seeking behavior. Social media has a significant potential, which should be wisely utilized by news providers. Future research should further examine the effectiveness of different social media platforms on news engagement and consumption.

Thirdly, engagement with the content or the news is more critical than mere news consumption (time spent reading the news or the frequency of access). This study investigated news engagement and mobile news consumption as the outcomes (or dependent variables) and revealed that the former could form a better prediction model. Future research should consider developing the model framework by employing news consumption or news engagement as a mediating factor to better comprehend mobile news consumption in the current digital world.

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Declaration of interest: Authors declare no competing interest.

Data availability: Data generated or analyzed during this study are available from the authors on request.

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