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"I CLICK, I SAW, AND I ACQUIRE": THE SEDUCTIVE FORCE OF SUBLIMINAL MESSAGES IN SOCIAL MEDIA POSTING WHICH INFLUENCE CONSUMER PURCHASE INTENTION

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ABSTRACT: The proliferation of social media had opened up opportunities especially to small-time entrepreneurs to introduce their brand and sell their products to the consumers. Unlike before the social media big bang, entrepreneurs are now able to reach a wider market faster and at a cheaper cost. Social media posting must be able to incite the intention to purchase the product. Subliminal messages in social media posting can subtly incite consumer sensation and consciousness without them realizing it. These subliminal messages can be conveyed through Social Media Richness (SMR). This paperwill measure the influence of Media Richness (MR) in Social Media in stimulating the consumer Intention to Purchase (ITP) by manipulating the Instagram postings with different levels of MRshown to the respondents before answering the survey questions. In this paper, we will also look at the intervening effect of Brand Equity(BE) and Brand Loyalty (BL) on the relationship between MR and ITP is to be examined by utilising a non-parametric analysis technique of variance-based structural equation modeling of Partial Least Squares Structural Equation Modelling (PLS-SEM). A total of 261 respondents from two samples from Kota Bharu on the east coast of peninsular Malaysia and Kota Kinabalu in East Malaysia. Additionally, this paper had extended to uncover the heterogeneity within a dataset of two sub-samples relative to the relationships of variables under investigation. By using multigroup analysis techniques (PLS-MGA) it enables a test on single structural relationship model at a time that capable to uncover differences that is not evident when examining the dataset as a whole. Consequently, this technique able to identify significant and meaningful differences between respondents in Kota Kinabalu and Kota Bharu. This paper contributes to marketers focused on social media marketing to Malaysian non-urban areas.

KEYWORDS: Media Richness Theory, intention to purchase, consumer behaviour, social media, PLS-SEM, PLS-MGA.

I. INTRODUCTION

This paper starts with a false statement: In 1957, James Vicary claimed of putting subliminal messages of "eat popcorn" and "drink coke" in a movie and he claimed that this had caused an 18.1% and 57.8% increase in sales of Coke and Popcorn respectively. Yes, this claimturns out to be a hoax. No such experiments were done. However, this had spark another idea. The idea of subliminal messages through the media is not something that can be entirely dismissed.

The problem with advertising is that it causes an interruption. Brands competing to get the attention of the consumers and advertisement always interrupt the consumers for attention. These constant interruptions are annoying and may cause the consumer to look the other way. For example, when we watch a video on Youtube, whenever there is a forced pop up five-second advertisement, we will skip the advertisement the moment we can continue watching the video. The objective of advertising then is how to advertise with less or no interruption at all. This is where subliminal messages can play an important role in advertising messages

Consumers can be 'primed' or influence to have a more positive attitude on messages provided by the marketers. Legal, Chappe', Coiffard, & Villard-Forest (2012) research is a coherent panoply impact of subliminal messages that can influence the perception of messages and its source which eventually influences the

behavioural intentions. The said the research had confirmed Smith & Rogers (1994),research done 18 years earlier. Interestingly, both research confirmed that consumers need to be told what are they supposed to look for before the consumers can consciously detect the subliminal messages.

Highly rich media with multiple cues can be used to highlight the subliminal messages that may not be apparent to the consumers. Using the MR Theory (MRT), this paper will explain that rich social media postings such as photos, videos, text, and emojis can help marketers to influence purchase intention in non-urban consumers by sending subliminal messages through social media advertisement.

II. Literature review

MRT had evolved since it was first used in 1986 (Daft &Lengel, 1986). The theory expounded that communication from the sender to the receiver may be distorted due to ambiguity. Media-rich in multiple cues such as text, photo, a diagram can cut through these ambiguities to make the message understandable to the receiver. In its earliest form, MRT was used to explain business organisations' internal communications (Trevino, Webster, & Stein, 2000). In the 2000s, MRT was further developed to look into the influence of media richness in mobile marketing (Yang, Kim, &Yoo, 2013) and web marketing (Lu, Kim, Dou, & Kumar, 2014).

If a picture worth a thousand words, then photos and videos in social media definitely can convey thousands of effective subliminal messages to the audience. With smartphone high definition camera technology, marketers can use mobile phone cameras and video functions to a good effect. Study by Teo, Leng, &Pua, (2019)shows that image quality can influence the perception of quality and purchase intention.

The rise of social media such as Facebook, Instagram, Twitter, and TikTok enables marketers to market their product real-time and at more creative methods such as videos, lives, GIF and memes.
Recently, researchers are beginning to research the influence of social media richness on the consumer purchase intentions (Muhamad Shahrin, Ami Suhana, Rosni Ab Wahid,MuhammadAsyrafHasim&NorwaniMohdNazari, (2020), and Muhammad AsyrafHasim, Muhamad Shahrin, &Rosni Ab Wahid, (2020)). The ubiquitous of e-commerce through mobile had spurred researchers to investigate the mobile media richness on online consumer behavior (Tseng & Wei, 2020).

Consumers' brand loyalty is measured on the strength of consumers' attachment to a brand. The more positive consumers' attitudes towards the brand the higher are brand loyalty. By linking the consumer's brand's attachment with the response to brand attitude and actual purchase data, marketers are able to see the current brand performance and strategise for future sales effort (Park, Maclinis, Priester, Eisingerich,&Lacobucci, 2010). The highly committed consumer has a positive repurchase intention and loyalty (Ercis, Unal, Candan&Yildrim, 2012).

Brand equity is more cognitive. It is what the consumer thinks and feels about the brand. These thoughts and feelings are the subconscious feelingsof the consumers on the brand identity, the quality and credibility of the brand, and the connection between the consumer and the brand (Forbes, 2017). The consumer perceived value and brand preference had significant value on consumer purchase intention (Beig&Nika, 2019).

Based on the above, we have come up with the following hypotheses:

H1: Subliminal message amplified by MRin social media has a positive influence on the consumer's intention to purchase with brand socialmedia.
H2: BE mediates the MR and the consumer intention to purchase with the brand social media
H3: BL mediates the MR and consumer intention to purchase with the brand socialmedia.

III. Methodology

A self-administered questionnaire is distributed to 261 respondents in undergraduate students in Kota Kinabalu, Sabah and Kota Bharu, Kelantan. It is a semi experiment session whereby respondents were exposed with four (4) different Instagram postings from four (4) different brands before answering the questions. There are seven

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(7) parts of questions with a five-points Likert scale to measure the media richness, brand equity, and media loyalty and their relationship to purchase

Figure 1
Research desi Data Analysis

This paperemployed the second-generation analysis techniques of PLS-SEM (Partial Least Square Structural Equation Modelling). The PLS-SEM techniques analyses two stages which are the measurement model as well as the structural model as recommended by Anderson & Gerbing (1988). Moreover, this study also makes use of non-parametric multi-group analysis (PLS-MGA) in determining thesignificanceinfluences between the sub-samples that may affect the relationship between variables under investigation (Hair, Hult, Ringle, & Sarstedt, 2017). Henceforth, analytical software of SmartPLS 3.2.9 was utilised in performing PLS-SEM analysis as well as PLS-MGA

In the initial stage of analysis, this paper carried-out an assessment on the measurement model that was essential to ascertain the reliability and validity at both levels of constructs and measurement items (Hair, Sarstedt, & Ringle, 2017; Ghozali & Latan, 2015;). Analyses outcome such as Cronbach Alpha, Composite reliability (internal consistency) and Average Variance Extracted (AVE) was highlighted in assessingits validity and reliability (Fornell & Larcker, 1981; Hair, Hult, Ringle, & Sarstedt, 2017).

IV. Measurement Model Assessment

Consequently, the outcome of the measurement model assessment had confirmed that constructs andmeasurement items used in this study were reliable and valid. Supported by the analysis outcome of coefficient values that surpassedthe minimum threshold as suggested by Hair et al., (2017). Referring to Table 1 below on the measurement model assessments result.

Table 1. Measurement Model Assessment on Reliability and Validity.

Latent Construct	No. of Predictors (Items)	Cronbach Alpha	Average Variance Extracted (AVE)	Composite Reliability (CR)
BE (MV1)	4	0.934	0.834	0.953
BL (MV2)	6	0.924	0.725	0.940
ITP (DV)	3	0.938	0.889	0.960
MR (IV)	10	0.956	0.715	0.962

Moreover, in determining the discriminant validity at the construct level in which delineates constructs used were distinct by assessing the AVEs (average variances extracted) that follow Fornell-Larker Criterion(Hair et al., 2017; Henseler, Ringle, & Sarstedt, 2014). Additionally, as for cross validation this study conducted assessment

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on items level that further validate on items loading toward its intended constructs (Henseler et al., 2014; Hair et al., 2016). As for Fornell LarkerCriterion assessment, it follows the criterion benchmark of diagonal values (square root AVEs) should be larger than AVEs under it(Fornell & Larcker, 1981) to achieve discriminant validity (Hair et. al., 2017). The analysis result had confirmed that all constructs used in this study were distinct as represented in Table2below.

Table2. Fornell-Larker Criterion for Discriminant Validity Assessment.

	BE	**BL**	**ITE**	**MR**
BE	**0.913**			
BL	0.623	**0.851**		
ITP	0.679	0.742	**0.943**	
MR	0.489	0.579	0.590	**0.846**

Apart from the Fornell Larker Criterion on discriminant validity proved by AVEs at construct level. The cross validation on Cross Loadings of items had also supported that the constructs and items used are distinct by looking at values of the item's loadings were within the range according to the intended construct (Hair et al., 2014)

Table3Cross loading for Discriminant Validity Cross Validation.

	BE	**BL**	**ITP_**	**MR**
BE_1	**0.920**	0.558	0.639	0.485
BE_2	**0.919**	0.623	0.668	0.446
BE_3	**0.895**	0.520	0.542	0.412
BE_4	**0.920**	0.602	0.622	0.439
BL_A4	0.550	**0.854**	0.636	0.428
BL_A5	0.522	**0.864**	0.638	0.478
BL_A6	0.560	**0.869**	0.615	0.498
BL_B1	0.527	**0.807**	0.607	0.531
BL_B2	0.484	**0.856**	0.662	0.532
BL_B3	0.588	**0.856**	0.627	0.484
ITP1	0.605	0.679	**0.946**	0.569
ITP2	0.649	0.700	**0.950**	0.568
ITP3	0.666	0.718	**0.933**	0.534
MR_A1	0.349	0.454	0.445	**0.824**
MR_A2	0.418	0.498	0.504	**0.864**
MR_A3	0.387	0.471	0.484	**0.849**
MR_C4	0.419	0.496	0.508	**0.865**
MR_C5	0.474	0.566	0.577	**0.861**
MR_C6	0.444	0.532	0.527	**0.889**
MR_C7	0.441	0.503	0.513	**0.859**
MR_UI10	0.399	0.430	0.445	**0.784**
MR_UI8	0.404	0.455	0.479	**0.839**
MR_UI9	0.385	0.474	0.488	**0.821**

Therefore, the measurement model analysis result presented above. It can be concluded that this study had adopted valid and reliable constructs and measurement items. Hence, at this point in assessment, it had proven that the research model used is fit for further structural assessments in determining the relationships between constructs as well in testing hypotheses developed.

V. Structural Model Assessment

Accordingly, the second stage of assessment that drives the final decision was the structural model assessments of causal relationship between the latent constructs. At this particular stage of analysis, the assessment was directed to the indices such as path coefficient (β) for the relationship magnitude and strength.Correspondingly, indices produced by bootstrapping routine in determining the significance of relationship which also applied for the intervening effect evaluation.

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Following the common practice in determining the relationship strengths (magnitude), assessment on path coefficient value of βwas applied.The path coefficient indices should read in between -1 to 1, in which, any values that close to 1 explains a strongerrelationship (Cohen, 1988).As for the result of the structural model assessment, this study had confirmed a positive significant relationship between latent variables under investigation. Analysis outcome on the direct path relationship between SMR (Social Media Richness) and ITP (Intention to Purchase)had revealed a positive significant relationship,demonstrated by a high magnitude path coefficient of β 0.591. Bootstrapping routine result also had confirmed on its significance, justified by *t*-value of 13.451 and *p*-value of 0.000. Thus, Hypothesis H1wasaccepted supported by the analysis results presented.

Furthermore, about the full structural model that includes mediation effects, this study had reckoned that the latent variables of Brand Equity (BE) and Brand Loyalty (BL) had partially mediates the relationship path between SMR and ITP. The degree of mediation taken placed was assessed using VAF (*Variance Accounted For)* percentage values as suggested by Hair et al (2014) alongside with mediation test recommended by Hair et al. (2017), Hayes, (2018), Zhao et al., (2010), Cepeda et al., (2018) and Nitzl et al., (2016). The mediation test adopted was mainly to determine the specific indirect path, total indirect and direct path significance that utilised bootstrapping procedure.

Result on the complete analysis of the structural model after including the mediation variables of BE and BL in the model had somehow shown the direct path of SMR (Social Media Richness) and ITP(Intention to Purchase)had been diluted (Nitzl et al., 2016) to a lower relationship path magnitude of β=0.184. However significant test through bootstrapping procedure suggesting this particular path was significant showed by t-value of 4.104 and *p*-value of 0.000. As suggested by Zhao et al (2010) and Hair et al (2017), mediation model with significant direct path (path *c'*) should be further analysed using VAF assessment in determining the level of mediation had taken place. As suggested byHair et al., 2014, VAF percentage of>80%indicates full mediation, VAF >20% <80% partial mediation and VAF < 20% indicates no mediation.

The output from bootstrapping on specific indirect effect (path *ab*) of SMR→BE→ITP was significance with high magnitude of β value of 0.153 and significant *p*-value of 0.000 and *t*-value of 4.399(J. Hair et al., 2017)with significant direct effect path *c'* (β=0.184, *t*-value of 4.104 and *p*-value of 0.000.). Therefore, VAF assessment ($\text{VAF} = \frac{ab}{ab+c'}$) had resulted in partial mediation explain by VAF of 45.5% (Hair et al., 2014)

Likewise, the other indirect relationship path through mediation of BL (SMR→BL→ITP) also demonstrated as partial mediation as represented by significant direct path (path *c'*) with VAF of 58% . Assessment outcome of this indirect specific path had showed a high magnitude of β value of 0.254 and significant *p*-value of 0.000with*t*-value of 5.353 (Nitzl et al., 2016). Hence, the hypotheses H2 and H3 on mediation was supported as partial mediation path relationship justified by statistical explanations above.

VI. Non-Parametric Multi-group Analysis (PLS-MGA)

Additionally, this study was driven to explore the differences between the sub-sample lies in dataset between two locations of UMK (West Malaysia) and UITM Kota Kinabalu (East Malaysia). This paper found it imperative to identify variances that lies within dataset used relative to the different conditions observed may yield different measures of the same attributesHenseler, Ringle, &Sarstedt, 2016). The assessment of PLS-MGA was carried-out by assessing the disparitiesthat may surface reflected by path coefficients between the two data sets (UMK and UITM KK). Hence, observing the two sub-samples on the location-specific can lead to richer and valid results. This study also finds this technique may further reduce biases that increase generalisability.

Indeed, statistical comparison on path coefficients indices often generates numerical differences of two datasets unquestionably(Henseler et al., 2016). Consequently, this study follows a non-parametric approach of multi-group analysis suggested by Henseler, et al., (2016) alongside with bootstrapping routine in determining significance of variances existed. Moreover, assessment with PLS-MGA does not require proportionate sample of groups (Matthews, 2017) and it also more liberal in term of minimum sample size, 30 cases for each group should be executable (Hair, Sarstedt, Ringle, &Gudergan, 2018).

Table 4belowsummarise the PLS-MGA analysis outcome on the differences of the path coefficients estimates between UMK (West Malaysia) and UiTM KK (East Malaysia). Results of the non-parametric multi-group

comparison of significance test represent the *p*-values and *t*-values as the basis to test null hypotheses (Fulka et al., 2018; Hair et al., 2017). A for overall on PLS-MGA analysis, study find it consistent with a slight variation(refer to the table 4). Overall differences and variations were insignificant p-value of two-tailed test (<0.05 or >0.95)(Matthews, 2017; Hair et al., 2017). Accordingly, statistical justification of PLS-MGA had found there was no significantdifferences between sub-samples of UMK and UITM KK that may affect the intention to purchase relative to the heterogeneity of this attribute (location wise).

Table4. Multi-group Comparison Test Result (PLS-MGA).

Relationship	**Path Coefficient Difference (UMK–UITM KK)**	***p*-Value (UMK – UITM KK)**	***t*-Value (UMK – UITM KK)**
BE→ ITP	-0.113	0.826	0.349
BL→ITP	0.132	0.162	0.323
MR→BE	-0.150	0.908	0.185
MR→BL	0.010	0.460	0.921
MR→ITP	0.024	0.403	0.805

Remarks: Two tailed test. p-value > 1.96, t-value < 0.05 or >0.95

Model Predictive Power Assessment.

Apart from the above presentation on overall structural and measurement model assessments. This paper also keens to report on the extended assessment conducted on the overall research model assessment as to uncover the model's predictive power between endogenous construct that are linked with exogeneous construct(s) by looking at the coefficient of determinant of R^2. The assessment includes all the data used for model estimation in determining the model's predictive power (J. Hair et al., 2017). Table 5and Figure 2below represent the assessment result on R-square and R-square adjusted on overall variances of exogeneous construct on endogenous construct

Table5. Model's Predictive Power of Coefficient of Determinant (R^2)

Construct	**R-Square**	**R-Square Adjusted**
BE	0.239 (23.9%)	0.236(23.6%)
BL	0.336 (33.6%)	0.333(33.2%)
ITP	0.646 (64.6%)	0.641 (64.1%)

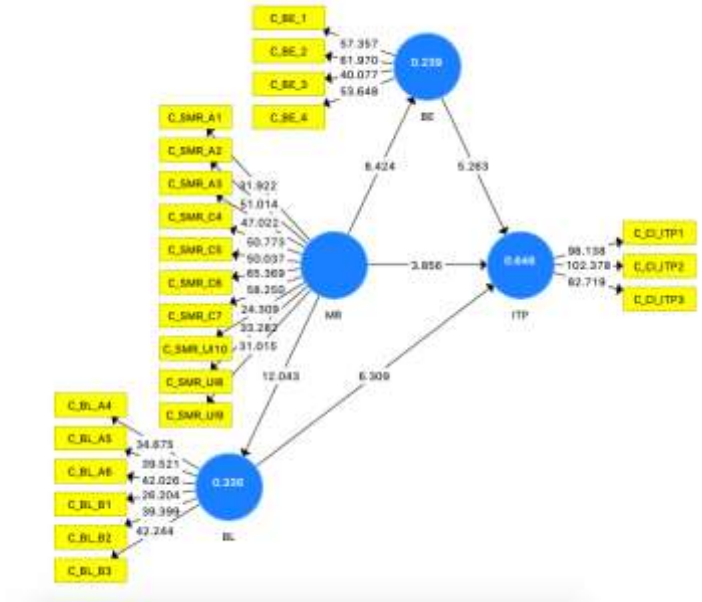

Figure 2Structural model assessment

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VII. Discussion

Even though MRT was established by Daft & Lengel (1986) almost thirty-four years ago, the theory is still germane in marketing research, especially when we want to study the impact of MR on consumer ITP. This paper confirmed our hypothesis that Subliminal message amplified by MR in social media has a positive influence on the consumer's intention to purchase with brand social media. The result of this paper also confirmed the findings of Muhamad Shahrin, Ami Suhana, Rosni Ab Wahid,Muhammad Asyraf Hasim & Norwani Mohd Nazari, (2020), and Muhammad Asyraf Hasim, Muhamad Shahrin, & Rosni Ab Wahid, (2020) on the influence of SMR on the consumer ITP.

The result of this paper confirmed our hypothesis that BE mediates the MR and the consumer intention to purchase with the brand social media. It is pertinent for marketers to increase BE for the brand as BE increases the consumer's perceived value and brand preference which will have significant ramifications on consumer purchase intention (Beig & Nika, 2019).
This paper also reasserts the mediation role of BL between MR and consumer intention to purchase with the brand social media. BL appurtenant to the brand as it creates highly committed consumers has a positive repurchase intention and loyalty as suggested by Ercis, Unal, Candan & Yildrim (2012).The result of this paper is useful for marketers to note that purchase, repeat purchase and loyalty towards a particular brand can be sculptured through media richness of the social media postings as proposed Perrey, Spillecke (2013). Exposure to constant subliminal rich media content has a positive effect on brand loyalty, brand equity, and the intention to engage with the brand's social media, a hypotheses expanded from the research done by Legal, Chappe', Coiffard, & Villard-Forest (2012) on the influence of subliminal message to the behavioural intentions.
Brands had used social media marketing without comprehensively understand the impact of subliminal messages in MR on the consumers' attitudinal reactions. The findings of this paper manifest that elevated MR has a consequential impact on customer engagements The result of our analysis also confirms that through Social Media are by eliciting emotions through multiple cues in its postings as argued by Farook & Abeysekara (2016). This paper contributes to the literature on MRT and its role in the realm of brand loyalty and brand equity. The findings of this paper also serve as a guide for marketers to prepare strategies to elicit engagement and interactivity with the brand.

However, the most important take away from this paper is that marketers can replicate the same research model to test whether their social media postings had influenced the consumer purchase intention. The research model proposed in this paper can be replicated to test the response of any sample of respondents or any type of brand. Besides, the result of the study serves as an indication of the return of investment for the brand's social media advertising campaign.

VIII. Limitations and future research

This paper provided favourable results to test the influence of social media marketing to increase consumer purchase intentions. Although this paper had examined respondents from the east coast of the Malay peninsula and north Borneo, the results show negligible differences in how respondents react to the subliminal messages in the social media posting. The results seem to suggest that respondents from Kota Bharu and Kota Kinabalu are not culturally diverse. Future research, more comprehensive research should be conducted on respondents from totally different cultural environments.

Our conclusion on cultural diversity is based on the results of the multi-group analysis. The test shows that there is no significant difference in consumers in Kota Kinabalu and Kota Bharu. Although the respondents are from West Malaysia and East Malaysia, the result suggested that there is not much difference in consumers' responses to the subliminal messages in social media postings. This situation may be explained by the fact that all respondents are university students who share similar academic level. These university students may have similar social media exposure and level of education, causing homogenous results. For future research, we suggest for comparisonbetween millennials in the university and young professionals. It is also fascinating to know whether baby boomers will have a similar response as the younger generation such as generation Z and generation Y.

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