Offline Brand Outcomes of Instagram: Do Cognitive Network and Self-congruity Matter?

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ABSTRACT

Manuscript type: Research paper
Research aims: This study aims to determine the extent to which consumers' brand "Follows" are self-congruent due to their cognitive networks or the perception of their social network structure on Instagram. This study also examines if self-congruity results in positive offline brand outcomes when mediated by brand love.
Design/Methodology/Approach: A total of 168 valid responses are collected and analysed. SPSS version 21 is used to measure the descriptive statistics and frequencies and the SMART PLS 3.0 is used as the structural model for hypothesis testing.
Research findings: Results indicate that social tie strength significantly affects self-congruity while brand love is a significant mediator on the relationship between self-congruity and offline brand outcomes (brand loyalty and WoM). Of the three perceived homophily (attitude homophily, status homophily and morality homophily), findings show that morality homophily is the stronger predictor for social tie strength among consumers and their friends on Instagram.
Theoretical implications: This study expands on previous literature by investigating the relationship between cognitive network influence, consumers' self-congruity with "followed brand" and offline

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brand outcomes (brand love, brand loyalty and WoM), in the context of Instagram.
Practitioner/Policy implications: The findings suggest that in order to target Instagram users that "follow" the brand, these brands must be categorised based on status and moral ties. Marketing intelligence and target market segmentations on Instagram can be performed by using tie-strength. Brands on Instagram should be defined based on customers' orientation, i.e., by humanising the brand so as to create an emotional bond. Proxy measures of brand love can be used to predict repurchase intention and the likeliness of sharing through WoM.
Research limitation/Implication: The homophily and social tie strength are measured based on consumers' own perceptions with friends on Instagram. The small number of samples used may limit the generalisability of the findings.

Keywords: Brand Love, Instagram, Loyalty, Self-congruity, Social Tie Strength, WoM
JEL Classification: M31

1. Introduction

The self-concept theory posits that people seek to groom their self-concept, partly through the brands and products they own, desire to own, or do not desire to own (Graeff, 1996). Consumers are more likely to choose brands with images that are similar or congruent to themselves (Liu, Li, Mizerski, & Soh, 2012; Mazodier & Merunka, 2012), and such sense of similarity or congruency invokes valuable outcomes, such as brand loyalty, re-use intention and favourable brand attitudes (Kressman et al., 2006; Sirgy, 1982; Roy & Rabbanee, 2015). As consumers fortify their self-image by purchasing brands that are congruent, they are also developing brand loyalty (Kressman et al., 2006). As a function of both behaviour and attitude, loyalty increases consumers' willingness to pay more for a brand. Similarly, some studies on interpersonal communication (Bataineh, 2015) have also shown that personal influence affects the individual's decision-making process, which makes word of mouth (WoM) worth studying. The WoM behaviour can be driven by impression goals (Schlenker, 1980) in which positive WoM leads to consumers recounting positive experiences, objective displays and recommending the product or service to others (Anderson, 1998). Unfortunately, studies of self-congruity, brand loyalty, and WoM mainly focused outside the online context where physical

interactions are involved in order for brand consumptions to occur. It is only recently that the construct of self-concept, and how individuals create an online version of themselves via brands has caught the attention of brand researchers (Back et al., 2010; Hollenbeck & Kaikati, 2012; Eelen, Özturan, & Verlegh, 2017; Wallace, Buil, & de Chernatony, 2017), where consumption is manifested mainly online (Schau & Gilly, 2003). Not much is known about the brand loyalty–self-congruity, and WoM–self-congruity relationship in the virtual world (Wallace et al., 2017).

The abundance of online social network sites (SNS) has created an opportunity for users to project themselves by creating an aggregated self that would be affirmed by the friendships offered on SNS (Belk, 2013). Brands are used as "shorthand" to create an identity for consumers, where they describe to others who they are, as well as who they are not (Schau & Gilly, 2003). In contrast, offline brands which consume social media are solely for self-presentation purposes. These would probably only remain as a social network interaction (Schau & Gilly, 2003; Sekhon, Bickart, Trudel, & Fournier, 2015), and possibly, never to be owned or purchased (Belk, 2013).

Among the social media platforms used, Instagram is a well-known SNS application that allows users to transform an image into a memory to keep around forever (Instagram, 2018). As of 2017, Instagram consists of 700 million monthly active users (Statista, 2018a). It has also been reported to be the fastest growing app in 2013 (Sala, 2013). Importantly, Instagram has a higher reach of younger audiences that are also more diverse when compared to other social networking sites (Lenhart et al., 2015). These users spend more time on Instagram, unlike those using other social network sites (SNSs), such as Facebook (Salomon, 2013). Holding the motto, "image first, text second", Instagram creates a strong visual-oriented culture. Mathison (2018) reported that 60 per cent of Instagram users discovered new products through the site, with three-quarters of them taking action after seeing a brand's post (Mathison, 2018), and at least 70 per cent of them have made mobile purchases (Global Web Index, 2015) as a result.

Compared to other SNS platforms, Instagram users who "followed" brands on the platform have been found to be the second highest brand community membership intention (Phua, Jin, & Kim, 2017a). Instagram users are also more sociable; they tend to show more affection (Phua, Jin, & Kim, 2017b), but little is known about the degree to which Instagram activities are used to project oneself which cannot be validated or evaluated by friendship network. Consumers may post

product information that are outside of their means for impression management purposes on Instagram, "*where every element is chosen for its semiotic potential*" (Schau & Gilly, 2003, p. 394). Liking a brand on the SNS could be superficial (Zaglia, 2013), and may actually suggest the lack of a real sense of connection with a brand. Facebook users, for instance, give out subtle cues to mould the impression of other people towards them, and their interaction with the brands could be representative of the ideal or actual self (Hollenbeck & Kaikati, 2012; Back et al., 2010) which has previously "slipped under the radar" (Hollenbeck & Kaikati. 2012). In other words, consumers may use brands for self-extension purposes in an online context. Brands could be more crucial for self-concept in the online context because brand preferences are open for all to see (Hollenbeck & Kaikati, 2012). Belk (2013) therefore, has called for more studies to be done on the role of self-congruity in consumers' presentation of oneself on the SNS.

While "Liked" brands express values because of their association with a group or person, socialisation agents such as peers (Hogg, Banister, & Stephenson, 2009) may not necessarily be self-congruent. Other motivations, such as financial incentives and information search could explain why these "Likes" are given, thus posting more doubts (Wong, 2010; Parker, 2012). The same could be true for Instagram "Follows". In this regard, Instagram friends would encourage the consideration of the consumers' network display more carefully. As a result, they may "Follow" brands on Instagram due to the friendship structure (Schau & Gilly, 2003), which is supported in Facebook case (Ligas & Cotte, 1999).

Thus far, only Wallace et al. (2017) have quantitatively investigated the relationship between consumers' self-congruity with a "Liked" brand, their cognitive network influence and brand outcomes, but not in the context of Instagram, and the offline brand outcomes. Motivated by the importance of self-congruity, cognitive network influence and brand outcomes in an online SNS, this study thus aims to specifically investigate the degree to which consumers' brand "Follows" are self-congruent due to their cognitive networks, or the perception of their social network structure on Instagram. In this study, the findings of Richard and Guppy (2014) and Wallace et al. (2017) were expanded so as to include self-congruity with consumers' "Follows" on offline brand outcomes (brand love, brand loyalty and WoM). This study also addresses the call by Wallace et al. (2017) to explore how brand love mediates the relationship between self-congruence and offline brand outcomes.

The remainder of this paper is organised as follows: Section 2 looks at the literature on homophily, social tie strength, brand love and brand loyalty done in the past so as to develop the hypotheses. Section 3 describes the research methodology employed. Section 4 presents the empirical results and Section 5 concludes.

2. Literature Review and Hypotheses Development

2.1 Homophily and Social Tie Strength

On the social network, each individual is a "node" connected to other nodes, and the connection between the nodes is known as social ties (Newman, 2010). Social tie strength is represented by the frequency of interactions (Wallace et al., 2017). The strength of a tie is defined as a (probably) linear combination of the amount of time, the emotional intensity, the intimacy (mutual confiding) and the reciprocal services which characterise the tie (Granovetter, 1977).

On Instagram, individuals who communicate more frequently with each other and are more involved with each other have stronger ties. Similar tastes also contribute to stronger ties (Lewis, Kaufman, Gonzalez, Wimmer, & Christakis, 2008) in an online context (Wallace et al., 2017). The inclusion of the public self (social and ideal social self) when measuring consumers' self-congruity in this study is relevant as the public self could predict preferences for conspicuous products (consumption of brands on social media) compared to inconspicuous products (Sirgy & Su, 2000).

There is an observed tendency of similar people associating with one another (McPherson, Smith-Lovin, & Cook, 2001; Ruef, Aldrich, & Carter, 2003; Huston & Levinger, 1978). Homophily, which is the observed tendency of "like to associate with like" (Lazarsfeld & Merton, 1954; McPherson & Smith-Lovin, 1987; McPherson et al., 2001) explains why friends, spouses, romantic partners and colleagues have a tendency to be more similar to each other (Kossinets & Watts, 2009). McCroskey, Richmond and Daly (1975) posit three dimensions of perceived homophily, namely attitude homophily, morality homophily and status homophily. Attitude homophily refers to the degree consumers think that their network friends share similar attitudes (Wallace et al., 2017). Morality homophily refers to the degree to which consumers trust that their network friends share the same moral beliefs. Status homophily refers to the degree consumers are convinced that their network friends

come from socioeconomic circumstances that are the same as theirs (McCroskey et al., 1975), which can be ascribed or achieved (McPherson et al., 2001). Friends are found to be more similar on status dimensions, such as education level, age, occupation and socioeconomic status as compared to chance (McPherson & Smith-Lovin, 1987). Similarity leads to trust and solidarity because of the simplicity of evaluating, communicating and predicting behaviours (Hamm, 2000; Portes & Sensenbrenner, 1993). It also incurs lower maintenance costs (Felmlee, Sprecher, & Bassin, 1990). Studies (Skitka, Bauman, & Sargis, 2005) also show that people tend to disassociate with those who have dissimilar moral values. The nature of social media, which is public, makes it an important platform to express moral convictions and ideals as well as the opportunity to assess moral behaviour in its raw and untouched state.

Reviews of recent literature (Aiello et al., 2012; Halberstam & Knight, 2016; Phua et al., 2017a, 2017b) indicating the role of homophily in various social media platforms have been examined in social psychology, political-psychology and branding studies, but not yet in the context of SNS such as Instagram. Therefore, in this study, perceived homophily between consumers and their friends on Instagram is expected to influence their perceived social tie strength. The consumers' perception of their social relations is measured instead of the actual existing social relations mainly because the measures of "cognitive networks" or social relations, as perceived by the actors themselves, is a more suitable measure to study social influence on attitudes and opinions (Marsden, 1990). Based on the above, the hypotheses are formulated as:

H_{1a}: Greater perceived attitude homophily is positively associated with greater perceived social tie strength.
H_{1b}: Greater perceived status homophily is positively associated with greater perceived social tie strength.
H_{1c}: Greater perceived morality homophily is positively associated with greater perceived social tie strength.
H_2: Greater perceived social tie strength is positively associated with greater perceived self-congruity with a "Followed" brand.

2.2 Self-Congruity

Self-congruity is the natural extension of the self-concept and the degree of consistency one has with a brand (Usakli & Baloglu, 2011). The basic hypothesis of the self-congruity theory is that consumers

have the tendency to choose products or brands that match their self-concept. In other words, cognitive matching between value–expressive attributes of a product or brand and the consumer's self-concept would partially determine the consumer's behaviour (Sirgy, Johar, Samli, & Claiborne, 1991). A high self-congruity occurs when the consumer perceives that the product-user image matches the consumer's self-image, and vice versa.

Self-congruity is made up of four dimensions, namely actual self, ideal self, social self and ideal social self (Sirgy & Su, 2000). An actual self-congruent brand is perceived as one that matches who the customer really is while an ideal self-congruent brand would be one that matches who the customer wished to be (Aaker, 1999; Rauschnabel & Ahuvia, 2014). A social self-congruent brand is perceived to match who the consumer is perceived to be in social terms or by other people while an ideal social self-congruent would be one that matches who the consumer wishes to be perceived by other people (Sirgy, 1985). Past literature (Sirgy, 1982; Roy & Rabbanee, 2015; Rauschnabel & Ahuvia, 2014; Saenger, Thomas, & Johnson, 2013) shows that a positive relationship exists between the brand self-congruence and the brand outcome. An individual would feel more self-congruent when his/her self-concept is the same as the brand's personality. Consumers tend to love a brand more when the brand enhances their social self, or when the brand reflects their inner self (Carroll & Ahuvia, 2006). Brand love shows how much the passionate emotional attachment a satisfied consumer has for a particular trade name. It is enhanced when self-congruity with a brand is higher (Wallace et al., 2017). It has also been theorised that consumers become more attracted to brands which are more congruent with who they are (Rahschnabel & Ahuvia, 2014). Based on this, the following hypothesis is formulated:

H_3: Greater perceived self-congruity with a "Followed" brand is positively associated with greater brand love.

2.3 Brand Love, Brand Loyalty and Positive WoM

Previous studies (e.g. Caroll & Ahuvia, 2006) have highlighted the significant relationship that exists between brand love, brand loyalty and positive WOM. The use of a brand to express one's identity and to facilitate interpersonal relationships is viewed as leading to positive brand outcomes. Brands "followed" on Instagram are expected to help

co-create the consumers' identity through their interactions with other individuals on the social network. Customers who fall in love with a certain brand would not only choose the particular brand as their first choice, they also tend to recommend it to others. In the social media context, previous studies have found that a consumer who is engaged with the brand is likely to have emotional attachment, hence spreads positive WOM. The consumer influences prospective customers by providing recommendations in social media. Looking at the context of Facebook, Wallace et al. (2017) noted that brand love mediates the relationship between self-congruence with a brand and brand loyalty, and between self-congruence with a brand and WoM. They suggested that consumers may only display brand loyalty, and spread positive WOM about the brand when the brand holds an emotional or passionate attachment for them. The present study also expects that when the brand love is high, the relationship between self-congruence and brand outcomes, such as brand loyalty, and WoM, also becomes stronger. Thus, the hypothesis is formulated as:

H_{4a}: Greater brand love mediates a stronger relationship between self-congruity with a "Followed" brand and brand loyalty.
H_{4b}: Greater brand love mediates a stronger relationship between self-congruity with a "Followed" brand and WoM.

Based on the hypotheses formulated, the following conceptual framework was developed (Figure 1).

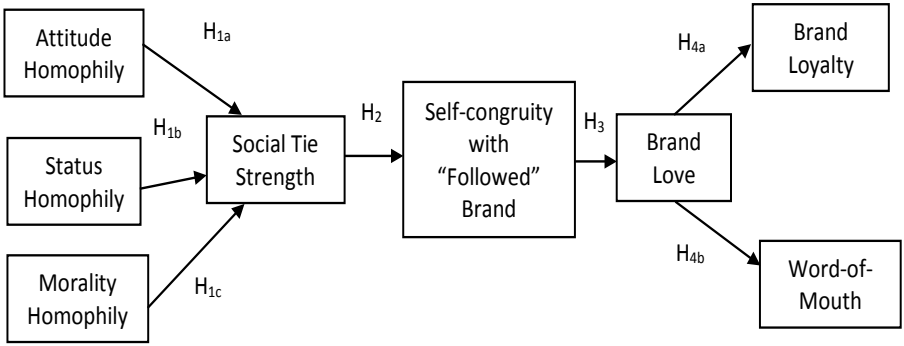

Figure 1: Research Framework

3. Methodology

This study aims to determine the degree to which consumers' brand "Follows" are self-congruent due to their cognitive networks, and if the self-congruity results in a positive offline brand outcome when mediated by brand love. The sample for this study comprised young Malaysian adults aged between 20 to 39 years. Accounting for 40 per cent of the Malaysian population, they are also the largest segment of the population (Muda, Mohd., & Hassan, 2016) of this country. Based on age, they are the largest segment of the Malaysian Internet users who are the frequent users of social media and are technologically-savvy.

In this study, homophily was measured through 12 items adapted from McCroskey et al. (1975) and Wallace et al. (2017) while social tie strength was measured with four items adapted from Granovetter (1983), Brown and Reingen (1987), and Wallace et al. (2017). Self-congruity was measured with 13 items adapted from Grzeskowiak, Sirgy, Foscht and Swoboda (2016) while brand love was measured with 10 items adapted from Carroll and Ahuvia (2006), and Wallace et al. (2017). Brand loyalty was measured using seven items adapted from Yoo, Donthu and Lee (2000), Carroll and Ahuvia (2006), and Wallace et al. (2017) while WoM was measured with four items adapted from Carroll and Ahuvia (2006).

Purposive sampling was adopted using three screening questions: "Do you have an Instagram account?", "Do you follow any clothing/ apparel/fashion brand on Instagram?", and "Have you bought any product of the clothing/apparel/fashion brand you follow on Instagram?". Minimum sample size was determined using the G* Power Analysis (Erdfelder, Faul, & Buchner, 1996). Based on *a priori* analysis, the minimum number of respondents required was 138, but in the context of this study, a Google online questionnaire was created, and then distributed to a total of 384 online users through multiple social media applications. Only 168 valid responses were retrieved for use and analysis, suggesting a 44 per cent response rate.

4. Findings of the Study

Majority of the respondents are females (66.1%) aged between 20 to 24 years of age (75.6%), and they currently reside in Peninsular Malaysia (66.1%), with majority holding a Bachelor's degree (70.8%). Majority also used the Instagram application multiple times a day (85.1%), and three-

Table 1: Respondents' Profile

Demographic Variables	Categories	Frequency	Percentage
Gender	Female	111	66.1
	Male	57	33.9
Age	20–24	127	75.6
	25–29	36	21.4
	30–34	2	1.2
	35–39	3	1.8
Hometown	Peninsular Malaysia	111	66.1
	Sabah and Sarawak	57	33.9
Education Level	SPM and below	8	4.8
	STPM or Diploma	25	14.9
	Bachelor's degree	119	70.8
	Master's degree	16	9.5
Frequency of Use	Multiple times a day	143	85.1
	Once a day	8	4.8
	A few times a week	9	5.4
	Once a week	3	1.8
	A few times in a month	5	3.0
Number of Social Media Accounts	1–5	126	75.0
	6–10	40	23.8
	More than 10	2	1.2

quarters (75%) of them have one to five social media accounts. Table 1 outlines the profile.

Eight variables were included in this research: Attitude Homophily, Status Homophily, Morality Homophily, Social Tie Strength, Self-Congruity with "Followed" Brand, Brand Love, Brand Loyalty, and Word-of-Mouth (WoM). Table 2 shows the means and standard deviations for the variables.

It can be noted that Attitude Homophily scores the highest mean (M = 3.8289) while Brand Loyalty has the lowest mean (M = 2.7177). Brand Love has the lowest variation while Social Tie Strength scores the highest variation among the data. The data indicate that the respondents are having positive responses for all variables, except for brand loyalty, and Word-of-mouth (WoM). In addition, most of the data are clustered based on the means. This suggests that the respondents are rather agreeable

Table 2: Descriptive Analysis for Variables

Variables	Mean	Standard Deviation
Attitude homophily	3.829	1.278
Status homophily	3.696	1.304
Morality homophily	3.692	1.297
Social Tie Strength	3.585	1.370
Self-congruity with "followed brand"	3.032	0.823
Brand love	3.640	0.766
Brand loyalty	2.718	0.910
Word-of-mouth	2.749	1.087

towards the variables tested. A measurement model encompassing all the variables of interest was then evaluated. Two psychometric tests, the convergent validity, and the discriminant validity were then performed. Convergent validity was determined using outer loadings, CR and AVE. Table 3 displays the analysis.

Table 3: Internal Consistency Reliability and Convergent Validity

Constructs	Items	Loadings	AVE	CR	Cronbach's Alpha (α)
Attitude homophily	ATTHP1	0.863	0.732	0.916	0.878
	ATTHP2	0.877			
	ATTHP3	0.852			
	ATTHP4	0.830			
Status homophily	STHP1	0.795	0.693	0.900	0.853
	STHP2	0.875			
	STHP3	0.825			
	STHP4	0.833			
Morality homophily	MRHP1	0.789	0.701	0.903	0.857
	MRHP2	0.804			
	MRHP3	0.864			
	MRHP4	0.888			
Social tie strength	STS1	0.816	0.710	0.907	0.864
	STS2	0.836			
	STS3	0.857			
	STS4	0.861			

Table 3: continued

Constructs	Items	Loadings	AVE	CR	Cronbach's Alpha (α)
Self-congruity with "followed" brand	SCActual1	0.707	0.566	0.944	0.936
	SCActual2	0.673			
	SCActual3	0.775			
	SCIdeal1	0.801			
	SCIdeal2	0.749			
	SCIdeal3	0.833			
	SCSocial1	0.785			
	SCSocial2	0.774			
	SCSocial3	0.701			
	SCIdealSocial1	0.756			
	SCIdealSocial2	0.706			
	SCIdealSocial3	0.766			
	SCIdealSocial4	0.734			
Brand love	BrandLove1	0.751	0.655	0.950	0.942
	BrandLove2	0.809			
	BrandLove3	0.825			
	BrandLove4	0.778			
	BrandLove5	0.840			
	BrandLove6	0.828			
	BrandLove7	0.806			
	BrandLove8	0.867			
	BrandLove9	0.819			
	BrandLove10	0.766			
Brand loyalty	BrandLOYAL1	0.797	0.611	0.917	0.896
	BrandLOYAL2	0.749			
	BrandLOYAL3	0.839			
	BrandLOYAL4	0.810			
	BrandLOYAL5	0.744			
	BrandLOYAL6	0.762			
	BrandLOYAL7	0.766			
Word-of-mouth	WOM1	0.903	0.808	0.944	0.921
	WOM2	0.879			
	WOM3	0.916			
	WOM4	0.897			

As can be noted from the above analysis, all the outer loadings are above the recommended value of 0.5 (Hair, Ringle, & Sarstedt, 2011), ranging between 0.673 to 0.916. The Composite Reliability (CR) for all the items ranged between 0.900 to 0.950, and which exceeded the recommended minimum value of 0.70 (Hair, Black, Babin, & Anderson, 2010). In addition the Average Variance Extracted (AVE) ranged between 0.566 to 0.808 which exceeded the recommended value of 0.5 (Hair et al., 2010; Fornell & Larcker, 1981). All the Cronbach's Alpha coefficients ranged from 0.853 to 0.942, which also exceeded the recommended value of 0.70 (Nunnally, 1978). These figures indicate that the measurement model satisfies the convergent validity.

Discriminant validity refers to the degree to which indicators differentiate across constructs by examining the correlations between potentially overlapped factors. This is determined by using Fornell and Larcker's criterion, Cross-Loadings and HTMT (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). The acceptable value for the Cross-Loading criterion is 0.5 and above (Costello & Osborne, 2005), whereby the indicator for loadings which belonged to the constructed items must be higher when compared to the other constructed measurements. All the indicators loaded (in bold) are found to be stronger than other latent variables, whereby the values of loadings are higher than the loadings on all other latent variables. Table 4 highlights the details.

It can be seen from the table that the square roots of the AVE exceeded the squared correlations between the latent variable and all

Table 4: Discriminant Validity: Fornell-Larcker's Criterion

	AT	BL	BLO	MH	SC	STS	SH	WOM
AT	**0.855**							
BL	0.285	**0.809**						
BLO	0.363	0.548	**0.782**					
MH	0.584	0.261	0.348	**0.837**				
SC	0.373	0.642	0.506	0.259	**0.752**			
STS	0.407	0.374	0.396	0.575	0.424	**0.843**		
SH	0.528	0.242	0.415	0.641	0.349	0.537	**0.832**	
WOM	0.309	0.593	0.658	0.269	0.543	0.34	0.336	**0.899**

Note: AT – Attitude Homophily, BL – Brand Love, BLO – Brand Loyalty, MH – Moral Homophily; SC – Self-Congruity with "Followed" Brand, STS – Social Tie Strength, SH – Status Homophily, WOM – Word of Mouth.

other latent variables. A threshold value of 0.90 has been suggested for HTMT (Henseler, Ringle, & Sarstedt, 2015) where a reading of above 0.90 indicates a lack of discriminant validity, and the confidence interval of the HTMT should not involve the value of 1. Table 5 shows that the HTMT criterion has been fulfilled. Overall, it can be concluded that the measurement model in this study showed satisfactory evidence of overall reliability, convergent validity and discriminant validity.

Table 5: Discriminant Validity: HTMT

	AT	BL	BLO	MH	SC	STS	SH	WOM
AT	–							
BL	0.308	–						
BLO	0.410	0.550	–					
MH	0.678	0.284	0.396	–				
SC	0.408	0.675	0.532	0.287	–			
STS	0.465	0.409	0.444	0.664	0.468	–		
SH	0.612	0.258	0.460	0.743	0.393	0.616	–	
WOM	0.344	0.624	0.717	0.298	0.585	0.382	0.379	–

Lateral collinearity issue is an issue that must be avoided before evaluating the structural model. Although the criteria of the discriminant validity are fulfilled, the lateral collinearity issue may mislead the results since it could mask the strong causal effects in the model (Costello & Osborne, 2005). In the analysis provided, all the Inner VIF values for the variables ranged from 1 to 1.976. This indicates that lateral multicollinearity is not a concern in this study (Hair et al., 2014).

Assuming that the measurement model is parsimonious, the structural model was calculated by using the Bootstrapping function. As indicated in Table 6, the value of R^2 ranged from 0.180 to 0.412. For a hypothesis to be considered significant and supported, the standard beta value has to be positive, and the p-value has to be less than 0.05 (Hair et al., 2014). The effect size was measured according to the guideline recommended by Cohen (1988) whereby the value of 0.01, 0.20, 0.50 and 0.80 represents very small, small, medium and large effects, respectively.

From Table 6, it can be noted that perceived attitude homophily is not significantly related to perceived social tie strength ($t = 0.505$, $p > .05$, $f^2 = 0.002$), hence H_{1a} is not supported. In contrast, status homophily ($t = 2.749$, $p < .05$, $f^2 = 0.067$) and morality homophily ($t = 3.653$, $p < .05$,

Table 6: Hypotheses Testing

	Std Beta	Std Error	t-value	p-values	Decision	R^2	f^2	Effect size
Attitude Homophily → Social Tie Strength	0.044	0.087	0.505	0.614	Not supported	0.380	0.002	Very small
Status Homophily → Social Tie Strength	0.274	0.100	2.749	0.006**	Supported	–	0.067	Very small
Morality Homophily → Social Tie Strength	0.374	0.102	3.653	0.000**	Supported	–	0.114	Very small
Social Tie Strength → Self-Congruity with "Followed" Brand	0.424	0.074	5.694	0.000**	Supported	0.180	0.219	Small
Self-Congruity with "Followed" Brand → Brand Love	0.642	0.043	15.018	0.000**	Supported	0.412	0.702	Medium
Brand Love → Brand Loyalty	0.548	0.055	10.018	0.000**	Supported	0.300	0.428	Small
Brand Love → Word-of-Mouth	0.593	0.049	12.051	0.000**	Supported	0.352	0.543	Medium

Note: p values for one-tailed test: *p < 0.05, **p < 0.01.

$f^2 = 0.114$) are observed to have a positive relationship with social tie strength, hence H_{1b} and H_{1c} are supported. The effect size in producing the R^2 for social tie strength was observed to be rather small, with all the homophily variables affecting the social tie strength with small effect sizes.

The analysis further shows that social tie strength positively predicted self-congruity with "followed" brand ($\beta = 0.424$, $t = 5.694$, $p < 0.01$), and hence H_2 is supported. The effect size in producing the R^2 for self-congruity with "followed" brand is small, with a value of $f^2 = 0.219$. This study also found that greater perceived self-congruity with a "followed" brand has a positive significant relationship with greater brand love ($\beta = 0.642$, $t = 15.018$, $p < 0.01$). Thus, H_3 is supported. The value of $f^2 = 0.702$, indicating that self-congruity with a "followed" brand had a medium effect size in explaining the variance of brand love.

The mediation test was performed by bootstrapping the sampling distribution of the indirect effect (Hair, Hult, Ringle, Sarstedt, & Thiele, 2017; Zhao, Lynch Jr, & Chen, 2010). Bootstrapping yielded a higher level of statistical power when compared with the Sobel test (Hair et al., 2014). In this study, the mediation effect occurred when a change in self-congruity resulted in a change in brand love which, in turn, changed the brand outcomes. The findings thus show that brand love mediates the relationships between self-congruity and brand loyalty ($\beta = 0.548$, $t = 10.018$, $p < 0.01$), and also WoM ($\beta = 0.593$, $t = 12.051$, $p < 0.01$). The lower and upper limits for the mediating relationship between self-congruity, brand love, and brand loyalty are 0.631 and 0.790, respectively, while the lower and upper limits for the mediating relationship between self-congruity brand love and WoM are 0.547 and 0.730, respectively. There is also no zero in between the UL values and the LL values, respectively. This indicates the mediation effect, hence H_{4a} and H_{4b} are supported. The effect size in producing the R^2 for brand loyalty is small, with a value of $f^2 = 0.428$ while the effect size in producing the R^2 for WoM was medium, with a value of $f^2 = 0.543$.

5. Discussion

Several interesting findings are derived from the current study. First, the findings show that greater perceived attitude homophily, among the consumers and their friends on Instagram, do not predict greater perceived social tie strength. This finding contradicts the findings of Wallace et al. (2017), and Ruef et al. (2003) who found that group members'

similarity, in terms of psychological states, should cause and contribute to the formation of the group. Homophilous attitude should lead to attraction and interactions (Huston & Levinger, 1978), and similar behavioural patterns should result in increased associations (Cohen, 1977; Kandel, 1978). However, this is not the case in the current study.

One possibility attributing to this insignificant result may be the misperception of friends' attitudes (Jussim & Osgood, 1989; Huckfedlt & Sprague, 1995). Many people have the tendency to assume that their friends are similar to them, when the reality is that disagreements are simply not discussed (McPherson et al., 2001). This occurrence, inevitably also contributes to the weak social tie strength since the relationship is not as strong, despite being seemingly similar. Another reason could be because people have a tendency to control their social media postings, thus creating an extension of self that may not be completely true to oneself. For example, Odom, Zimmerman and Forlizzi (2011) found that teenage respondents controlled their Facebook contents by carefully deleting comments, photos and messages to avoid family members and friends seeing them, in case they get into trouble. Ahuvia (2005) also found multiphrenic and dialogical selves in online identities curated by individuals. Other researchers have also discussed identities being managed actively (Côté, 1996; Madden & Smith, 2010). Thus, Suler's (2004) quotation, "What others know or don't know about me is not always clear" showed that despite perceiving attitude homophily, users may still have a lack of trust or a "wall" that comes in between while having a strong social tie with others. This is especially true in the digital world where communities are imagined, and the members may not be known personally. The only information they have of each other could be mere pseudonyms, derived from their respective online contributions (Born, 2011). In most circumstances, users barely know the intimate details of one another, unlike close neighbourhood friends. This therefore, creates a sense of imaginary community, which aptly applies Granovetter's (1983) concept of weak ties (Belk, 2013). This outcome therefore, explains why greater perceived attitude homophily may not necessarily predict greater social tie strength.

Second, status homophily is found to be significantly associated with social tie strength. Festinger (1950) had stated that people were more likely to use a reference group which is more similar to them in structural positions. This theory of social comparison has been supported by other studies (Burt, 1992; Friedkin, 1993). People who are more alike in terms of their positions within a structural network are

also more likely to have interpersonal communications on issues related to the positions. Consequently, they tend to have more influence over each other, and may indicate a higher frequency of advice exchange, friendship and associations (McPherson et al., 2001). According to Wright (1997), property boundary is the strongest factor for friendships to occur in most societies. Blau, Beeker and Fitzpatrick (1984) also demonstrated that an area's composition of occupational and income structure, and educational distribution affected homophily. This inadvertently, reflects that similarity in terms of socioeconomic status plays a role in determining the strength of the social ties since one's place of stay is determined by one's socioeconomic status. Therefore, people with similar social status and socioeconomic prestige would also have stronger social ties with one another.

Third, morality homophily has the highest contribution in terms of effect size for explaining the variance on R^2; it also has the strongest effect on social tie strength among the three homophily elements analysed. People tend to reject, keep a distance, or not accept the idea of having a relationship with others who do not share the same moral convictions (Skitka et al., 2005). In this regard, people tend to keep higher social distances.

This study illustrates a significant relationship between social tie strength and self-congruity. An individual is more likely to be congruent online if the friends on the online platform are also able to gauge if the online identities being portrayed were real or idealised (Back et al., 2010). In Back et al. (2010), participants were tested to see if their online "self" reflected their offline "self", that is, if they were congruent. The study found that indeed, the respondents' online profile reflected their offline "self". The well-acquainted friends were presumed to have strong social ties with the respondents. Therefore, this stronger social tie correlated with a more congruent portrayal of the "self" online. Consumers' online community, in this case, Instagram friends, would cause the consumers to take careful considerations of the objects chosen to be displayed online – such as brand "follows" – in an attempt to communicate the "self" (Schau & Gilly, 2003). This is because such displays enable the members (Instagram friends) to decode in agreement with the others within the group.

Consumers who are attracted to a brand that is self-congruent, are very much similar to the people who are attracted to one another due to homophily (Rauschnabel & Ahuvia, 2014). The sense of having an interpersonal connection or relationship with the brand would result

in brand love (Rauschnabel & Ahuvia, 2014). The current study, for instance, finds that items for self-congruity such as, "The brand is like me," or "I like to see myself as similar to the brand" are able to show that people have a sense of social relationship with the brand. This leads to a sense of attachment, like to a person, thereby resulting in an emotional reaction – love. This study has found that greater perceived self-congruity with a "followed" brand does indeed lead to greater brand love. Consumers would love a brand more when the brand is more like themselves (Wallace et al., 2017; Rauschnabel & Ahuvia, 2014).

The potential for self-extension could also contribute to greater brand love (Aron & Aron, 1996). For instance, if the brand was perceived to be similar to the consumer's ideal self or social ideal self, there is a greater brand love (Kressmann et al., 2006). This study supports the finding that self-congruity is an antecedent to brand relationship quality (Kressmann et al., 2006) because self-congruity with a "followed" brand has a stronger effect in determining brand love as an outcome. Overall, the most popular brands "Followed" on Instagram were fashion, sports and retail brands (Statista, 2018b). This is not surprising since Instagram members mainly used the site as a style guide. Users who frequently used Instagram to "follow" brands were also avid fashion followers (Phua et al., 2017a). They used this as a platform to showcase their personal styles and a sense of fashion (Phua et al., 2017a).

The findings of this study also supported the two mediation hypotheses. Wallace et al. (2017) had posited the mediation role of brand love in which it mediated the relationship between self-congruity and brand loyalty, as this study has also revealed. Brand love is also found to mediate the relationship between self-expressive brands and brand loyalty (Carroll & Ahuvia, 2006). This further highlights the role of brand love as the middle ground between the self and brand loyalty. The outcome generated by this study is also consistent with Wallace et al. (2017), and Carroll and Ahuvia (2006) whose findings showed that brand love positively and significantly predicted WoM; it also mediated the relationship between self-congruity with a brand and WoM.

6. Conclusion, Implications and Limitations

From a theoretical standpoint, after an extensive literature review, this study ought to be the first study to quantitatively measure self-congruence in four dimensions – actual self, ideal self, social self and ideal social self, with "followed" brands on Instagram. The study by

Wallace et al. (2017) focussed only on the actual and ideal self in the self-congruence measurement, which was situated in the context of Facebook instead of Instagram. Other studies tended to measure self-congruity with only two dimensions – actual self and ideal self (Usakli & Baloglu, 2011; Kressmann et al., 2006) when in fact, there are four dimensions (Grzeskowiak et al., 2016). This study has explored the antecedents and outcomes of self-congruent brand "follows" on Instagram, which contributes to the expanding body of literature that examines self-presentations, and congruence with the self on social network platforms, such as Facebook and Instagram (Belk, 2013; Back et al., 2010).

Most studies investigating the usage of brands for self-presentation purposes online were qualitative (Sekhon et al., 2015; Hollenbeck & Kaikati, 2012), but the current study heeded the call for a quantitative approach so as to corroborate previous findings, such as those by Hollenbeck and Kaikati (2012). This study has also contributed to the literature focussing on the relationship between homophily and social tie strength. Unlike the findings of Wallace et al. (2017), this study finds that attitude homophily did not predict stronger social tie strength among consumers and their friends on Instagram. The outcome has been attributed to the misperception of self, and the lack of confrontations of disagreements among the community of users (Jussim & Osgood, 1989; Huckfedlt & Sprague, 1995; McPherson et al., 2001). Nonetheless, status homophily predicts a stronger social tie strength among the consumers and their friends, resonating the findings of Wallace et al. (2017). This study has also contributed to literature by using an additional variable, morality homophily, which was added into the framework to determine its relationship in predicting social tie strength among consumers and their friends on Instagram. It was found to be the strongest predictor for predicting social tie strength, among the three homophily components used. The cause could be because moral convictions had a greater tendency to unite or divide (Skitka et al., 2005).

This study has also provided some insights into the relationship between brand "follows", and offline brand outcomes, in the virtual world. As there are few studies looking at brand outcomes in the virtual world (Wallace et al., 2017), this study has thus expanded the literature by showing that brands may not necessarily be within the reach of consumers' material reality.

From a managerial standpoint, this study has indicated that brand managers can target Instagram users who "follow" the brand, by categorising their brands according to status and moral values. The

Instagram users can then be extended to target their friends because they are homophilous in terms of status and morality, thereby leading to a stronger social tie, greater self-congruity with the brand "followed", and greater brand love. The greater brand love would also create a positive offline brand outcome, such as brand loyalty and WoM. This then enables the brands to develop a potentially strong, loyal base of customer, which would then contribute to the brand's long-term sales.

From the results of this study, it is recommended that marketing managers consider using their marketing intelligence to segment brand followers on Instagram according to their tie strengths. For instance, they can use frequency, recency and amount of time spent interacting with fellow friends as a starting point. The informatics should be able to give marketing managers an insight into the social tie strength between the users and their friends on Instagram. The social tie strength would therefore, give insight into the consumers' self-congruity with the brand "followed" on Instagram, thereby allowing marketers to know if these followers actually love the brand. This can contribute to positive offline brand outcomes.

Brand managers should also define the brands based on the customers' perspective on Instagram so as to create an emotional bond, brand love, between the consumers and the brand. The self-concept of consumers should be taken into consideration since self-congruity has a strong effect on whether or not brand love will exist. By humanising the brand, this external approach of making consumers feel a heightened sense of similarity with the brand can lead to brand love, hence positive offline brand outcomes. To bring it up a notch, marketing managers could even consider individual branding as this study has revealed that self-congruence with the "followed" brand has a strong effect on brand love. For example, consumers may contribute to brand personality through posts, like "what do you think of us?" Their feedback could be analysed to create brand personality that is congruent to their target markets.

This study also finds that brand love leads to positive offline brand outcomes such as brand loyalty and WoM. The proxy measure of "love" can be analysed through the comments of consumers which might suggest affection. This can be assessed through the length of the comments, use of emojis, amount and type of punctuations used, or choice of words, all of which are useful for analysis, thereby allowing managers to predict the customers' repurchase intention, and the like-liness of sharing WoM.

In retrospection, this study and its propositions were only generated based on the consumers' own perceptions of homophily, and their social tie strength with their friends on Instagram. A more objective measure such as the frequency of liking, commenting, or direct messaging one another on the platform would have been a more suitable measure to assess these variables. However, this would need to take into consideration their privacy and other ethical issues which need to be deliberated with care. Marsden (1990) had mentioned that it is adequate to measure perceptions of the cognitive network structure of a social influence topic. Future studies may thus consider other objective measurements of the consumers' cognitive network structures, such as, frequency of interactions between consumers and their friends on Instagram in terms of liking, commenting, or direct messaging. Future studies may also consider increasing the sample size so as to match the small sample size of the current study, which restrained the generalisability of the findings.

Overall, this study has revealed that morality homophily contributed the most to the strength of social ties, while attitude homophily did not. Six out of the seven proposed hypotheses were supported, and the outcome generated offered some insightful findings to both the marketing practitioners, and the academicians to better understand the relationship workings between cognitive networks, and brand outcomes in an online SNS context.

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