Information Systems: Transforming the Future

24th Australasian Conference on Information Systems, 4-6 December 2013, Melbourne

Proudly sponsored by

[Logos of sponsors]
Understanding social network site consumer engagements

John R. Hamilton
Faculty of Law Business and Creative Arts
James Cook University
Cairns, Qld., Australia
Email: John.Hamilton@jcu.edu.au

Singwhat Tee
School of Business
James Cook University
Cairns, Qld., Australia
Email: Singwhat.Tee@jcu.edu.au

Abstract
Interpreting social network site (SNS) consumer behavior engages motivation, consumption, and planned behavior theory. An expanded consumer attitude and engagement approach combines with consumer expectations and psychology to embed consumer value deliverance intermediaries, and to ultimately deliver SNS business outcomes through satisfaction, trust and loyalty. This SNS ‘consumer engagement’ model is conceptualized to operate across the business’s SNS consumer engagement cycle, and with the SNS consumer measurement framework, adds understanding of pre-event, at-event and post-event consumer behavior when engaging in the business’s SNS. Astutely interpreted, this approach allows business to further understand its SNS consumers (and even its sub-groups of consumers).

Keywords Consumption, motivation, marketing, social-media, technology.

INTRODUCTION
Since 2004, web 2.0 (deploying technologies beyond static web1.0 webpages), and now the web 3.0 (the current evolving web of intelligent, personalized, geospatial linked-data across the internet-of-things) (Berners-Lee, 2013) approach continues shifting consumers from passive recipients of marketing exchanges processes into active and co-creation engagements and interactions across the digital and communication media domain (Hanna et al., 2011). Deloitte recognizes such fast-changing, technology-driven communication channels as facilitators of new knowledge-sharing, enhanced intelligence gathering and greater networking options, but sees social networks as ‘full of risks’ but offering great rewards (Swiegers et al., 2012), with today’s businesses actively-engaging across its communication and exchange channels (Venkatesh and Bala, 2008). Neilsen (Q3, 2011) see social media as ‘… connecting people with just about everything they watch or buy.’ Social media empowers web consumers, and drives participant trust across social media software-harnessing network vehicles including Facebook, LinkedIn, YouTube, and Flickr. (Khong et al., 2013; Ross et al., 2009).

Across such online social network site (SNS) variants, consumers and membership-groups collaborate, and create innovations to their existing communications channels. SNS communication channels also market business offered transaction opportunities to consumers (Cheung et al., 2011), but the completion of each SNS exchange remains challenging (Hanna et al., 2011). Chan and Guillet (2011) suggest a five phase approach (attracting, engaging, retaining, learning and relating) improves SNS engagement, but they acknowledge limitations – such as completing a SNS transaction at the business website. Others show the SNS consumption can be sectioned under hedonic (emotional) or utilitarian (rational) grouping motivations (Mikalef et al., 2012).

Many SNSs utilize advertising as a prime revenue source, and pursue ways to maximize such revenue streams (Kim et al., 2007). These SNS consumers apply three customer value dimensions (functional, social and emotional) as their digital-purchase-intention determinants (Kim et al., 2011), but scant communication and interaction theory exists as to how consumers are actually drawn towards completing specific transactions. We explore such motivations and consumptions theoretically, and develop a SNS consumer engagement model (and framework) to capture a time-lined value deliverance sequences and to acquire processes that operate within the SNS.

SNS COMMUNICATION CHANNELS
SNSs connect networks of consumers with unstructured, ad hoc, consumer-generated-content (Doyle, 2007). SNS communication channels now include blogs, micro-blogs (Twitter), wikis, news/photo/video-sharing, co-
creation, social bookmarking, interactive game-scenarios, and RSS feeds, and these present new ways to connect consumers and business (Cox, 2008).

Within SNS environments each consumer controls their online experience, and their motivations to engage online (Hoffman and Fodor, 2010) across social media modes such as those of Table 1. Social communication draws on consumer trust, and the credibility of associating with ‘persons-like-me’ (Scanfield et al., 2010).

SNSs typically encompass shared social, human and intrinsic content features (Doreian and Conti, 2010), which may be restricted to selected homogeneous populations (Boyd and Ellison, 2007; Lee et al., 2010).

Consumer perspectives

SNSs move beyond spaces where consumers are solely preoccupied with communicating and forming networks around either themselves or activities (Beer, 2008). SNSs continually develop functional reasons for consumer involvement/engagement. SNSs, and they also gain: consumer identity (and disclosures); conversations; sharing; presence; relationships; reputation and group actioning (Keitzmann et al., 2011).

SNS consumers typically build common social behaviors, or identities (Dholakia et al., 2004), and this grouping motivates them to participate – especially when the SNS community impact (and its social identity) aligns with their social behaviors (Chaffey and Smith, 2013). Thus, gaming, social and information SNS segmentations arise (Heinonen, 2011), and as the need arises sub-segments of ‘like’ consumers also emerge (Hamilton et al., 2013).

Previous consumer segmentation approaches include: quantifiable social toolkit selections (Anon, 2010), economic value, consumer perceived value assessments of performance, quality, servicing (Hamilton et al., 2013), and/or emotive and/or behavioral values linked to particular SNSs and their social media applications (Hoffman and Fodor, 2010; Sweeney and Soutar, 2001), and brand recognition links across a business’s social media site.

SNSs also segment across chosen consumer behaviors and value perceptions (Doyle, 2007). These include: social networks (LinkedIn, Google+, Facebook); social searching (Bing, Google-text); social knowledge (Article-sites, Wikipedia); social blogging (RSS-feeds, Mobile-apps); social customer service (Commerce-reviews, Twitter); social publishing (Blogs, media-sites); and social bookmarking (Reddit, Stumbleupon) (Chaffey and Smith, 2013).

Within these SNS segments shareable content is continually incorporated, and different consumer segments display different behavioral motivations to participate (Cheung et al., 2011). Thus, consumer motivation sets a pre-event influence and is included within this SNS study.

Business perspectives

The business seeks to reach potential SNS consumers by pursuing information about their attitude, usage, knowledge, affects, engagements, foresight, and fears (Akar and Topcu, 2011). Some businesses use variations to technology acceptance models (TAM) and seek consumer perspectives including: usability, value/brand, and intention-to-reparticipate (Choi and Chung, 2013; Venkatesh and Bala, 2008). These TAM variations sometimes include consumer retail value, and psychological motivation and consumption linkages (Hamilton et al., 2013).

Eighty five per cent of 2009 SNS participants prefer businesses to engage with them across SNSs applications (Nail, 2009). This requires business SNSs to engage pools of resources, and often involves the build of economically worthwhile, but unevenly distributed connections with back-links into their business websites (Gonzalez-Bailon, 2009). These competitive back-linkages also create scope for further business engagement (Chaffey and Smith, 2013; Hoffman and Fodor, 2010).

Others see SNS consumer engagement with the business as simple wiki and blog communications (Lai and Turban, 2008) to raise expectations, win social connections and convince social consumers of the group’s ‘collective good’(Liben-Nowell and Kleinberg, 2007). In SNSs customer value analysis studies the business-side of the SNS encounter warrants inclusion. For example, Telstra a large Australian telecommunications corporate, requires staff to responsibly target and discuss its products, services, people, and competitors when engaging within SNS environments.

Harris and Rae (2009) see future business SNSs as being technology supported, consumer-collaborative, and aligned (from business and consumer social connectivity perspectives) (Klick and Parisi, 2008). In such collaborative environments the SNS consumer is a controlling entity that must be reached, and then sufficiently motivated to engage. Hence, we assess the consumer’s SNS requirements from both the business provision and the consumer demand perspectives.
Psychology social engagement perspectives

In social-psychological approaches, consumer engagement in social groups is a rational weighting of costs and benefits around activities perceived as desirable (Klandermans, 1984). As SNS consumers also behave in line with resource (and social) expectancy theory (and with mate selection theory), SNS businesses should mobilize their consumer goals as a ‘collective good’, generating relief, overriding personal risk (Liao, 2011), targeting user social network added-value, and overriding other existing negative value perceptions (Wirtz et al., 2013).

Past social engagement approaches have used incentivization processes (Olson, 1977), such as: ideology (Carden, 1978), solidarity (Fireman and Gamson, 1979), responsibility (Fleishman, 1980), perceived contribution indispensability (Tolbert, 1981); action versus follow (Fireman and Gamson, 1979); production additives (Oberschall, 1980; Oliver et al., 1983); or market thresholds (Granovetter, 1978). However, these incentivizations may or may-not make a social network consumer engage.

Klandermans (1984) social-psychology approach to engagement argues consumers hold expectations about the behavior of others, and so formulate their own production functions, which in-turn, heavily influence individual willingness to participate/engage. At the wider group level, consumers also expect others to participate/engage even at a marginally positive level, and particularly where the ‘collective good’ is highly valued (Oberschall, 1980).

Social network consumers also display differential inter-social group mobility influenced by: contribution levels, group size and the level of contribution towards the production of the group’s collective good (Oliver et al., 1983). This differential mobility builds from consumer perceived expectations of group relevance and links through past experiences into current value deliverables (as cost/benefits weightings) (Klandermans, 1984).

These differentially motivated consumers add to a social network’s ‘collective good’ by sharing (or exchanging) content/ideas, and in sharing, they consume from their SNSs. Hence, we now investigate the consumer’s SNS requirements from both motivational and consumption theoretical perspectives.

MOTIVATION THEORY

Consumer motivation to participate in SNSs depends on desired personal gratification levels (Cheung et al., 2011). Like Klandermans (1984), Urdan and Maehr (1995) consider SNS consumer social goals, social motives, and social influences motivate engagement attitudes and behaviors to align within the SNS norms.

SNS consumer attitudinal and behavioral motivation patterns also affect technologies usage, and in-turn influence contact-reach, connections-with-friends, and socialization levels (Brandtzaeg and Heim, 2009). Deci (1975) and Davis et al., (1992) divide consumer behavior into extrinsic motivation (usefulness, or an action of perceived usefulness committed in achieving a value dimension), and intrinsic motivation (enjoyment, or committing an action of interest because the action itself is of interest). Both motivations affect the consumer’s intention-to-use, and then to consume information technologies (Lu and Su, 2009; Lin and Lu, 2011), and both contribute to consumer perceived benefits in the SNS (Lin and Lu, 2011).

Seventy five per cent of SNS consumers seek business-offerings, with over thirty per cent believing SNSs provide good information, and over forty six per cent of consumers socially connecting to discuss business-offerings (Anon, 2010; Neilsen, 2011). Another twenty seven per cent of SNS consumers see entertainment as a motivation to connect. Entertainment can include gaming and/or invitations to: events, sharing activities, special-offers, and promotions (Neilsen, 2011; Swiegers et al., 2012).

From psychology, Heinonen (2011) develops three similar pre-event motivations (transaction information, social connectivity, and entertaining interactions) for consumers to engage in SNSs, and Heinonen (2011) also links each pre-event motivation into its own set of at-event SNS consumptive activities – as shown in Table 2.

CONSUMPTION THEORY

Consumption occurs when a business first appropriates requisite services, engages appropriate enhancing tools, and dedicates suitable levels of attention towards the consumer differentiated transacting practices (Warde, 2005). Consumers participate if they know of the opportunity, can access the opportunity, and are motivated to engage (Heinonen, 2011).

If a business offering’s ‘collective good’ (or intended expectations) and other additional features (or extensions to their intended expectations) (Feather, 1982) sufficiently capture a perceiving attractiveness of business offering, the consumer may progress into a consumption phase (Klandermans, 1984). Levels of consumer expectations also influence the willingness to check on a business item’s value options (Kamaruddin et al., 2012.).
The pathway to consumption remains interactive, embedded across business-consumer interface, and forms a business-consumer value co-creation that can inform, greet, deliver, charge, and help in the value acquisition processes (Gronroos and Voima (2011). However, Kwan and Yuan (2011) recognize value co-creation may arise from a static pre-event recognition (such as an expectation), and so create a dynamic service-value-network by combining static value co-creations with economic imperatives.

Similarly, in SNS’s the business can initiate consumer expectations and capture their choice pathways variations (Kamaruddin et al., 2012) against levels of customer motivation for the business offerings sought (Wei and Miao, 2013). In psychology such attitude, motivation, choice, and decisions fit expectancy-value models of rational-choice (Pinard, 1983). Numerous information systems consumer studies also support an expectations-value connection, and often engage expanded TAMs approaches.

DIMENSIONS OF VALUE

From above, consumer expectations (gauged as intentions and extensions) occur pre-event and are normally pre-promoted by the business.

Intentions represent the normative ‘goodness-present’ dimension (Parasuraman and Grewal, 2000), and house ‘should-exist’ components (Swan and Trawik, 1980) the consumer expects to find in an excellent the business offering (Hamer, 2006).

Extensions add further business-offered components beyond the consumer’s normal intention expectations. These ‘hope-exist’ extension components, plus the above intentions, provided they are both relevant (Boulding et al., 1993), then jointly contribute towards a positive ‘more-than-fulfilled’ or a negative ‘less-than-fulfilled’ expectation state within the consumer (Lei et al., 2008). Where a strong positive expectations state exists, the consumer has motivations to consume (Heinonen, 2011) through an at-event values acquisition phase.

Hou and Tang (2008) present consumer value as a dual value set – combining business orientation and consumer perception, but in SNSs consumers are typically value seekers. Consumer value is also a multi-dimensional construct (Barnes and Mattsson, 2008; Roig et al. 2006; Sheth et al. 1999; Sweeney and Soutar 2001), and although researchers display variations in the value dimensions they adopt, their value dimensions can be grouped into five at-event dimensions (performance, quality, servicing, economic value and value satisfiers) (Hamilton et al., 2013; Roig et al., 2006; Sheth et al., 1999), which can then influence post-event measures such as consumer willingness to buy or seek information, or to compare/evaluate alternatives (Boksberger and Melsen, 2011). Where business offerings show alignment to SNS values, consumers are influenced towards post-event decisions – including satisfaction (Mitra and Fay, 2010), trust and loyalty (Khong et al., 2013).

LINKING MOTIVATION AND CONSUMPTION

With motivation and consumption related above through expectancies and values, but operating in different time positions, we adapt Heinonen’s (2011) Table 2 grid of three SNS motivations (entertainment, social connection or information activities) against three SNS consumption areas (interactive, participatory, or production-related (Shao, 2009)), and show nine segments for SNS consumer targeting.

We also recognize a SNS consumer’s value acquisition is an at-event consumptive process, and remap Table 2 into Table 3, showing five value consumption dimensions (servicing, performance, quality, economic-value, and instant-satisfiers) as a motivators-to-consumption map for SNSs.

Table 3 allows business to interpret differing consumer SNS motivations against its consumptive valuing measures. First, a substantive SNS business portal providing entertainment, social connection and information can promote its consumption by winning additional consumer connectivity in every cell of Table 3. Second, a gaming SNS community can place further emphasis across the three entertainment motivation-consumption cells of Table 3 (and a specific game may focus on just one cell). Third, an academic SNS site with information targets, can first focus on this row of three cells for motivation-consumption value deliverance enhancement, and fourth, targeted SNSs first focus on strongly delivering across this row of cells.

SNS CONSUMER ENGAGEMENT MODEL

IT usage models including TAM approaches are normative, predictive, and typically link intentions and behaviors (Ajzen, 2002), and unified acceptance and technology approaches continue expanding, with some assessing frequency-of-use and consumer behavioral intention (Venkatesh and Bala 2008). Wilson et al. (2012) links prior frequency-of-use and attitudinal-habit-strengths (engagement drivers) with expectations, and also includes a social influence driver. These pre-event consumer states conjointly create a consumer preconception (or belief), which then combines with a developing set of values recognitions, and finally results in reflective decisions to reuse the IT site.
As a SNS captures a group of consumers who ‘like’ similar things, the SNS constitutes a group norming construct. Hence, from Table 3 motivators, we select the motivator that best aligns with a chosen SNS. For example, a boating website and its linked SNS focuses on offering information and advertising of new products. Hence, ‘information’ is the norming motivator for its consumers, and consumption is best targeted through the information set of consumptive value dimensions.

Like others (Choi and Chung, 2013; Venkatesh and Bala, 2008; Wilson et al., 2012), we include the attitudinal elements of TAM and psychological approaches when including consumer behaviors as pre-event SNS attitudes, engagements, and expectations (or planned behaviors). As we move into the at-event values delivery suite we add value analysis studies, and then move to the post-event reflective group outcome behaviors. We recognise many post-event outcomes studies show behavioral progressions – typically from satisfaction, to trust, and then to loyalty (ref), and when SNS loyalty leads to definite consumer re-visiting decision, then a new Figure 1 consumer re-engagement cycle begins – with previous consumer pre-event motivations and prior beliefs of the business offering undergo repositioning considerations.

To demonstrate the applicability of Figure 1 and Table 3, we adopt an informative SNS motivation-consumption business situation, and develop an informative SNS consumer measurement framework (Table 4). From Figure 1’s constructs, and using the informative row of the at-event Table 3 motivation-consumption value dimensions, we build Table 4 to capture the pre-event and post-event informative constructs. This now provides a framework for quantitative and qualitative informative SNSs consumer engagement studies, and in quantitative studies the total effects of any SNS input driver can be gauged against its individual outcomes measures. The same approach can also be applied to the other Table 3 row motivators of social connection or entertainment. This SNS consumer engagement model is to be tested using two commercial websites with substantive activities within their SNSs - one is an industrial farm machinery portal the other is a key marine industry portal.

CONCLUSION

The growth in the online membership of a business SNS can be stimulated when improved channels for collaboration and communication emerge between the online business and its engaging SNS consumers.

Interpreting SNS consumer behavior within online business environments enlists psychology (motivation, consumption, and planned behavior), information systems (usefulness and ease-of-use attitudes, and include engagement competency to cater for consumer capabilities) and business expectations (intentions and extensions) as pre-event variables. These influence at-event business SNS value deliverance, and post-event reflective outcomes interpretations. The resultant SNS consumer engagement model (Figure 1) presents pathways to understand pre-event, at-event, and post-event consumer behavior across specific business SNSs.

The SNS consumer engagement model (Figure 1) in combination with Table 3’s motivators-to-consumption values triggers establishes a SNS consumer measurements framework (Table 4) for an information normed SNS. Table 4’s cell measures are developed from psychology, business and information systems literature, on-line survey-captured and analysed as values deliverance systems (or for selected total effect comparisons) across one (or more) SNS business. The SNS consumer engagement approach facilitates greater understanding of the business SNS value deliverance to its consumers, and it applies to information, or to social, or to entertainment SNS frameworks.

![Figure 1: SNS consumer engagement model](image_url)
Table 1. Social media marketing approaches (Stelzner, 2011)

<table>
<thead>
<tr>
<th>On-line Consumer-Connection Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email marketing</td>
</tr>
<tr>
<td>SEO</td>
</tr>
<tr>
<td>Event marketing</td>
</tr>
</tbody>
</table>

Table 2. SNS Consumer targeting matrix (adapted from Heinonen, 2011)

Table 3. Motivators-to consumption value triggers for SNSs
### Table 4. Informative SNS consumer measurement framework

<table>
<thead>
<tr>
<th>Motivation to use a business’s SNS</th>
<th>Preconceived market expectations of bus. offerings</th>
<th>Immediate consumer perceived values acquired/delivered</th>
<th>Reflective customer considered outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude to SNS experience (perceived favorable environment)</strong></td>
<td>This SNS should be useful and engage me with other like-interest consumers.</td>
<td>This SNS is useful when seeking product and/or service information.</td>
<td>This SNS provides top quality consumer experiences.</td>
</tr>
<tr>
<td><strong>Engaging in SNS experiences (normative competitive bus pressures)</strong></td>
<td>Before choosing to engage on this SNS, I consider the usefulness of SNS communication modes offered by this bus against other bus sites.</td>
<td>SNS of business involves me in useful experiences.</td>
<td>This SNS allows consumer analysis of the business’s products/services</td>
</tr>
<tr>
<td><strong>Intentions from SNS bus engagement (perceived capabilities)</strong></td>
<td>On this bus’s SNS, I expect to find engaging informative discussion about the bus product/service I seek.</td>
<td>SNS of business always provides me with links to the useful business components I seek. This SNS is: fun, vibrant, dynamic, interactive, sharing (feedback from group).</td>
<td>This SNS always clarifies the products and services applications I seek from the business.</td>
</tr>
<tr>
<td><strong>Extensions from Bus SNS Experience (perceived added capabilities)</strong></td>
<td>On this bus’s SNS, I’d like to test competitive views regarding the product/service I seek (communications channels/platforms, ads, links, traffic approaches.</td>
<td>This SNS continues to develop unique consumer engaging activities. This SNS continues to improve activities advocated by its users.</td>
<td>This SNS allows discussion that further clarifies the quality of its offerings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motivation to use a business’s SNS</th>
<th>Immediate consumer perceived values acquired/delivered</th>
<th>Reflective customer considered outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attitude to SNS experience (perceived favorable environment)</strong></td>
<td>This SNS is easily understood, &amp; interestingly-presented.</td>
<td>I am satisfied with this bus’s SNS. I am satisfied with those who use this bus’s SNS</td>
</tr>
<tr>
<td><strong>Engaging in SNS experiences (normative competitive bus pressures)</strong></td>
<td>This SNS is interestingly-presented.</td>
<td>I enjoy the experiences I have shared with others on this bus SNS. I enjoy the experiences I have shared with this bus through its SNS.</td>
</tr>
<tr>
<td><strong>Intentions from SNS bus engagement (perceived capabilities)</strong></td>
<td>The SNSs I am using is meeting my: needs, wants, desires, delights. The SNSs I am using is: interesting, fun, engaging, competitive.</td>
<td>I consider this SNS is great for: social networking, group interactions, economic value, connecting with new consumers, finding information, finding media, entertainment, business solutions.</td>
</tr>
<tr>
<td><strong>Extensions from Bus SNS Experience (perceived added capabilities)</strong></td>
<td>This SNS: is easy to use, is up-to-date, contains latest ideas.</td>
<td>I consider the SNS’s value adds are useful.</td>
</tr>
</tbody>
</table>
REFERENCES


Carden, M.L. 1978. *The proliferation of a social movement, ideology and individual incentives in the contemporary feminist movement*. In Louis Kriesberg (Ed.), Research in Social Movements, Conflict and Change (pp. 179–196), Volume 1, Greenwich, CT: JAI.


Swan, J.E. & Trawik, F.I. 1980. Satisfaction related to predictive vs desired expectations. In Keith H. Hunt and Ralph L. Days, (Eds.), Refining concepts and measurements of Consumer satisfaction and complaining behavior (pp. 7-12), Bloomington, IN: School of Business, Indiana University.


COPYRIGHT

[John Hamilton & Singwhat Tee] © 2013. The authors assign to ACIS and educational and non-profit institutions a non-exclusive licence to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. The authors also grant a non-exclusive licence to ACIS to publish this document in full in the Conference Papers and Proceedings. Those documents may be published on the World Wide Web, CD-ROM, in printed form, and on mirror sites on the World Wide Web. Any other usage is prohibited without the express permission of the authors.