

Defining Interactivity: Building Relationships Online

Working Paper

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For the past twenty years the IMP Group has been discussing interaction, relationship and network issues (Turnbull, Ford and Cunningham, 1996) and its research has transformed the way in which we conceptualise markets and the language we use to describe them. Indeed, Håkansson & Ford (2001) note that the words “relationships” and “networks” are now widely used in discussion of business practice and they define a network as a “structure where a number of nodes are related to each other by specific threads” and describe business markets as a network of nodes (business units) linked by the relationships between them (the threads). Both the threads and the nodes are “heavy” (Håkansson, 1997) with the results of complex interactions within and between companies.

During this period other transformational market forces have emerged – the Internet and the World Wide Web. Described as a “network of networks” (Berners-Lee, 1998) or “a network of computer networks globally linked through telephone lines and telecommunication systems” (Ellsworth and Ellsworth, 1997), these computer-mediated environments (CME) are “facilitators of interaction between consumers and organisations” (Hagel and Armstrong, 1997)¹ and act as a medium for relationship building (Sheth and Parvatiyar, 1995; Srirojanant and Thirkell, 1998; Sheth, Sisodia and Sharma, 2000). Srirojanant and Thirkell propose that two key tenets of relationship marketing are “continuity of the relationship through repeated interactions and a facility for dialogue and meaningful two-way information exchange between each individual consumer and the firm” (1998, p. 24). They argue that a synergy exists between the interactive function of the Internet in the CME - which allows relational dialogue (1998, p41) - and the implementation of Relationship Marketing.

Interactivity is seen as the inherent characteristic of the CME (Hoffman and Novak, 1996; Morris and Ogan, 1996; Deighton and Glazer, 1997; Rafaeli and Sudweeks, 1997; Cho and Leckenby, 1998; Haeckel, 1998; Haubl and Trifts, 2000; Leckenby and Li, 2000) which has positive effects on the consumer online experience of the flow, telepresence and bricolage constructs. These positive experiences assist in the formation of favourable attitudes, longer visit durations, revisit intentions, the facilitation of learning and, importantly, the building of trust and relationships.

Despite a growing body of research on interactivity there is no consistent definition and conceptualisation of the interactivity construct. Most of the literature is idiosyncratic to discipline and fragmentary (Berthon, Pitt and Watson, 1996; Ducoffe, 1996; Ha and James, 1998; Rafaeli, 1998; Heeter, 2000; Lombard and Snyder-Duch, 2001) and academics are calling for a clarification of the concept to guide marketing practice (O’Keefe, O’Connor and Kung, 1998; Massey and Levy, 1999; Liu and Shrum, 2002). While conceptual consumer online experience models have been created to illustrate the effect of interactivity on flow, telepresence and bricolage (Hoffman and Novak, 1996; Shih, 1998) and in advertising contexts (Liu and Shrum, 2002), empirical research on these consumer experiences in the CME and their linkage to interactivity has not been successfully undertaken.²

Given these gaps in the knowledge, we were interested in clarifying the conceptualisation of interactivity, attempting a definition of the construct, and empirically investigating interactivity’s causes and effects, particularly expert panellists from the marketing, information systems and computer science disciplines, and consumer focus

¹ We concur with Cova and Salle’s (2003) call for an inclusion of the consumer experience in IMP research.

² Novak, Hoffman and Yung’s (2000) attempt to measure the online experience conceptualised interactivity too narrowly. It should be noted that Liu and Shrum (2002) expressly call for research employing qualitative method to investigate what interactivity means to users.

groups was employed. Data from the interviews with expert panellists confirmed that interactivity is still a complex, multi-faceted and underdeveloped construct that holds multiple meanings (Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer and wood, 1997; Ghose and Dou, 1998; Ha and James, 1998; Hoffman and Novak, 1996; Heeter, 2000; Kim and Biocca, 1997; Massey, 2000; Lombard and Ditton, 1997; Schumann, Artis and Rachel, 2001).

Themes from the expert interview data manifested six major dimensions of interactivity deemed specific to hypermedia CME: They are: 1) *feedback and two-way reciprocal process*; 2) *machine interactivity*; 3) *person interactivity*; 4) *marketing-related conceptualisations*; 5) *website-related conceptualisations* (design, use of multi-media, innovation) and 6) *involvement and engagement*. Of these, interactivity as a *two-way reciprocal process* was considered the fundamental building block of interactivity (Bezjian-Avery, Calder and Iacobucci, 1998; Sundar, Hesser, Kalyanaraman and Brown, 1998; Kozinets, 1999; Sundar, Brown and Kalyanaraman, 1999; Ariely, 2002). All of the twenty-three facets of interactivity, derived from the literature, were considered relevant in different degrees by at least half of the experts, and all experts perceived *control over the flow of information* as the most relevant. This is commonly perceived as the key characteristic of hypermedia CME in comparison to traditional media (Jaffe, 1995; Bezjian-Avery, Calder & Iacobucci, 1998; Ariely, 2002). Nine other facets were also identified as highly relevant by the experts: *customisation, feedback, speed, willingness to participate, navigation, choice, exchange, facilitation of interpersonal communication*, and *control* and can, therefore, be considered as core facets. Initially, while the study set out to investigate the relevance of facets that constitute interactivity in hypermedia CME in general it became evident that the relevance and importance of interactivity facets varies across contexts. The ten facets identified above were considered as the core facets relevant across different contexts, whereas the relevance of the other thirteen facets was seen as primarily dependent on the context.

Two types of *antecedents* determining interactivity in hypermedia CME were manifested in the expert interviews. The first is resource/firm-related factors such as the level of technological expertise the firm possesses and the availability of technological resources. The second is strategy-related factors such as the website's objectives, the type of product and service the provider offers, and the target market's needs.

These factors were seen to determine the *structural* characteristics of the CME which are the facets of interactivity that determine consumers' interaction with and through the medium. These facets, in turn, influence *affective* interactivity facets that, in their turn, encourage more interactive *behaviour* with the hypermedia CME .

The expert group generally perceived interactivity as being as effective with positive outcomes for marketers such as stickiness, customer satisfaction, transactions and revenue, learning and information processing and relationship building. Additionally, interactivity was perceived to have positive effects on the consumer online experience, consequently driving positive attitudinal and intentional outcomes. These were primarily attributed to interactivity's ability to meet consumers' needs and to enhance consumer involvement in the hypermedia CME.

The effectiveness of interactivity was recognised as being influenced by several contextual factors. They were motivation mode, personal characteristics, and expectations and needs. Specifically, interactivity was seen to be effective if the type and level of interactivity the website offers meets expectations. Expectations were understood to be dependent on motivational mode, personal characteristics and product type.

Interactivity was generally perceived to have a positive impact on consumer online experience by creating interest in and motivation toward the hypermedia CME. All experts perceived interactivity as the driver of three

online experiences- telepresence, flow and bricolage (Turkle, 1984; Steuer, 1992; Trevino and Webster, 1992; Hoffman and Novak, 1996; Kim and Biocca, 1997; Shih, 1998; Coyle and Thorson, 2001). However, they perceived different degrees of relevance for these constructs in the context of hypermedia CME. Telepresence was considered the least relevant to the enquiry, held negative connotations and was not currently considered to be technologically possible. Although flow was considered as similar to telepresence, more experts considered flow as relevant and that it held positive connotations. All of the experts agreed that bricolage is relevant and useful in hypermedia CME as it enhanced consumer learning. The core interactivity facets (*speed*, *customisation*, and aspects of usability such as *control*, *control over the information flow* and *navigation*) were commonly mentioned as drivers of the three consumer online experiences.

The second-stage of this study used consumer focus groups to triangulate the expert findings³. As the expert interviews revealed two types of antecedents and suggested a new three-stage construct of interactivity with linkages between structural, affective and behavioural interactivity we attempted verification with the consumer sample and the following research objectives were formulated:

1. Clarify the conceptualisation of interactivity in the context of hypermedia CME and compare the differences and similarities in conceptualisation by experts and consumers.

2. Investigate consumers' perception of the antecedents of interactivity in the hypermedia CME.

The expert data suggested beneficial effects of interactivity and that interactivity effectiveness was particularly influenced by how well the website's structural interactivity met consumers' expectations. We, therefore, intended:

3. To investigate consumers' perception of the effects of interactivity in the hypermedia CME.

Expert interviews indicated that interactivity had positive effects on consumer online experience and that certain interactivity facets were more influential than others. Therefore, we intended to:

4. Investigate the effects of interactivity on consumer online experience and the facets important in influencing these effects.

Experts agreed with the influence of interactivity on flow and bricolage, but the relevancy of telepresence in the hypermedia CME was questioned. We, therefore, intended:

5. To investigate the relevance of flow, telepresence and bricolage to consumers' experience in the hypermedia CME.

The expert postulation that interactivity causes flow and telepresence by enhancing involvement and immersion in the CME necessitated the last research objective:

6. To investigate the influence of interactivity on flow, telepresence (and bricolage).

Nine interactivity facets were agreed to by more than half of the consumer participants. In hierarchical order they were: 1) *speed*; 2) *ease, navigation and control*; 3) *visual appeal and multimedia*; 4) *content*; 5) *hyperlinks*; 6) *goal-directed attributes*; 7) *website-design related elements*; 8) *two-way process*; and 9) *person interactivity*. The wide acceptance of *speed*; *ease, navigation and control*; and *two-way process* was consistent with the expert data. Compared with the expert data, the conceptualisation of an interactive hypermedia CME as one that provides *visual appeal*, *multimedia*; *content*; and *hyperlinks* was more prevalent with consumers.

³ It is understood that consumer definitions of interactivity and their perceptions of its effects on their online experience are important, since the success of a website is determined by the consumer's perception of its interactivity (Wu, 1999).

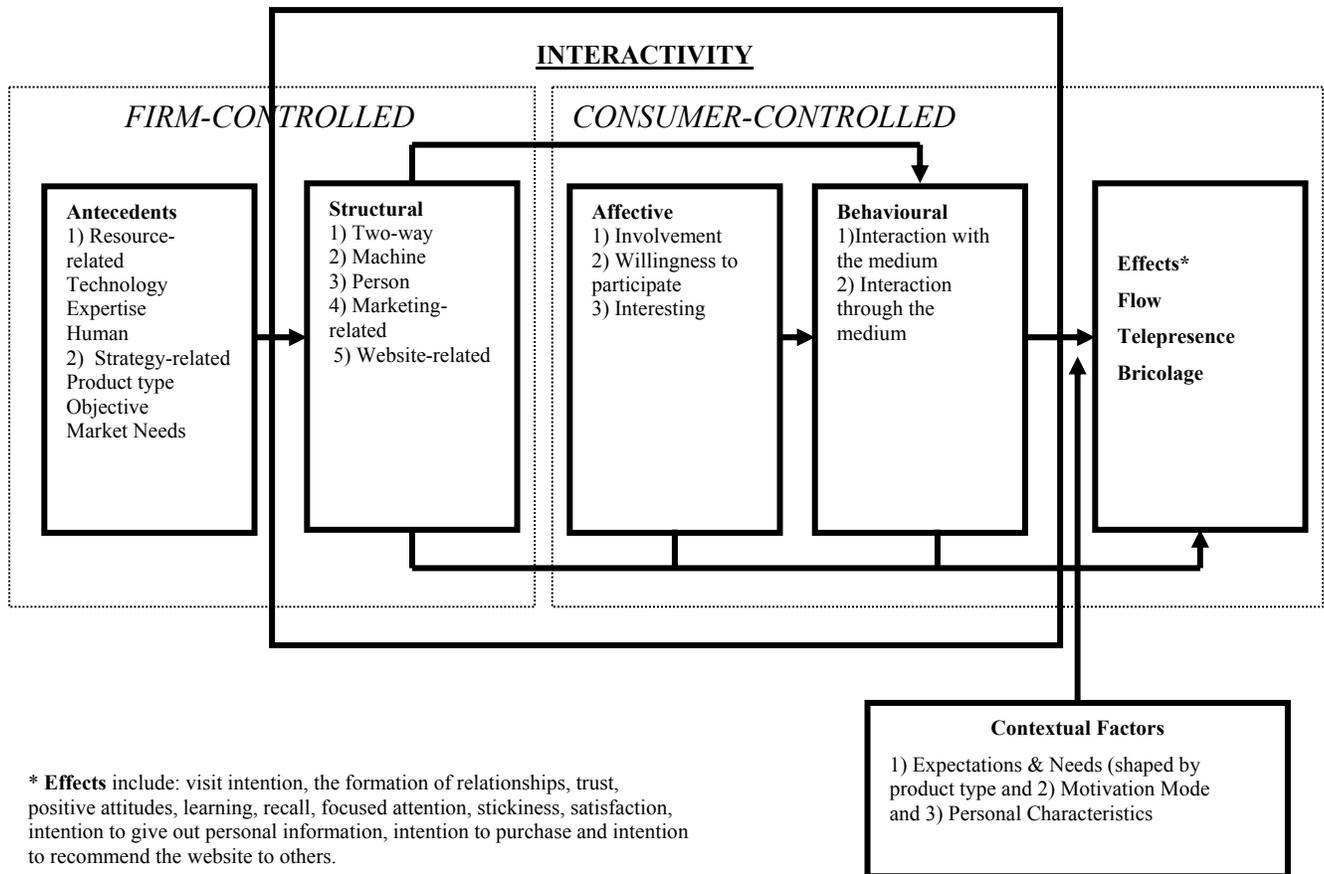
The two types of antecedents exhibited in the expert results were also manifested in consumer focus groups. First, firm characteristics, such as the availability of resources, and strategy-related factors of website objective, product type, and target market needs were confirmed. Participants understood that interactivity in websites is determined by the availability of resources and expect large companies to invest more in interactivity, because they have more resources. Secondly, the inter-dependent expert factors of website objective, product type, and target market needs that determine website interactivity were also manifested in the consumer data and consumers agreed that firms with different objectives, product types and target markets are suited to different levels and types of interactivity.

Structural interactivity, which drives affective and behavioural interaction with or through the medium was also exhibited in the consumer data. The structural facets of *two-way reciprocal process*; *machine interactivity*; *person interactivity*; *marketing-related interactivity* and *website design-related interactivity* were also found to influence interactions. Of these latter facets, *content* was found to be the most influential on interactions, followed by *ease, navigation and control*. As indicated in the expert data, *structural* interactivity was perceived to heighten consumer interest and involvement, (*affective interactivity*), which subsequently drove *behavioural* interaction. General correlation of consumer perceptions and expert opinion occurred. In particular, *speed; ease, navigation and control*; and *two-way reciprocal process* were consistently mentioned as components of interactivity in both sets of data and can, therefore, be viewed as core facets of interactivity. Similarly, interactivity facets were perceived as inter-related and context dependent and the two types of antecedent and the three-stage conceptualisation of interactivity suggested by the expert data were further confirmed in the consumer data. Consumers also viewed interactivity as effective, although mediated by confounding factors.

Of the three consumer online experience constructs, telepresence was most commonly experienced. Consumers reported experience of flow, but suggested that they more readily experience the primary indicators of flow (time distortion, intense concentration and attention) and do not completely dislocate themselves from the physical environment. Person interactivity was also indicated as a driver of flow, in contrast to previous conceptual models of flow, which only specified the influence of machine interactivity (Hoffman and Novak, 1996; Novak, Hoffman and Yung, 1999). Bricolage was generally perceived as effective, because of its active learning role and provision of control over information.

A Conceptual Model of Interactivity

As we have previously discussed, Interactivity is neither a well-defined nor consistent construct in the literature. We have provided a conceptualization of the interactivity construct - specifically in the context of the hypermedia CME – based on empirical data from experts and consumer interviews.



Our data confirms that interactivity in the context of hypermedia CME is a complex and multi-faceted construct which, at its most basic level, is a two-way process involving *two-way interaction and feedback* between at least two entities, which could be either human or machine. Both sets of data indicate that the relevance of the interactivity facets is context dependent and that *speed, ease, navigation and control*; and *two-way process* could be considered as the core facets relevant across differing contexts, whereas the relevance of the other facets is primarily dependent on the context. All the data determined three broad interactivity dimensions: *structural, affective, and behavioural* interactivity. Structural interactivity is controlled by the firm, while affective and behavioural interactivity are under the control of the consumers.

Structural Interactivity

Structural interactivity denotes the structural characteristics of the medium, is controlled by the website provider and consists of five sub-dimensions: 1) *two-way*; 2) *machine interactivity*; 3) *person interactivity*; 4) *marketing-related*; and 5) *website-related*. These five dimensions are manifested in both sets of data.

a) Two-way Reciprocal Process: Both sets of data concur with this concept. Two-way reciprocal process involves a two-way interaction between at least two entities, which could be either human or machine (Ha and James, 1998; Heeter, 1989).

b) Machine Interactivity: Machine interactivity refers to interaction with the medium (Hoffman and Novak, 1996), and encompasses the dimensions of *choice, modification, contingency, ease, navigation, and control*; and *speed*.

c) Person Interactivity: In contrast to machine interactivity, person interactivity refers to consumer interaction through the medium with the website provider or others (Hoffman and Novak, 1996; Rafaeli and Sudweeks, 1997).

In comparing expert and consumer findings, more consumers mentioned person interactivity than experts.⁴

d) Marketing-Related: This conceptualisation of interactivity encompasses *customisation and responsiveness to customer needs*, and *relationship building*. These facets align to the practice of marketing, exhibiting the commonality of aiming to satisfy the needs of the consumers.

e) Website-Related: Website-related interactivity refers to the elements that constitute a website.⁵

Affective Interactivity

The affective dimension consists of indicators relating to the consumer's affective state and perception of the medium. They are: 1) *involvement*, 2) the perception that the hypermedia CME is *interesting and novel*, and 3) *willingness to participate*. This interactivity perspective differs to the conventional view, which considers these facets as a functional or structural characteristic of the medium (Massey and Levy, 1999; Schultz, 1999) or a behavioural interaction with or through the medium (Cho and Leckenby, 1998). Affective Interactivity describes the characteristics consumers perceive when they experience interactivity e.g. that an interactive website is one that is interesting and novel.

Affective interactivity was seen as driven by the types of structural interactivity present in the website. Certain types of structural interactivity were perceived as being contextually and market appropriate. Structural interactivity motivates interest (*affective interactivity*) and participation (*behavioural interactivity*). For example, visual appeal and the use of multimedia are important for experiential activities. If these are not present consumers may lose attention and interest and a low degree of affective interactivity will result.

Behavioural Interactivity

The behavioural dimension entails the ability to interact with the interactive medium itself and through the medium with another entity or entities.⁶ To reiterate, structural interactivity is responsible for driving and maintaining consumer interest and involvement in the website. This in turn motivates the consumer to interact more with the website. For consumers, interactivity factors such as *content; ease, navigation and control*; and *speed* were mentioned as particularly important in maintaining interest and involvement, and determining interactivity with and through the medium. The facets within each type of interactivity dimension were also seen as also inter-related.

Antecedents of Interactivity

Structural interactivity is determined by firm-related factors that are related to the availability of financial, technological and human resources and the firm's strategy. Consistent with the literature, the amount of financial and human resources that the firm possesses determines the level and type of interactivity a website affords (Schultz, 1999; Massey, 2000). It was also found that the availability of technological resources assists interactivity. The

⁴ This illustrates its importance in consumer online experience. The presence of mechanisms that facilitate interpersonal communication, is important for an interactive website.

⁵ Examples are: content, range of hyperlinks, provision of external hyperlinks, well implemented website elements, such as mouse-over effects and drop-down boxes, visual appeal and the use of multimedia and Internet-related programming technology (IPT).

⁶ See Berthon, Pitt and Watson, 2000 and Schlosser and Kanfer, 2000). This behavioural dimension has also been described as the consumer's intention to interact with banner ads (Cho, 1999), the website (Cho & Leckenby, 1998), or the website provider (Cho & Leckenby, 1998).

inter-dependent strategy-related antecedents of product type, website objective, and target market needs were also found to determine structural interactivity.⁷

Effects of Interactivity

The effects of interactivity were generally perceived as positive by both experts and consumers, and it was suggested that they have beneficial effects for both consumers and the firm. The most notable effect is visit intentions as consumers are more likely to stay longer and revisit an interactive website (Dysart, 1998; Gillespie, Krishna, Oliver, Olsen and Thiel, 1999; Yoo and Stout, 2001). Structural facets that are most influential on visit intentions are *content, ease, navigation and control, marketing-related factors, visual appeal and multimedia, speed,* and well-implemented *interface elements*. Favourable attitudes towards the website provider are also developed if the website is highly interactive (Cho and Leckenby, 1999; Wu, 1999). Further effects are learning, transactions and revenue, customer satisfaction, and relationship building (Dellaert and Kahn, 1999).

These positive effects are influenced by all three types of interactivity. Firstly, the presence of Structural Interactivity has a positive effect on perceptions of interactivity and attitude toward company. Secondly, Affective Interactivity - the feeling of involvement and the perception that the website is interesting and novel - has a direct impact on outcomes such as visit duration, flow and telepresence. Thirdly, Behavioural Interactivity- interaction with or through the medium - enhances outcomes such as learning, bricolage, flow and relationship building.

Confounding Factors of Interactivity

Interactivity was not always perceived to be effective and its effectiveness was seen to be subjected to a number of confounding factors. They are motivation mode, personal characteristics, and expectations and needs. Consumers desire different types of interactivity for differing motivational modes.⁸ The effectiveness of interactivity is also influenced by consumers' personal characteristics: 1) their level of expertise with the Internet, 2) demographics, and 3) individual traits (e.g. information processing and learning styles, and sensation seeking). Lastly, the effectiveness of interactivity was perceived as driven by how well it met consumer needs and expectations. These were shaped by the product type, motivational mode, and personal characteristics (Clarke, 1991).

Consumer Online Experience

Interactivity was perceived to have a positive effect on consumer online experience. In an interactive website, consumers perceive the online experience as fun, enjoyable, exciting, and pleasurable, meeting their needs, enhancing involvement, attracting and retaining their interest. Telepresence, the perception of presence in the virtual environment was perceived as more prevalent in experientially-orientated activities. Three indicators of telepresence were revealed: *involvement, time distortion, and continuous interaction*. Although the expert data

⁷ Likewise, Ghose and Dou (1998) conclude that firms with different goals in setting up their websites employ different types of interactive functions due to their differential benefits. For example, consumers expect that brands known for "fun" and innovation (e.g. Coca Cola, McDonald's and Sony) will exhibit high interactivity and high potential for experiential activities.

⁸ For example, for goal-orientated consumers, the speed and user-friendliness and the quality of information is pre-eminent, because these have significant influence on the efficiency and effectiveness of task completion. In contrast, for experientially-orientated consumers, tolerance for delays and/or difficulties with using the website is exhibited as the interactive elements can enhance the entertainment and novelty value of the experience. Furthermore, the effectiveness of interactivity is found to be stronger for experientially-orientated consumers than those who are goal-orientated as goal-directed consumers can be well served by the ability of a website to meet their functional needs. In contrast, since experiential users do not have goals in mind, they are more likely to move on to other websites if their limited attention has not been captured.

considered telepresence as the least relevant experience of the three experiential constructs, consumers generally perceived telepresence as relevant to hypermedia CME. Interactivity was perceived to drive telepresence and interactivity facets influential for telepresence were the provision of *hyperlinks; interesting and novel[content/design]; visual appeal and multimedia; speed; and content*. The prevalence of telepresence in activities involving person interactivity, such as chat-rooms was noted. This is in contrast to the literature, which specifies the relationship between telepresence and interactivity as mechanical.

Five flow indicators were revealed, representing different aspects of the experience: *involvement; time distortion; continuous interaction; intrinsic enjoyment; and intense concentration and attention*. While consumers reported experience of these flow aspects, both experts and consumers were sceptical that users actually reach the ultimate experience of flow which results in dislocation from the physical environment. Consumers reported that those interactivity facets considered the most important for consumer online experience in general were also important for producing flow. These facets were *ease, navigation and control; speed; and content*. Linked to telepresence, person interactivity was also suggested to cause flow.

Bricolage, the tinkering and manipulation of virtual objects, which assists learning is generally perceived as relevant in hypermedia CME and an outcome of interactivity. Bricolage was seen as being effective due to its categorisation of information assisting in the locating and assimilation of information. Interactivity was perceived as a pre-requisite for bricolage.

Conclusion

The study arrived at a conceptual model of interactivity, specific to the CME context and, for the first time, illustrated the empirical relationship between the interactivity construct and its facets, antecedents and effects. Building on and extending current literature on interactivity in the marketing, information systems and computer science disciplines the findings illustrate that interactivity is a complex and multifaceted construct in which two antecedent and three broad inter-related dimensions exist – structural, affective and behavioural interactivity. Interactivity was also found to have a positive effect on three consumer online experiences – flow, telepresence and bricolage.

Furthermore, the creation of a conceptual model serves as a starting point for systematic research on interactivity. The study, in providing the only extant empirical account of the relevance of flow, telepresence and bricolage and their linkages to interactivity, shows marketers how to utilise interactivity to build positive online experiences, and to foster long term relationships between the consumer and the firm through CME's which facilitate "interaction between consumers and organisations." (Hagel and Armstrong, 1997).

REFERENCES:

- Alba, J., Lynch, J., Weitz, B., Janiszewski, C., Lutz, R., Sawyer, A., and Wood, S. (1997), "Interactive Home Shopping: Consumer, Retailer, and Manufacturer Incentives to Participate in Electronic Marketplaces," *Journal of Marketing*, 38.
- Ariely, D. (2002), "Controlling the Information Flow: Effects on Consumers' Decision-Making and Preferences," *Journal of Consumer Research*, 27.
- Berners-Lee, T. (1998), "The World Wide Web: Past, Present and Future," www.w3.org/people/berners-lee/faq
- Berthon, P., Pitt, L., Watson, R.T. (1996), "The World Wide Web as an Advertising Medium: Toward an Understanding of Conversion Efficiency," *Journal of Advertising Research*, 36:1.
- Bezjian-Avery, A., Calder, B., and Iacobucci, D. (1998), "New Media Interactive Advertising vs. Traditional Advertising," *Journal of Advertising Research*, 38:4.
- Cho, C-H. (1999), "How Advertising Works on the WWW: Modified Elaboration Likelihood Model," *Journal of Current Issues and Research in Advertising*, 1.
- Cho, C.H., and Leckenby, J.D. (1997), "Internet-Related Programming Technology and Advertising," Paper presented at the American Academy of Advertising (AAA) Conference, St. Louis, MO.
- Clarke, C.T. (1991), "Rationale and Development of a Scale to Measure Computer-Mediated Communication Apprehension," *Dissertation Abstract International*, A1129.
- Coyle, J.E., and Thorson, E. (2001), "The Effects of Progressive Levels of Interactivity and Vividness in Web Marketing Sites," *Journal of Advertising*, 30.
- Cova, B., and Salle, R. (2003), "When IMP-Don Quixote Tilts his Lance Against the Kotlerian Windmills: BtoB Marketing Deeply Changed During the Last 25 Years, BtoC Marketing Too!," Paper presented at IMP Conference, Lugano, Switzerland.
- Dalleart, B.G.C., and Kahn, B.E. (1999), "How Tolerable is Delay?: Consumers' Evaluation of Internet Web Sites after Waiting," *Journal of Interactive Marketing*, 13.
- Deighton, J., and Glazer, R. (1997), "Life at the Frontier: Setting the Stage," *Marketing Science Institute: Conference Summary Report*, December 1997.
- Ducoffe, R.H. (1996), "Advertising Value and Advertising on the Web," *Journal of Advertising Research*, 36:5.
- Dysart, J. (1998), "Custom Pages on the Fly: A New Model of Interactivity Emerges on the Web," *Online*, 22.
- Ellsworth, J.H., and Ellsworth, M.V. (1997), *Marketing on the Internet*. NY: John Wiley and Sons.
- Ghose, S., and Dou, W. (1998), "Interactive Functions and their Impact on the Appeal of Internet Presence Sites," *Journal of Advertising Research*, 38:2.
- Gillespie, A., Krishna, M., Oliver, C., Olsen, K., and Thiel, M. (1999), "Using Stickiness to Build and Maximize Web Site Value" <http://www2000.ogsm.vanderbilt.edu/Student.Projects/stickiness>
- Ha, L. and James, E.L. (1998), "Interactivity Reexamined: A Baseline Analysis of Early Business Web Sites", *Journal of Broadcasting and Electronic Media*, 42:4.
- Haeckel, S.H. (1998), "About the Nature and Fun of Interactive Marketing", *Journal of Interactive Marketing*, 21:1.
- Hagel, J.I., and Armstrong, A.G. (1997), *Net Gain*. Boston: Harvard Business School Press.
- Håkansson, H., "Organization Networks". In: Sorge A., Warner, M. editors, *The IEBM handbook of organizational behaviour*. London: International Thompson Business Press, 1997.
- Håkansson, H., and Ford, D. (2002), "How should companies interact in business networks?," *Journal of Business Research*, 55
- Haubl, G., and Trifts, V. (2000), "Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids," *Marketing Science*, 19.
- Heeter, C. (2000), "Interactivity in the Context of Designed Experiences", *Journal of Interactive Advertising*, 1:1.
- Hoffman, D.L., and Novak, T.P. (1996), "Marketing in Hypermedia Computer Mediated Environments: Conceptual Foundations", *Journal of Marketing*, July.
- Jaffe, J.M. (1995) "Media Interactivity, Cognitive Flexibility, and Self-Efficacy," <http://wwwresearch.haifa.ac.il>
- Kim, T., and Biocca, F. (1997) "Telepresence via Television: Two Dimensions of Telepresence May Have Different Connections of Memory and Persuasion," *Journal of Computer-Mediated Communications*, 3:2.

- Kozinets, R.V. (1999), "E-Tribalized Marketing?: The Strategic Implications of Virtual Communities of Consumption," *European Management Journal*, 17.
- Leckenby, J.D., and Li, H. (2000), "Why We Need the Journal of Interactive Advertising," *Journal of Interactive Advertising*, 1:1.
- Lombard, M., and Ditton, T. (1997), "At the Heart of it All: The Concept of Presence," *Journal of Computer-Mediated Communications*, 3:2.
- Lombard, M., and Snyder-Duch, J. (2001), "Interactive Advertising and Presence: A Framework," *Journal of Interactive Advertising*, 1.
- Liu, Y., and Shrum, L.J. (2002), "What is Interactivity and Is It Always Such a Good Thing? Implications of Definition, Person, and Situation for the Influence of Interactivity on Advertising Effectiveness", *Journal of Advertising*, XXXI: 4
- Massey, B.L. (2000), "Market Based Predictors of Interactivity at Southeast Asian Online Newspapers," *Internet Research: Electronic Networking Applications and Policy*, 10:3.
- Massey, B.L., and Levy, M.R. (1999), "Interactive Online Journalism at English Language Web Newspapers in Asia: A Dependency Theory Analysis", *Gazette*, 61:6.
- Morris, M., and Ogan, C. (1996), "The Internet as Mass Medium," *Journal of Computer-Mediated Communications*, 1:4.
- Novak, T.P., Hoffman, D.L., Yung, Y. (2000), "Measuring the Customer Experience in Online Environments: A Structural Modelling Approach," *Marketing Science*, 19:1.
- O'Keefe, R.M., O'Connor, G., Kung, H-J. (1998), "Early Adopters of the Web as a Retail Medium: Small Company Winners and Losers," *European Journal of Marketing*, 32:7/8.
- Rafaeli, S. (ed.), (1998), *Interactive Media*, NY: Springer-Verlag.
- Rafaeli, S., and Sudweeks, F. (1997), "Networked Interactivity," *Journal of Computer-Mediated Communications*, 2:4.
- Schlosser, A.E., and Kanfer, A. (2000), "Impact of Product Interactivity on Searchers' and Browsers' Judgments: Implications for Commercial web Site Effectiveness, Working Paper, Owen School of Management, Vanderbilt University.
- Schumann, D., Artis, A., and Rachel, R. (2001), "The Future of Interactive Advertising Viewed through an IMC Lens," *Journal of Interactive Advertising*.
- Schultz, T. (1999), "Interactive Options in Online Journalism: A Content Analysis of 100 US Newspapers," *Journal of Computer-Mediated Communications*, 5:1.
- Sheth, J.N., and Parvatiyar, A. (1995), "Relationship Marketing in Consumer Markets: Antecedents and Consequences," *Journal of the Academy of Marketing Science*, 23:4.
- Sheth, J.N., Sisodia, R.S., Sharma, A. (2000), "The Antecedents and Consequences of Customer-Centric Marketing," *Journal of the Academy of Marketing Science*, 28:1.
- Shih, C-F.E. (1998), "Conceptualizing Consumer Experiences in Cyberspace," *European Journal of Management*, 32:7/8
- Srirojanant, S., and Thirkell, P.C. (1998), "Relationship Marketing and its Synergy with Web-Based Technologies," *Journal of Market-Focused Management*, 3.
- Stur, J. (1995) "Defining Virtual Reality: Dimensions Determining Telepresence," *Journal of Communication*, 42:4.
- Sundar, S.S., Brown, J., Kalyanaraman, S. (1999), "Reactivity vs. Interactivity," paper presented at the meeting of the International Communication Association, San Francisco, CA.
- Sundar, S.S., Hesser, K.M., Kalyanaraman, S., Brown, J. (1998), "The Effect of Web Site Interactivity on Political Persuasion", paper presented at the meeting of the International Association for Media and Communication Research, Glasgow, UK.
- Trevino, L.K., and Webster, J. (1992), "Flow in Computer-Mediated Communication," *Communication Research*, 19.
- Turkle, S. (1984), *The Second Self: Computers and the Human Spirit*, NY: Simon and Schuster.
- Turnbull, P., Ford, D., Cunningham, M. (1996), "Interaction, relationships and networks in business markets: an evolving perspective," *Journal of Business and Industrial Marketing*, 11 (3).
- Wu, G. (1999), "Perceived Interactivity and Attitude Towards Web Sites," in *Proceedings of the 1999 Conference of the American Academy of Advertising*, Gainesville, FL.
- Yoo, C.J., and Stout, P.A. (2001), "Factors Affecting Users' Interactivity with the Web Site and the Consequences of Users' Interactivity," in *Proceedings of the 2001 Conference of the American Academy of Advertising*, Villanova, PA.

