COMPETENCY CODES: MARKETING MANAGEMENT FOR THE DIGITAL FUTURE

E. VINCENT CARTER, California State University—Bakersfield

The digital market demands new marketing management competencies. This study advances new marketing management competencies to meet the challenges of an evolving digital market. Until recently, digital marketing strategy has focused on information control and the advantages of computing technology. Future strategic value, however, will be largely derived from collaborative intelligence and applications of intelligent digital content. These future trends point to emerging marketing management information competencies comprised of cross-disciplinary techniques which leverage the malleability of digital content, most notably the confluence of enterprise and ethics intelligence.

INTRODUCTION

Digital market value is derived from shared information content, whereas traditional market value is determined by information control. Traditionally, marketing management intelligence has been separated to control strategic decision making. In other words, strategic micromarketing factors, such as market share performance, target customer profiles, brand preferences, and competitor tactics are parsed from societal macromarketing factors like social ethics and community well being. However, because digital content commingles strategic and societal purposes, it enables a more confluent approach towards managing market intelligence aimed at both enterprise objectives and ethical outcomes. In terms of enterprise objectives, the plasticity of digital market content blurs the line between the commercial and community strategy. In terms of ethical outcomes, collaborative digital market interaction erases the boundary between the private and public sectors of society. Consequently, confluent digital market content requires marketing management competencies that cultivate intelligence, not control information.

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A recent Wall Street Journal ad by the information media conglomerate Thomson Reuters epitomizes this digital market competency imperative.

> Information, the world runs on it. Industries are built on it. And for decision makers, it's as vital as oxygen. But, information is not what it used to be. It has evolved. It lives in a world of data agents, semantic understanding and embedded metadata. It thinks. It finds you. We call it intelligent information. And for people who make decisions that matter, it is their next great advantage. (Thomson Reuters *Wall Street Journal* May 1, 2005, p. A5)

Although this newfound digital content intelligence liberates marketing managers from traditional thinking, it must be first understood within the context of digital market evolution. The ascendance of marketing management techniques typically parallels actual market transformations. Brodie, et al. (2007) examine the penetration of "e-Marketing" using Coviello, et al.'s (2001) five practice descriptors of transaction, database, electronic, interaction, and network marketing. Generally, this evolution tracks the progression from arms length transaction strategies and relational network business models. Echoing the previous e-Business research (Wu, et al. 2003), increased e-Marketing penetration is found to improve the strategic performance of marketing management techniques. More importantly,

these emerging digital marketing competencies are attributable to the internet-related cognitions of marketing managers (Celuch, et al. 2007). Although Brodie, et al. (2007) chart a path towards relational practices, the concurrent digital market trend towards confluent strategic and societal competencies is not well addressed. Therefore, the following literature review chronicles digital market progression towards confluent intelligence to help marketing management scholars discern future information competencies.

LITERATURE REVIEW: DIGITAL MARKET COMPETENCY EVOLUTION

Each stage of digital market evolution has maintained equilibrium between enterprise and ethics. The balance between strategic goals and societal gains during the progression depends on developments in *information computing technology* and *information competency techniques.* At its inception, the digital market coupled micromarketing participants and macromarketing policy (Milne 2000; Peterson, et al. 1997; Bloom, et al. 1994). As Figure 1 shows the early digital market stages are conditioned by an *information computing technology* orientation. Marketing managers applied computing technology to improve information value chains (Blattberg, et al. 1994; Porter and Millar 1979). For this *information computing technology* period, an arms length relationship balanced strategic opportunity and societal uncertainty (Clemmons and Bradley 2001; Barabba 1995).

The earliest *independent mode* of the digital market availed access to customer data (Hegel and Rayport 1997) to support traditional marketing management strategies, using "interactive" techniques (Deighton 1996). Digital ethics at this juncture enforced fairness principles regarding consumer rights and proprietary company data (Nowak and Phelps 1997; Malone 1997; Milberg, et al. 1995). These protections constitute "data bank" competency, because they safeguard autonomous and independent digital market activity (Carter and Goel 2005).

This *independent mode* of the digital market is clearly chronicled by the marketing management literature. The strong information computing orientation is highlighted by Chen, et al.'s (2001) analysis of information privacy determinants among customers. These contributions evolve incipient digital marketing strategies, such as e-tailing and online relationship management programs. Consumer information privacy constituted a wedge issue between enterprise strategies relying on data mining and ethics stakeholders regulating data manipulation. By protecting the "data base," the benefits of digital markets to support traditional market exchanges are preserved.

Later research examined time-and-location-free interaction in the digital market's *immersive* or *marketspace mode* (Hoffman, et al. 1999b; Rayport and Sviokla 1996, 1994). Greater acceptance of electronic presence made market participants accustomed to exchanges that transpire entirely in digital space. Traditional marketing mix elements were recast for an immersive digital context commonly referred to as a "hypermedia computer-mediated environment" (Hoffman and Novak 1996). *Marketspace* theory transforms marketing management functions into digital network competencies for operating cybermediaries (Sarkar, Butler and Steinfield 1998). For instance, product element factors are realigned with *marketspace* information search methods to combine digital brand content with digital transaction channels (Venkatraman and Dholakia 1997). Likewise, *marketspace* models for *immersive* Internet service pricing were developed to reflect the information currency of digital markets (Gronroos, et al. 2000). Place element physical market logistics functions were reconfigured to fit digital content transmission networks (Crowley 1998). Promotion element management in the *marketspace* designs web advertising and sales content (Berthon, et al. 1997). Additionally, digital customer relationship techniques expand to embrace both enterprise and ethics intelligence management (Dutta, Kwan and Segev 1997).

FIGURE 1
Progression of Digital Marketing Management Enterprise/Ethics

Digital Market Modes			
Information Computing & Technology		**Information Competency & Techniques**	
Independent ("Data Bank")	**Immersive ("Marketspace")**	**Relational ("Data Blank")**	**Confluent ("Digital Well Being")**
· Chen, et al. 2001 · Clemmons & Bradley 2001 · Caudill & Murphy 2000 · Sheehen & Hoy 2000 · Milberg, et al. 1995 · Hagel & Rayport 1997 · Malone 1997 · Nowak & Phelps 1997 · Peterson, et al. 1997 · Steinke & Leamon 1996 · Deighton 1996 · Barabba 1995 · Millberg, et al 1995 · Bloom, et al. 1994 · Jones 1991 · Porter & Millar 1979	· Martinez, et al. 2001 · Gronroos, et al. 2000 · Rolland, et al. 1999 · Hoffman, et al. 1999b · Sarkar, Butler & Steinfield 1998 · Crowley 1998 · Sheth & Sisodia 1997 · Venkatraman & Dholakia 1997 · Hardwick & Bolton 1997 · Dutta, Kwan & Segev 1997 · Berthon, et al. 1997 · Hoffman & Novak 1996 · Benjamin & Wigand 1995 · Rayport & Sviokla 1994, 1996	· Clemmons, et al. 2003 · Luo 2002 · Schoenbachler & Gordon 2002 · Chen, et al. 2001 · Fletcher 2001 · Franzak, et al. 2001 · Gauzente & Ranchhod 2001 · McKnight & Chervany 2001 · Phelps, et al. 2001, 2000 · Wind, et al. 2001 · Petty 2000 · Haeckel 1999 · Hoffman, et al. 1999a · Milne & Boza 1999 · Bradley & Nolan 1998	· Wirtz, et al. 2007 · Lwin, et al. 2006 · Ashworth & Free 2006 · Rao, et al. 2006 · Sirgy, et al. 2006 · Biennier & Favrel 2005 · Bechwati & Eshghi 2005 · Chellappa & Sin 2005 · Hoffman & Novak 2005 · Inks & Loe 2005 · Wood, et al. 2005 · Milne, et al. 2004 · Zwick & Dholakia 2004 · Culnan & Bies 2003 · Pitta, et al. 2003 · Sarathy & Robertson 2003 · Koehn 2003

Virtual enterprise and virtual value chain approaches typify the *immersive mode* of digital marketing management. Rayport and Sviokla's (1994) "marketspace" paradigm transformed Porter and Millar's (1979) early electronic marketplace information value chain theory into a wholly digital process consisting of virtual content, conduits, and constituents. Leading business strategy scholars (Rayport and Sviokla 1996; Benjamin and Wigand 1995) coined the term "virtual value chains" to capture the immersive context and inclusive character of emerging digital networks. This virtual value intelligence does not distinguish between enterprise and ethics content. Accordingly, the digital market's *immersive mode* rewards information competencies that balance strategic and societal considerations. Marketing management scholars have shown that a considerate enterprise strategy can lead to strong ethical ties (Gehani 2001). Ethical returns described as "reputational capital" increase when enterprise strategy is executed in an innovative and complementary manner.

The bond between digital commerce and digital community is further solidified in the next digital market stage, which transitions to *information competency techniques* from *information technology computing*. This more recent digital market period encompasses two modes that emphasize both digital collaboration and intelligent digital content. When the digital market business model becomes the adaptive enterprise (Haeckel 1999) collaboration among digital market constituents replaces contention. Likewise, sense and respond strategies (Bradley and Nolan 1998) cause intelligent content to replaces intelligent network conduits as the primary source of marketing management competency. These information competency modes depict the digital market's progression towards inclusive interaction.

The *relational mode* is the first digital market stage with an *information competency* orientation. Eventually, an explicit trust construct emerged (McKnight and Chervany 2001; Hoffman, et al. 1999a) reflecting the implicit tradeoffs associated with information transactions (Schoenbachler and Gordon 2002; Phelps, et al. 2001; Franzak, et al. 2001). Digital marketing managers developed customer relationship management (CRM) strategies by balancing the risk of information sharing (Larson, et al. 2004; O'Malley, et al. 1999) against the reward of trusted relationships (Petty 2000; Phelps, et al. 2000). Marketing management studies reinforce the strategic importance of trust for both traditional and digital brand customers (Bechwati and Eshghi 2005; Chatterjee and Chaudhuri 2005) for forging one-to-one customer relationships (Luo 2002). Likewise, trust enhances the relational potential of web advertising to anchor multimedia strategies (Choi, et al. 2006), and trust provides data assurance to vulnerable digital customers (Clemmons, et al. 2003). Consequently, trust incubates the relational mode's inclusion of both enterprise and ethics considerations.

In the digital market's *relational mode*, fast paced and widespread participant data exchange increases the ethical value of privacy and anonymity, as trust endowed content properties. In contrast to the individual mode "data bank," relational mode privacy ethics secures digital market participants with a "data blank" (Carter and Goel 2005). Specifically, relational mode participants gain control by losing their identity rather than locking away their data. Competencies that disguise relationship participants ("blank") are less limiting than controls that guard relational data ("bank"), when information exchange is essential for digital market engagement. Privacy and anonymity, therefore, are operationalized measures of trust embedded by *relational mode* competencies (Fletcher 2001).

Presently, the digital market's *confluent mode* extends relational principles to build stronger enterprise and ethics connections (Sarathy and Robertson 2003). The conditions for online trust (Koehn 2003) create confluence between digital strategy aims and digital society assurances (Culnan and Bies 2003). These confluent marketing management competencies are primarily attributable to an aptitude for

coding intelligent digital content (Lessig 1999) and contributing to digital well being (Sirgy, Lee and Bae 2006). Strategically, code enables marketing managers to extract information competency from digital content, instead of digital computing. As a standard for societal ethics, digital well being equips marketing managers with a competency for interacting in a more inclusive online environment.

Increasingly, marketing scholars are advancing confluent information competency practices for balancing digital strategy and society concerns (Zwick and Dholakia 2004; Pitta, et al. 2003; Gauzente and Ranchhod 2001). The American Marketing Association Code of Ethics (2004), as well as forward thinking paradigms for ethical marketing (Rao, et al. 2006) provide the premise for balancing the digital marketing system and digital society well being. This growing recognition of information competency in the marketing field demonstrates the strategic and societal merits of "information value" (Baye, et al. 2003) for balancing the uncertainty of online interaction with the benefits innovative web-based business models (Hoffman and Novak 2005; Clemmons and Bradley 2001).

Digital market confluence imputes ethical properties into enterprise practices to benefit both companies and consumers. At the marketing management level, "cognitive moral development" (Goolsby and Hunt 1992) is an ethics control competency for guiding enterprise conduct (Deconinck 2005). From a customer orientation perspective, digital market confluence improves trust in online transactions to resolve the paradox between technology virtue and data vulnerability (Jiang, et al. 2008; Johnson, et al. 2008). These confluent strategic and societal goals underscore both traditional and digital marketing ethics (Engelland and Eshee 2007), particularly in sales and interactive service situations (Eckert and Rinehart 2005; Inks and Loe 2005). Moreover, the digital market heightens the role of ethics and social responsibility as a unique brand dimension (Madrigal and Boush 2008). Accordingly, *confluent mode* competencies are vital to marketing managers seeking to optimize digital content *form, flow, and function*.

INTELLIGENT DIGITAL MARKET CODE

The confluent coding of enterprise and ethics intelligence is conceptualized using a digital content paradigm, known as "code." Lessig's (1999) code concept is the nomological and epistemological foundation for the proposed Information Competency Codes Typology (ICCT). Nomologically, code captures the purpose of intelligent digital content, as well as the combinatorial propensity of confluent enterprise and ethics patterns. Epistemologically, code designates a new intelligent digital content philosophy. It prescribes how enterprise and ethics competencies are aligned with the philosophical character of digital presence.

> Code is Law. This code presents the greatest threat to liberal or libertarian ideals, as well as their greatest promise. We can build, or architect, or code cyberspace to protect values that we believe are fundamental, or we can build, or architect, or code cyberspace to allow those values to disappear. (Lessig 1999, p. 6)

Code maps the architecture of digital "infosphere" presence in a similar manner as genetic code maps the architecture of biological eco-domain presence (Floridi 1999). The computer ethics literature (Bynum 2000) programs code with ethical properties to enrich its utility. Unlike conventional marketing ethics appraisals of digital content and processes, computer ethics principles consider the future possibilities of "information objects" with intelligence (Floridi 2002). Research assessing the implications of digital representation and identity (Matthias 2004; White 2002; Coleman 2001; Brey 1999) affirm the inherent confluence of enterprise and ethical intelligence in code. As a combinatorial index, code deconstructs content to liberate the

composition of *digital identity, interactions, and idioms*.

Likewise, the intangibility of code decouples digital content intelligence from the material world's time/place locus. This frees societal conditions for *individual, institutional, and inclusive digital well being*. Specifically relevant for this study's purpose, are code properties that actualize digital market aims and affirm moral values in cyberspace (Spinello 2001). Computer and information ethics guidelines embrace confluent strategic and societal digital content codes, including values for self directed software agents and morality rules (Gert 1999; Steinhart 1999).

FRAMING CONFLUENT DIGITAL MARKETING

Having clarified the nature of digital code, the proposed Information Competency Codes Typology (ICCT) can be presented (see Figure 2). Conceptually, the proposed ICCT intersects the two main vectors of *strategic digital market dimensions* and *digital well being society domains*. By expanding the "strategic orientation" typology (Engelland and Summey 1999) to address confluent digital market parameters, the ICCT weds strategic dimensions and societal domains. From a marketing management perspective, the strategy and society vectors parallel the micro-marketing and macro-marketing realms in general marketing theory (Shaw and Jones 2005; Dixon and Wilkinson 1982; Hunt and Burnett 1982; Hunt 1976; Bartels 1968). Both vectors comprise a three category continuum. For the *digital strategy dimensions* the continuum categories are *identity, interaction,* and *idiom. Identity* addresses the autonomous factors that characterize digital market presence. *Interaction* aligns digital content exchanges conducted by digital market participants. *Idiom* encodes information competencies into intelligent digital content, reflected in a wide array of form and function properties.

Similarly, the continuum of *digital society domains* includes the three categories of *individual, institutional,* and *inclusive* digital presence. The *individual domain* constitutes the enterprise aims of consumers, as well as the ethical aspirations of citizens. The *institutional domain* comprises the enterprise goals of commercial organizations and the ethical guidelines of civic organizations. *The inclusive domain* captures the collective digital market commercial presence and the digital market's collective community presence. Digital well being in the *inclusive domain* insures distributive justice for digital market participants, as articulated in the macromarketing literature (Ferrell and Ferrell 2008; Laczniak and Murphy 2008), to achieve "constructive conflict outcomes" (Eckert and Rinehart 2005) among collective/community stakeholders. Therefore, the ICCT is a normative framework comprised of two vectors, one affirming digital society ethics and the other achieving digital strategy enterprise.

CODING MARKETING INFORMATION COMPETENCY

Digital market strategy is executed according to the three sequential dimensions of *identity, interaction, and idiom* (See Figure 2). These *digital strategy dimensions* are coded with information competencies that allow marketing managers to execute confluent enterprise and ethics plans, primarily by harnessing the power of intelligent digital content. Whereas *digital society domains* draw the boundaries of digital market activity (e.g., individual, institutional, inclusive), *digital strategy dimensions* depict how information competency is leveraged to code intelligent digital content. This "dominant logic" accentuates Vargo and Lusch's (2004) assertion that; "specialized skills and knowledge is the fundamental unit of exchange" (p.6). Consequently, Figure 2 also serves as a marketing management heuristic for generating scenarios that result from the dialectic between *digital strategy dimensions* and *digital society domains*. In each scenario, digital content is coded with confluent enterprise and ethics intelligence to reveal the

"dominant logic" of particular information competencies.

ICCT *strategy dimensions* chart a marketing management continuum that begins by coding digital *identity* forms. These *identity dimension* forms populate all three digital society domains. As a result, marketing managers must simultaneously code the *digital identity* of individuals, institutions, and the inclusive society as a whole. From a traditional standpoint, these *digital identity* forms comprise a target market profile. However, for future marketing managers, the time and location free context of electronic markets will code *identity* as a more fluid state of digital autonomy. For these future digital autonomy states, information competencies enable marketing managers to code *identity* forms of individuals, institutions, and inclusive society by modeling intelligent digital content.

The *identity dimension* scenario addresses the vital practice of market segmentation. The strategic necessity of parsing digital content and information entities into targeted and non-targeted *identities* is accomplished using data mining skills. Data mining translates physical identity characteristics into *digital identity codes*, using advanced algorithms for filtering and finding information patterns (Weiss 1997). Although data mining competencies segment *identity dimension* descriptors, they also bring potential threats to digital well being ethics (Saban, et al. 2001). Therefore, additional competencies are applied to model *digital identity* forms with confluent enterprise and ethics intelligence.

Broadly speaking, these additional information competencies help marketing managers code, not just classify, *digital identity* forms. Wilkinson and Young (2005) advance a similar marketing management logic called "soft-assembled strategies," by drawing upon the cognitive systems literature (Clark 1997). "Soft assembly" information competencies direct marketing managers to model *digital identity codes* based on adaptive intrinsic properties, rather than static extrinsic parameters as employed in data mining. These collaborative "wikinomics" techniques (Tapscott and Williams 2005) inherently encode *digital identity* with confluent enterprise and ethics

FIGURE 2
The Information Competency Codes Typology (ICCT)

	Digital Marketing Management Strategic Dimensions (*Enterprise Competencies*)		
Digital Well-Being Society Domains (*Ethics Competencies*)	(a) Identity (Autonomy)	(b) Interaction (Alignment)	(c) Idiom (Artificial)
a) Individual -- Customer/Citizen	*Digital Form Attributes*	*Digital Flow Activity*	*Digital Function Architecture*
b) Institutional -- Commercial/Civic	Data Mining (pattern algorithms)	Network Functionality (sense & respond)	Memetic Mapping (digital DNA)
c) Inclusive -- Collective/Community	Collaborative Modeling	Agency Channeling	Semiotic Design
	Soft-Assembly Strategy	Transparency & Authentication	Information Branding

intelligence. Kalyanam, et al. (2008) use a similar identity coding dynamic to explain the merit of adaptive experimentation in interactive marketing.

Likewise, the "interactive personalization" framework advanced by Miceli, et al. (2007) demonstrates the efficacy of coding collaborative "E-customer profiles." Even the institutional domain of business-to-business interactions have moved towards more freely configured third-party electronic marketplaces to accrue the strategic benefits of collaborative trade relationships (Fu, et al. 2008).

Next, digital market strategy engages the *interaction dimension* to align digital intelligence sharing among participants. After collaboratively modeling autonomous *digital identity* forms, marketing managers must chart digital channel flow. Digital networking is the property that characterizes the *interaction dimension's* role in the strategic process. These navigational flow phenotypes are coded with the "dominant logic" of network connection patterns.

> The networks of relationships in which firms are embedded may be viewed as extended phenotypes in which the resources of the firms comprising the network directly and indirectly contribute to its pattern of organization and behavior as well as to the reinforcement and reproduction of the resources required to continue this pattern depending on which patterns succeed. (Wilkinson and Young 2005, p. 383)

For this *interaction dimension* phenotype, a digital market intelligence delivery scenario is posed. For instance, a strategic interaction may need to be aligned between a provider and procurer of medical treatment content. Yet, simultaneously, the same digital interaction participants would channel an inverse flow of health insurance content. These dynamic patterns among digital market participants align shared intelligence through what Ballantyne and Varey (2006) regard as "value-in-use" information competencies, based on seminal "value constellation" research (Normann and Ramirez 1993).

Comparable "sense and respond" competencies for coding the *interaction dimension* (Haeckel 1999; Bradley and Nolan 1998) are described by Wilkinson and Young (2005) as "network functionalities" required to manage interconnectivity through generative relations.

> Strategy becomes more about searching via interaction processes to discover and respond to opportunities and threats, rather than about designing and controlling resources to achieve desired outcomes. Network positioning and repositioning become key strategic issues as firms seek to identify and engage in generative relations, through which they sense, interpret and reinterpret their world and act to respond to it. (Wilkinson and Young 2005, p. 389)

Agency techniques represent another type of information competency to enhance the *interaction dimension's* "network functionality." In the context of digital market strategy, this *interaction dimension* agency can be characterized as intelligence channeling. Arrow (1986, 1984, 1962) formulates agency theory as an interaction agreement which is directly applicable to digital market providers and procurers. Shapiro's (2005) contemporary agency research identifies three techniques to "bridge information asymmetries": knowledge monitoring, participant control, and shared interest incentives. These risk management competencies can be coded directly in digital content properties to achieve strategic *interaction dimension* objectives.

For instance, meta-tags and spy-ware are digital content monitoring properties that can reduce the strategic agency risks of digital market interaction evaluation and execution (Andrejevic 2007; Spinello 2002). Similarly, algorithms can be encoded with learning properties that coordinate participant interaction. Further, premium hyper-links and

monetization models (e.g., affinity program point systems) code intelligent digital content with incentives for shared interest. Marketing scholars have also applied agency competencies to the management of relational market patterns, including sales (Bergen, Dutta and Walker 1992; Basu, et al. 1885). Artificial intelligence research has shown that coding these types of agency competencies into digital content can improve interaction by aligning the "knowledge representation" of provision and procurement activities (Agre 1995). However, generally speaking, these information competencies are best explained by the concept of "embedded agency":

> Embedding agency relationships in an ongoing structure of personal *[digital]* relationships solves the problem of adverse selection … through members *[content]* of social networks in which both principal and agent are embedded. (Shapiro 2005, pp. 276-277)

Agency properties are reinforced by another information competency for improving strategic *interaction dimension* value delivery called transparency. As a confluent element of digital enterprise strategy, transparency opens the opportunity for complementary alliances among digital ethics stakeholders. Confluence is achieved because transparent enterprise data creates trusted public access. Thus, transparency skills strategically align digital intelligence *interactions* to improve digital well being.

Authentication is a good example of a competency code that strategically controls *digital interaction* transparency. In order to preserve the security of digital intelligence sharing (Bramall, et al. 2004; Luo 2002; Hoffman, et al. 1999a; Schneider 1999), marketing managers align digital intelligence content and digital market participants. Drawing from Grant's (1998) digital network competencies, the entire authentication protocol sequence is presented by Lessig (1999) as the "architecture of trust."

> This architecture would have to provide (1) authentication, to ensure the identity of the personal you are dealing with, (2) authorization, to ensure that the person is sanctioned for a particular function, (3) privacy, to ensure that others cannot see what exchanges there are, (4) integrity, to ensure that the transmission is not altered en route, and (5) nonrepudiation, to ensure that the sender of a message cannot deny that he sent it. (Lessig 1999, p.40)

The digital marketing strategy literature combines these networking, agency, and transparency/authentication competencies in the property of interactivity. Digital market success depends on the strategic coding of interactivity into electronic commerce networks, online websites, and virtual communities (Song and Zinkhan 2008). In fact, enhanced interactivity is an essential for digital customer relationships to thrive. The strategic viability of web-based relationships (Yoon, et al. 2008), as well as entirely "virtual customer environments" such as Second Life have been linked to competencies for coding advanced "interaction facilities" (Nambisan and Baron 2007). More broadly, these *interaction dimension* competencies support the inherent web service quality experience (Yi and Gong 2008; Fassnacht and Kose 2007).

The role of *interaction dimension* "code" architecture in facilitating favorable web experiences leads logically to the strategic competencies for the digital *idiom dimension*. The first two strategic dimensions address digital market identity forms and interaction flows, but not the properties of digital content functions. *Idiom* competencies code digital property functions to deliver intelligence value. In essence, *idiom* contributes artificial intelligence ingredients to the digital strategy mix.

Digital content intelligence is constructed with symbolic meaning, just as biological content intelligence is comprised of genetic markers. Memes is a term that designates units of meaning for cognitive, social, and digital intelligence. Derived from the Greek word for

meaning, "mneme," memes constitute the basic unit of a "memetic" system model that is used across fields of study to map networks for idea sharing (Blackmore 1999; Brodie 1995; Dawkins 1976). In the *idiom dimension*, artificial intelligence memes code digital market messages with "actual information content" (Lynch 1999). Because the meaning content of memes is analogous to the biological content of genes, *idiom* information competency can be construed as coding digital DNA.

> "Memes, as coined by Richard Dawkins to denote units of memory, culturally analogous to genes, can be simply understood here as nodes in the associative networks of memory. Like a kind of semantic DNA, clusters of memes in the semantic networks of memory provide a recipe of meaning, allowing us to imbibe objects, including trademarks, with meaning." (Marsden 2002, p. 307)

Marketing scholars have embraced memetics as an instrumental system for coding and decoding strategic message content. The *idiom dimension* extends these information competencies to the coding of digital content functions (Krishnamurthy 2006). As an inclusive paradigm for understanding the attribution of shared meanings (Richins 1994) and consumer behavior interactions (Williams 2002; Marsden 1998), memetics contributes a useful competency for interpreting the value and influence of digital content properties. Further, memetics techniques that improve traditional brand analysis and affinity (Wu and Ardley 2007) are directly transferable to digital content properties. Similarly, the use of memetics to manage the meaning content in traditional marketing functions (Williams 2000) supports the proposed coding of strategic functions as intelligent *digital idiom* properties.

A strategic scenario for composing electronic apparel shopping content can clarify how *digital idiom* functions are coded. First, when considering how digital content functions can best convey apparel features to online shoppers, memetics would map the cognitive topography of digital idiom meanings. Moreover, since the digital medium externalizes cognitive associations in a hypermedia environment (Riva and Galimberti 1997; Hoffman and Novak 1996), memetic patterns can actually be coded into intelligent content objects. Much like the traditional concept of "associative networks" as patterns that activate cognitive meaning (Collins and Loftus 1975; Anderson and Bower 1973), memetic codes can design apparel shopping websites where digital mannequins and material mirror the mind of the market.

For instance, the three shopping factors of person, purpose, and product could be plotted as *digital idiom* codes. Person factors helps shoppers navigate based upon content that characterizes themselves and others. Purpose factors helps shoppers navigate based on the reason, situation, or occasion for shopping. This purpose content might be further charted using motivational and temporal coordinates for hedonic pleasure and utilitarian necessity. Product factor codes could then array content representations of apparel items and services both within and apart from the person and purpose factors. Similarly, codes for person and purpose factors could link selected merchandise to themes like men's, women's, or holiday apparel. Of course, product codes can also link apparel features to prices. This scenario merely shows how memetic maps might code *digital idiom* functions for a wide variety of digital market content.

Additional insight into *digital idiom* competency can be found in the field of semiotics. Derived from the Greek "semeiotikos," semiotics refers to the interpretation of sign systems (Eco 1976). As a logical system for specifying elements of meaning, semiotics is uniquely capable of improving *digital idiom* architecture. In simplified form, semiotic competencies triangulate the meaning of "signs," the "objects" being signified, and the human (or digital) "interpretant." (Pierce 1934). This triangulation codes *idiom* competencies,

because digital content properties have linguistic functions. As such, Morris' (1938) semiotics triad of "syntax, semantics, and pragmatics" is a *digital idiom* protocol.

Semiotics competencies are well grounded in the marketing literature. Early on, Levy (1959) called attention to the composition of symbols for market interaction. This symbolic coding of marketing stimuli (Mick 1986; Solomon 1983) for traditional markets can be logically extended to code signs in the digital market *idiom*. Umiker-Sebeok (1987) compiled an array of semiotics studies examining the meaning of signs in marketing. Pragmatic uses of semiotics have been devised to construct symbol rubrics for products design (Mick 1986), as well as to discern symbolic consumer behavior (Holbrook and Hirschman 1993). More recently, semiotics elements have been employed to coordinate marketing relationship meanings (Duncan and Moriarty 1998). However, semiotics is most prevalent in advertising (Beasley and Danesi 2002; Floch and Bodkin 2001; Mick and Buhl 1992). Extending this marketing literature, as well as the concept of "semiotic-aware architecture" for hyper-media environments (Nack and Hardman 2002), a semiotics scenario is presented for the *digital idiom*.

Returning to the electronic apparel shopping scenario, Morris' (1938) semiotics triad guides digital marketing managers past semantic memes to also code the interactive digital syntax and pragmatics embedded in *digital idiom* properties. For example, digital semiotics competencies can convey the look and feel of information objects (Floridi 2002). In one respect this pertains to artificial intelligence coding of electronic shopping aesthetics like apparel color, size, shape, and pattern. Yet, in other respects it pertains to "artificial life" (Langton 1986) coding of animated digital object behavior, personality, and expression. The range of digital semiotics competencies includes visual, audio, and most recently tactile (touch screen and holographic) coding. Digital merchandise representations can be brought to life, with movement, voices, and even personalities. Similarly, "intelligent agent" coding can create "shopping bots" and personified avatars to simulate human marketing functions (Wood, et al. 2005; Clark 2000; Maes 1995). Of course, each of these strategic semiotics competencies would also represent *digital idiom* functions with confluent enterprise and ethics properties (Brey 1999).

Ultimately, *digital idioms* like traditional marketing messages are constructed into strategic brand architectures (Keller 2003). *Digital idiom* brand architecture weaves the sign characters of semiotic design into the associational context of memetic meanings. Consequently, marketing managers use digital idiom brands to code confluent enterprise and ethics properties into intelligent content. Marketing management scholars regard brand identity as the primary construct for cohering intelligence properties such as "reputational capital" and innovativeness (Gehani 2001). Likewise, the information content comparisons for traditional marketing media (Choi, et al. 2006) help direct the intelligence content properties of *digital idiom* brands. The strategic capacity to facilitate shared intelligence is attributed by marketing management researchers to the property of brand trust (Chatterjee and Chaudhuri 2005), including confluent societal considerations like information privacy (Chen, et al. 2001).

Recent digital marketing studies have highlighted the importance of *digital idiom* competencies. At the level of digital content cues, Chang and Liu (2008) found that compatibility between the design of information formats and the depiction of online menu options directly impacts consumer choice. The strategic impact of visual content representation on consumer decision making has been widely affirmed (Kim and Lennon 2008; Larie and Mason 2007), including novel applications such as "sensory enabling technology" (Kim and Forsythe 2008) that permits virtual shoppers to tour spatial facilities, try on clothing, sample products, and engage in avatar interaction. These innovative *digital idiom* competencies include simulating

the sense of feel, referred to as "e-human touch" (Sivaramakrishnan, et al. 2007). Clearly, a strong information branding competency is required to coordinate and manage these new digital idiom possibilities. To that end, digital marketing scholars are modeling "cyber brands" (Saaksjarvi and Samiee 2007) and examining the implicit effects of web brand advertising (Yoo 2008).

CONCLUSION: CREATING THE INFORMATION COMPTENCY FUTURE

The digital market's evolution has transitioned from a separate computing medium focused on individual transactions to a seamless content mode for collaborative sharing. This digital market life cycle signals a shift from traditional marketing management computing technology to digital marketing management competency techniques. Intelligent content capabilities encode the immersive digital presence of providers and procurers. Moreover, the transparency and pliability of digital content codes fosters confluence between strategic enterprise and societal ethics. This confluent coding of digital content avails marketing managers of a richer pool of intelligence than is afforded to traditional marketing managers. Venkatesh, et al. (1998) captures this richer and more confluent digital market intelligence content in the foreseeing inquiry "Cyberspace as the Next Marketing Frontier?"

> "What we are creating is a world where we can lose ourselves and escape into the world of the hyperreal (or hype and real) manipulated by the ideologies and technologies of the digital. In this phantasmagoric world, in trying to relinquish the vesiges of modernism, we are preparing to enter a futuristic world replete, however, with the symbolism of the distant past." (Vankatesh, Meamber and Firat 1998, p.301)

Consequently, the research problem for this study was identified as developing confluent digital marketing competency for the coming "phantasmagoric world." The Information Competency Codes Typology (ICCT) is advanced to classify confluent digital marketing skills based on strategic process dimensions and societal domains of digital well being. This ICCT serves as a marketing management heuristic for coding information competencies that cultivate confluent enterprise and ethics properties. This exploratory study of marketing management information competencies offers an initial conceptualization of intelligent digital content "code" as a potential source of strategic and societal confluence. The digital market's evolution towards intelligent digital content signals a new marketing management frontier. Emerging marketing management research validates the complementary nature of strategic enterprise objectives and societal ethics outcomes (Sarathy and Robinson 2003), as well as the veracity of coding digital content to achieve those aims (Tung, et al. 2006; Baye 2003). This study's synthesis of divergent literature streams supports these emergent research veins with new angles for examining digital marketing management possibilities. Most importantly, the proposed ICCT helps to steer future marketing management research aimed at identifying strategic digital competencies.

REFERENCES

Agre, Philip E. (1995), "Computational Research on Interaction and Agency", *Artificial Intelligence*, Volume 72, Issue 1-2, pp. 1-52.

Alderson, Wroe and Miles W. Martin (1965), "Toward a Formal Theory of Transactions and Transvections", *Journal of Marketing Research*, Volume 11, May, pp. 117-129.

"American Marketing Association Updates Association's Code of Ethics 2004." *Marketing News*, September 1, 40-42.

Anderson, John R. and Gordon H. Bower, editors (1973), *Human Associative Memory: A Brief Edition.* Hillsdale, NJ: Erlbaum.

Andrejevic, Mark (2007), *iSpy: Surveillance and Power in the Interactive Era,* Lawrence, KS, University of Kansas Press.

Arrow, Kenneth J. (2005), "Agency and the Market", In *Handbook of Mathematical Economics*, K. J. Arrow and M. D. Intriligator, editors, Volume 3, Chapter 23, pp. 1183-1195.

Arrow, Kenneth J. (1984), *The Economics of Agency*, Stanford, CA, Institute for Mathematical Studies in the Social Sciences, October.

Arrow, Kenneth J. (1962), "The Economic Implications of Learning by Doing," *The Review of Economic Studies*, Volume 29, Number 3, pp. 155-173.

Ashworth, Laurence and Clinton Free (2006), "Marketing Dataveillance and Digital Privacy: Using Theories of Justice to Understand Consumers' Online Privacy Concerns*", Journal of Business Ethics*, Volume 67, Number 2, pp. 107-123.

Ballantyne, David and Richard J. Varey (2006), "Creating Value-in-Use through Marketing Interaction: The Exchange Logic of Relating, Communicating and Knowing", *Marketing Theory*, Volume 6, Number 3, pp. 335-348.

Baraba, Vincent P. (1995), *Meeting of the Minds: Creating the Market-Based Enterprise*, Boston, Harvard Business School Press.

Bartels, Robert (1968). "The General Theory of Marketing", *Journal of Marketing*, Volume 32, Number 1, pp. 29 – 33.

Basu, Amiya K., Rajiv Lal, V. Srinivasan and Richard Staelin (1985), "Salesforce Compensation Plans: An Agency Theoretic Perspective", *Marketing Science*, Volume 4, Number 4, pp. 267-291.

Baye, Michael R., John Morgan and Patrick Scholten (2003), "The Value of Information in an Online Consumer Electronics Market", *Journal of Marketing and Public Policy*, Volume 22, Number 1, pp. 17-25.

Beasley, Ron and Marcel Danesi (2002), *Persuasive Signs*: *The Semiotics of Advertising.* Berlin, Mouton de Gruyter.

Bechwati, Nada Nasr and Abdolreza Eshghi (2005), "Customer Lifetime Value Analysis: Challenges and Words of Caution", *Marketing Management Journal,* Volume 15, Issue 2, pp. 87-97.

Benjamin Robert I. and Rolf T. Wigand (1995), "Electronic Markets and Virtual Value Chains on the Information Superhighway", *Sloan Management Review*, Volume 36, Number 2, pp. 62-72.

Bergen, Mark, Shantanu Dutta and Orville C. Walker, Jr. (1992), "Agency Relationships in Marketing: A Review of the Implications and Applications of Agency and Related Theories", *Journal of Marketing*, Volume 56, Number 3, pp. 1-24.

Berthon, Pierre, Leyland Pitt, J-P Berthon, Claire Crowther, Lisa Bruwer, Peter Lyall and Arthur Money (1997), "Mapping the Marketspace: Evaluating Industry Websites Using Correspondence Analysis", *Journal of Strategic Marketing*, Volume 5, Issue 4, pp. 233-242.

Biennier, Frederique and Joel Favrel (2005), "Collaborative Business and Data Privacy: Toward a Cyber-Control?" *Computers in Industry*, Volume 56, pp. 361-370.

Blackmore, Susan (1999), *The Meme Machine,* Oxford, Oxford University Press.

Blattberg, Robert C., Rashi Glazer and John D.C. Little, editors (1994), *The Marketing Information Revolution*, Boston, Harvard Business School Press.

Bloom, Paul N., George R. Milne and Robert Adler (1994), "Avoiding Misuse of New Information Technologies: Legal and Societal Considerations", *Journal of Marketing*, Volume, 58, Issue 1, pp. 98-110.

Bontis, Nick (1998), "Intellectual Capital: An Exploratory Study That Develops Measures and Models", *Management Decision*, Volume 36, Number 2, pp. 63-76.

Bradley, Stephen P. and Richard L. Nolan (1998), *Sense and Respond: Capturing Value in the Networked Era*, Boston, Harvard Business School Press.

Bramall, Caroline, Klaus Schoefer and Sally McKechnie (2004), "The Determinants and Consequences of Consumer Trust in Online Environments: An Exploratory Investigation", *International Journal of Internet Marketing and Advertising*, Volume 1, Issue 4, pp. 388-412.

Brey, Phillip (1999). "The Ethics of Representation and Action in Virtual Reality", *Ethics and Information Technology,* Volume 1, Number 1, pp. 5-14.

Brodie, Richard (1995), *Viruses of the Mind: The New Science of the Meme*. New York, Integral Press.

Bynum, Terrell W. (2000), "The Foundation of Computer Ethics", *Computers & Society*, Volume 30, Number 2, pp. 6-13.

Brodie, Roderick J., Heidi Winklhofer, Nicole E. Coviello and Wesly J. Johnston (2007), "Is E-Marketing Coming of Age? An Examination of the Penetration of E-Marketing and Firm Performance", *Journal of Interactive Marketing,* Volume 21, Number 1, pp. 2-21.

Carter, E. Vincent and Rajni Goel (2005), "Preparing for Privacy: A Module for Marketing Educators in an Era of Electronic Commerce", *Proceedings of the Annual Meeting of the Association of Collegiate Marketing Educators (ACME)*, Dallas, TX, pp. 34-59.

Caudill, Eve M. and Patrick E. Murphy (2000), "Consumer Online Privacy: Legal and Ethical Issues", *Journal of Public Policy and Marketing*, Volume 19, Spring, pp.7-19.

Celuch, Kevin, Anna M. Green, Carl Saxby and Craig Ehlen (2007), "Market Orientation and Internet-Related Cognitions: Inside the Minds of Small Business Managers", *Journal of Marketing Management,* Volume 23, Issue 3/4, pp. 227-241.

Chang, Chung-Chau and Hsin-Hsien Liu (2008), "Information Format-Option Characteristics Compatibility and the Compromise Effect", *Psychology & Marketing*, Volume 25, Issue 9, pp. 881-900.

Chatterjee, Sharmilia C. and Arjun Chauduri (2005), "Are Trusted Brands Important?" *Marketing Management Journal*, Volume 15, Issue 1, pp. 1-16.

Chellappa, Ramnath K. and Raymond G. Sin (2005), "Personalization Versus Privacy: An Empirical Examination of the Online Consumer's Dilemma", *Information Technology and Management*, Volume 6, pp. 181-202.

Chen, Jim Q., Yue Zhang and Richard D. Heath (2001), "An Exploratory Investigation of the Relationship between Consumer Characteristics and Information Privacy", *Marketing Management Journal*, Volume 11, Number 1, pp. 73-81.

Choi, Sejung Marina, Nora J. Rifon, Carrie S. Trimble and Bonnie B. Reece (2006), "Information Content in Magazine, Television and Web Advertising: A Comparison and Update", *Marketing Management Journal,* Volume 16, Issue 2, pp. 188-203.

Clark, David (2000), "Shopbots Become Agents for Business Change", *Computer*, Volume 33, Issue 2, pp. 18-21.

Clemons, Eric K. and Stephen P. Bradley (2001), "Strategic Uncertainty and the Future of Electronic Consumer Interaction: Developing Scenarios, Adopting Strategies", in *Digital Marketing: Global Strategies from World's Leading Experts*, Jerry Wind and Vijay Mahajan (editors), Somerset, NJ, John Wiley and Sons, pp. 78-101.

Clemmons, Eric K., B. Gu and K. R. Lang (2003), "Newly Vulnerable Markets in an Age of Pure Information Products: An Analysis of Online Music and Online News", *Journal of Management Information Systems*, Volume 19, Issue 3, pp. 17-42.

Coleman, Karri Gwen (2001), "Android Arete: Toward a Virtue Ethic for Computational Agents", *Ethics and Information Technology*, Volume 3, Number 4, pp. 247-265.

Collins, Allen M. and Elizabeth F. Loftus (1975), "A Spreading-Activation Theory of Semantic Processing", *Psychological Review*, Volume 82, Number 6, pp. 407-428.

Consumer Advisory Council (1963), "The Consumer Bill of Rights", *Consumer Advisory Council, First Report*. Washington, DC, U.S. Government Printing Office.

Coviello, N. E., R. Milley and B. Marcolin (2001), "Understanding IT-Enabled Interactivity in Contemporary Marketing", *Journal of Interactive Marketing*, Volume 15, Number 4, pp. 18-33.

Crowley, James A. (1998), "Virtual Logistics: Transport in the Marketspace", *International Journal of Physical Distribution & Logistics Management,* Volume 28, Issue 7, pp. 547-574.

Culnan, Mary J. and Robert J. Bies (2003), "Consumer Privacy: Balancing Economic and Justice Considerations", *Journal of Social Issues*, Volume 59, Issue 2, pp. 323-342.

Davenport, T. H. and L. Prusak (1998), *Working Knowledge: How Organizations Manage What They Know*, Boston, Harvard Business School Press.

Dawkins, Richard (1989), *The Selfish Gene*, Oxford, Oxford University Press.

Deconinck, James B. (2005), "The Influence of Ethical Control Systems and Moral Intensity on Sales Managers' Ethical Perceptions", *Marketing Management Journal*, Volume 15, Issue 2, pp. 123-131.

Deighton, John (1996), "The Future of Interactive Marketing", *Harvard Business Review*, Volume 74, November-December, pp. 4-15.

Dixon, Donald F. and Ian F. Wilkinson (1982), *The Marketing System*, Melbourne, Australia, Longman Cheshire.

Duncan, Tom and Sandra E. Moriarty (1998), "A Communication-Based Marketing Model for Managing Relationships", *Journal of Marketing*, Volume 62, Number 2, pp. 1-13.

Dutta, Soumitra, Stephen Kwan, and Arie Segev (1997), *Transforming Business in the Marketspace: Strategic Marketing and Customer Relationships,* Fontainebleau, France, INSEAD.

Eckert, J. and L. Rinehart (2005), "Constructive Conflict Outcomes: Conceptualization, Measurement and Initial Validity", *Marketing Management Journal*, Volume 15, Issue 2, pp. 144-157.

Eco, Umberto (1976), *A Theory of Semiotic,* London, Macmillan.

Engelland, Brian and William D. Eshee, Jr. (2007), *Ethics Essentials for Business Leaders*, Starkville, MS, Rockwell Press.

Engelland, Brian and John Summey (1999), "An Extended Typology of Strategic Orientation and Its Linkages to Product Innovativeness", *Journal of Marketing Management*, Volume 9, Issue 2, pp. 19-31.

Eppler, Martin J. (2003), *Managing Information Quality: Increasing the Value of Information in Knowledge Intensive Products and Processes*, New York, Springer.

Fassnacht, Martin and Ibrahim Kose (2007), "Consequences of Web-Based Service Quality:Uncovering a Multi-Faceted Chain of Effects", *Journal of Interactive Marketing,* Volume 21, Number 3, pp. 35-54.

Ferrell, O. C. and Linda Ferrell (2008), "A Macromarketing Ethics Framework: Stakeholder Orientation and Distributive Justice", *Journal of Macromarketing*, Volume 28, Number 1, pp. 24-32.

Fletcher, Keith (2001), "Privacy: The Achilles' Heel of the New Marketing", *Interactive Marketing*, Volume 3, Number 1, pp. 141-153.

Floch, Jean-Marie and Robin O. Bodkin (2001), *Semiotics, Marketing and Communication: Beneath the Signs, the Strategies*, Hampshire, Palgrave Macmillan.

Floridi, Luciano (2002), "On the Intrinsic Value of Information Objects and the Infosphere", *Ethics and Information Technology*, Volume 4, Number 4, pp. 287-304.

Floridi, Luciano (1999), "Information Ethics: On the Philosophical Foundation of Computer Ethics", *Ethics and Information Technology*, Volume 1, Number 1, pp. 37-56.

Franzak, Frank, Dennis Pitta and Steve Fritsche (2001), "Online Relationships and the Consumers' Right to Privacy", *Journal of Consumer Marketing*, Volume 18, Number 7, pp. 631-641.

Fu, Hsin-Pin, Pei Chao, Tein-Hsiang Chang and Yu-Shuang Chang (2008), "The Impact of Market Freedom on the Adoption of Third-Part Electronic Marketplaces: A Fuzzy AHP Analysis", *Industrial Marketing Management,* Volume 37, pp. 698-712.

Gauzente, Claire and A. Ranchhod (2001), "Ethical Marketing for Competitive Advantage on the Internet", *Academy of Marketing Science Review*, Volume 29, Number 10, pp. 1-7.

Gehani, R. Ray (2001), "Enhancing Brand Equity and Reputational Capital with Enterprise-Wide Complementary Innovations", *Marketing Management Journal*, Volume 11, Issue 1, pp. 35-48.

Gert, Bernard (1999), "Common Morality and Computing", *Ethics and Information Technology*, Volume 1, Number 1, pp. 53-60.

Goolsby, Jerry R. and Shelby D. Hunt (1992), "Cognitive Moral Development and Marketing", *Journal of Marketing* Volume 56, Number 1, pp. 55-68.

Grant, Gail L. (1998), *Understanding Digital Signatures: Establishing Trust over the Internet and Other Networks*, New York, McGraw-Hill.

Gronroos, Christian Fredrik Heinonen, Kristina Isoniemi and Michael Lindholm (2000), "The NetOffer Model: A Case Example from the Virtual Marketspace", *Management Decision*, Volume 38, Issue 4, pp. 243-252.

Haeckel, Stephan H. (1999), *Adaptive Enterprise: Creating and Leading Sense and Respond Organizations,* Boston, Harvard Business School Press.

Hagel, John III and Jeffrey F. Rayport (1997), "The Coming Battle for Customer Information", *Harvard Business Review*, Volume 75, January-February, pp. 53-65.

Hatch, Mary Jo and James Rubin (2006), "The Hermeneutics of Branding", *Journal of Brand Management*, Volume 14, Number 1-2, pp. 40-59.

Hoffman, Donna L. and Thomas P. Novak (2005), "A Conceptual Framework for Considering Web-Based Business Models and Potential Revenue Streams", *International Journal of Marketing Education*, Volume 1, Issue 1, pp. 7-34.

Hoffman, Donna L., Thomas P. Novak and Thomas P. Peralta (1999a), "Building Customer Trust Online", *Communications of the ACM*, Volume 42, Number 4, pp. 80-85.

Hoffman, Donna L., Thomas P. Novak, and Thomas P. Peralta (1999b), "Information Privacy in the Marketspace: Implications for the Commercial Uses of Anonymity on the Web*", The Information Society*, Volume 15, Issue 2, pp. 129-139.

Hoffman, Donna L. and Thomas P. Novak (1996), "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations," *Journal of Marketing*, Volume 60, No. 7 (July), pp. 50-68.

Hoffman, Donna L., Thomas P. Novak, and Ann E. Schlosser (2003), "Locus of Control, Web Use, and Consumer Attitudes toward Internet Regulation", *Journal of Marketing and Public Policy*, Volume 22, Number 1, pp. 41-57.

Holbrook, Morris B. and Elizabeth C. Hirschman (1993), *The Semiotics of Consumption: Interpreting Symbolic Consumer Behavior in Popular Culture and Works of Art,* New York, Mouton de Gruyter.

Hunt, Shelby D. (1976), "The Nature and Scope of Marketing", *Journal of Marketing*, Volume 40, Number 3, pp.17-28.

Hunt, Shelby D. and John J. Burnett (1982), "The Macromarketing/Micromarketing Dichotomy: A Taxonomical Model", *Journal of Marketing*, Volume 46, Summer, pp. 11-26.

Inks, Scott A. and Terry W. Loe (2005), "The Ethical Perceptions of Salespeople and Sales Managers Concerning the Use of GPS Tracking Systems to Monitor Salesperson Activity", *Marketing Management Journal*, Volume 15, Issue 1, pp. 108-125.

Jiang, Pingjun, David B. Jones and Sharon Javie (2008), "How Third-Part Certificate Programs Relate to Consumer Trust in Online Transactions: An Exploratory Study", *Psychology & Marketing*, Volume 25, Issue 9, pp. 839-858.

Johnson, Devon, Fluera Bardhi and Dan T. Dunn (2008), "Understanding How Technology Paradoxes Affect Customer Satisfaction with Self-Service Technology: The Role of Performance Ambiguity and Trust in Technology", *Psychology & Marketing*, Volume 25, Issue 5, pp. 416-443.

Kalyanam, Kirthi, Shelby McIntyre and J. Todd Masonis (2007), "Adaptive Experimentation in Interactive Marketing: The Case of Viral Marketing at Plaxo", *Journal of Interactive Marketing, Volume 21, Number* 2, pp. 72-85.

Keller, Kevin Lane (2003), *Strategic Brand Management: Building, Measuring, and Managing Brand Equity*, Englewood Cliffs, NJ, Prentice-Hall.

Kirkpatrick, David (2007), "It's Not a Game. The 3-D Online Experience Second Life is a Hit with Users", *Fortune,* February 5, pp. 56-62.

Kim, Jiyeon and Sandra Forsythe (2008), "Sensory Enabling Technology Acceptance Model (SE-TAM): A Multiple-Group Structural Model Comparison", *Psychology & Marketing*, Volume 25, Issue 9, pp. 901-922.

Kim, Minjeong and Sharron Lennon (2008), "The Effects of Visual and Verbal Information on Attitudes and Purchase Intentions in Internet Shopping", *Psychology & Marketing*, Volume 25, Issue 2, pp. 146-178.

Krishnamurthy, Sandeep (2006), *Contemporary Research in E-Marketing*, Hershey, PA, IGI Publishing.

Laczniak, Gene R. and Patrick E. Murphy (2008), "Distributive Justice: Pressing Questions, Emerging Directions, and the Promise of Rawlsian Analysis", *Journal of Macromarketing,* Volume 28, Number 1, pp. 5-11.

Laczniak, Gene R. and Patrick E. Murphy (2006), "Normative Perspectives for Ethical and Socially Responsible Marketing", *Journal of Macromarketing*, Volume 26, Number 2, pp. 154-177.

Langton, Christopher G. (1986), "Studying Artificial Life with Cellular Automata," *Physica D,* Volume 2, Issue 1-3, pp. 120-149.

Larie, Nicholas H. and Charlotte H. Mason (2007), "Visual Representation: Implications for Decision Making", *Journal of Marketing*, Volume 71, Number 1, pp. 160-177.

Larson, Dee Ann, Brian Engelland and Ron Taylor (2004), "Information Search and Perceived Risk: Are There Differences for In-Home Versus In-Store Shoppers?" *Marketing Management Journal*, Volume 14, Number 2, pp. 36-42.

Lessig, Larry (1999), *Code and Other Laws of Cyberspace*, New York, Basic.

Levy, Sidney J. (1959), "Symbols for Sale", *Harvard Business Review*, Volume 37, July, pp. 117-124.

Luo, Xueming (2002), "Trust Production and Privacy Concerns on the Internet: A Framework Based on Relationship Marketing and Social Exchange Theory", *Industrial Marketing Management*, Volume 31, pp. 111-118.

Lwin, May O., Jochen Wirtz and Jerome Williams (2006), "Consumer Online Privacy Concerns and Responses: A Power-Responsibility Equilibrium Perspective", *Journal of the Academy of Marketing Science*, Online Issue, August 28.

Lynch, Aaron (1999), *Thought Contagion: How Belief Spreads Through Society*, New York, Basic.

Maes, Pattie (1995), "Artificial Life Meets Entertainment: Lifelike Autonomous Agents", *Communications of the ACM*, Volume 38, Number 11, pp. 108-114.

Madrigal, Robert and David M. Boush (2008), "Social Responsibility as a Unique Dimension of Brand Personality and Consumers' Willingness to Reward", *Psychology & Marketing*, Volume 25, Issue 6, pp. 538-564.

Malone. Thomas W. (1997), "Is Empowerment Just a Fad? Control, Decision Making and IT", *Sloan Management Review*, Volume 38, Number 2, pp. 23-35.

Marsden, Paul S. (2002), "Brand Positioning: Meme's the Word", *Marketing Intelligence and Planning*, Volume 20, Number 5, pp. 307-312.

Marsden, Paul S. (1998), "Memetics: A New Paradigm for Understanding Customer Behaviour and Influence", *Marketing Intelligence and Planning*, Volume 16, Issue 6, pp. 363-368.

Matthias, Andrea (2004), "The Responsibility Gap: Ascribing Responsibility for the Actions of Learning Automata", *Ethics and Information Technology*, Volume 6, Number 3, pp. 175-183.

McKnight, D. Harrison and Norman Chervany (2001), "What Trust Means in E-Commerce Customer Relationships: An Interdisciplinary Conceptual Typology", *International Journal of Electronic Commerce*, Volume 6, Number 2, pp. 35-59.

Miceli, Gaetano, Francesco Ricotta and Michele Costabile (2007), "Customizing Customization: A Conceptual Framework for Interactive Personalization", *Journal of Interactive Marketing, Volume 21, Number* 2, pp. 6-25.

Mick, David G. (1986), "Consumer Research and Semiotics: Exploring the Morphology of Signs, Symbols, and Significance", *Journal of Consumer Research*, Volume 13, Number 2, pp. 196-213.

Mick, David G. and Claus Buhl (1992), "A Meaning-Based Model of Advertising Experiences", *Journal of Consumer Research*, Volume 19, Number 3, pp. 317-338.

Milberg, S. J., S. J. Burke, S. J. Smith and H. J. Kallman (1995), "Values, Personal Information Privacy, and Regulatory Approaches", *Communications of the ACM*, Volume 38, Number 12, pp.65-74.

Milne, George R., Andrew J. Rohm, and Shalini Bahl (2004), "Consumers' Protection of Online Privacy and Identity", *Journal of Consumer Affairs*, Volume 38, Issue 2, pp. 217-232.

Milne, George R. (2000), "Privacy and Ethical Issues in Database/Interactive Marketing and Public Policy: A Research Framework", *Journal of Public Policy & Marketing*, Volume 19, Issue 1, pp. 1-6.

Milne, George R. and Maria-Eugenia Boza (1999), "Trust and Concern in Consumers' Perceptions of Marketing Information Management Practices", *Journal of Interactive Marketing*, Volume 13, Issue 1, pp. 5-24.

Moor, James (1998), "Can Cyberspace Be Just?" *Conference for the Design for Values: Ethical, Social, and Political Dimensions of Information Technology,* Princeton, NJ, Princeton University, February 28 – March 1.

Morris, Charles W. (1938), *Writings on the General Theory of Signs*, Chicago, University of Chicago.

Nack, Frank and Lynda Hardman (2002), "Denotative and Connotative Semantics in Hypermedia: Proposal for a Semiotic-Aware Architecture", *The New Review of Hypermedia and Multimedia*, Volume 7, Issue 1, pp. 7-37.

Nambisan, Satish and Robert A. Baron (2007), "Interactions in Virtual Customer Environments: Implications for Product Support and Customer Relationship Management", *Journal of Interactive Marketing, Volume 21, Number* 2, pp.62.

Normann, Richard and Rafael Ramirez (1993). "From Value Chain to Value Constellation: Designing Interactive Strategy", *Harvard Business Review*, Volume 71, July-August, pp. 65-75.

Nowak, Glen J. and Joseph Phelps (1997), "Direct Marketing and the Use of Individual-Level Consumer Information: Determining How and When 'Privacy' Matters", *Journal of Direct Marketing*, Volume 11, Issue 4, pp. 94-108.

O'Malley, Lisa, Maurice Patterson and Martin Evans (1997), "Intimacy or Intrusion? The Privacy Dilemma for Relationship Marketing in Consumer Markets*", Journal of Marketing Management*, Volume 13, Number 6, pp. 541-559.

Peterson, Robert A., Sridhar Balasubramanian and Bart J. Bronnenberg (1997), "Exploring the Implications of the Internet for Consumer Marketing," *Journal of the Academy of Marketing Science*, Volume 25, Fall, pp. 329-360.

Petty, Ross D. (2000), "Marketing without Consent: Consumer Choice and Cost: Privacy and Public Policy", *Journal of Public Policy and Marketing*, Volume 19, Number 1, pp. 42-53.

Phelps, Joseph E., Giles D'Souza and Glen J. Nowak (2001), "Antecedents and Consequences of Consumer Privacy Concerns: An Empirical Investigation", *Journal of Interactive Marketing,* Volume 15, Number 4, pp. 2-17.

Phelps, Joseph E., Glen J. Nowak and Elizabeth Ferrell (2000), "Privacy Concerns and Consumer Willingness to Provide Personal Information", *Journal of Public Policy and Marketing*, Volume 19, Issue 1, pp. 54-71.

Pierce, Charles S. (1934), *Collected Papers: Volume V. Pragmatism and Pragmaticism*, Cambridge, MA, Harvard University Press.

Pitta, Dennis A., Frank Franzak and Michael Laric (2003), "Privacy and One-to-One Marketing: Resolving the Conflict", *Journal of Consumer Marketing,* Volume 20, Issue 7, pp. 616-628.

Porter, Michael E. and Victor E. Millar (1979), "How Information Gives You Competitive Advantage", *Harvard Business Review*, Volume 57, July-August, pp. 149-160.

Rao, Sally and Pascale Quester (2006), "Ethical Marketing in the Internet Era: A Research Agenda", *International Journal of Internet Marketing and Advertising*, Volume 3, Number 1, pp. 19-34.

Rayport, Jeffrey F. and John J. Sviokla (1996), "Exploiting the Virtual Value Chain", *The McKinsey Quarterly,* Number 1, pp. 21-36.

Rayport, Jeffrey F. and John J. Sviokla (1994), "Managing in the Marketspace," *Harvard Business Review*, Volume 72, November-December, pp. 141-150.

Richins, Marsha L. (1994), "Valuing Things: The Public and Private Meaning of Possessions", *Journal of Consumer Research*, Volume 21, Number 3, pp. 504-521.

Riva, Giuseppe and Carlo Galimberti (1997), "The Psychology of Cyberspace: A Socio-Cognitive Framework to Computer-Mediated Communication", *New Ideas in Psychology*, Volume 15, Number 2, pp. 141-158.

Saaksjarvi, Maria and Saeed Samiee (2007), "Nonprice Antecedents of Consumer Preference for Cyber and Extension Brands", *Journal of Interactive Marketing*, Volume 21, Number 1, pp. 22-35.

Saban, Kenneth A. (2001), "The Data Mining Process: At a Critical Crossroads in Development", *Journal of Database Marketing,* Volume 8, Number 2, pp. 157-167.

Sarathy, R. and C.J. Robertson (2003), "Strategic and Ethical Considerations in Managing Digital Privacy", *Journal of Business Ethics*, Volume 46, Number 2, pp.111-126.

Sarkar, Mitrabarun, Brian Butler and Charles Steinfield (1998), "Cybermediaries in Electronic Marketspace: Toward Theory Building", *Journal of Business Research*, Volume 41, pp. 215-221.

Schneider, Fred B., editor (1999), *Trust in Cyberspace*, Washington, DC, National Academy Press.

Schoenbachler, Denise D. and Geoffrey L. Gordon (2002), "Trust and Customer Willingness to Provide Information in Database-Driven Relationship Marketing", *Journal of Interactive Marketing*, Volume 16, Issue 3, pp. 2-16.

Shapiro, Carl and Hal R. Varian (1999), *Information Rules: A Strategic Guide to the Network Economy*, Boston, Harvard Business School Press.

Shapiro, Susan P. (2005), "Agency Theory", *Annual Review of Sociology*, Volume 31, pp. 263-284.

Shaw, Eric H. (1995), "The First Dialogue on Macromarketing", *Journal of Macromarketing*, Volume 15, Number 1, pp. 7-20.

Shaw, Eric H. and D. G. Brian Jones (2005), "A History of Schools of Marketing Thought", *Marketing Theory*, Volume 5, Number 3, pp. 239-281.

Sheehen, Kim Bartel and Mariea Grubbs Hoy (2000), "Dimensions of Privacy Concern Among Online Consumers", *Journal of Public Policy and Marketing*, Volume 19, Issue 1, pp. 62-73.

Sheth, J. N. and R. S. Sisodia (1997), "Consumer Behavior in the Future," in *Electronic Marketing and the Consumer*, R. A. Peterson, editor, Newbury Park, CA, Sage, pp. 17-38.

Sirgy, M. Joseph and Dong-Jin Lee (2008), "Well Being Marketing: An Ethical Philosophy for Consumer Goods Firms", *Journal of Business Ethics,* Volume 77, pp. 377-403.

Sirgy, M. Joseph and Dong-Jin Lee and Don Rahtz (2007), "Research on Consumer Well being (CWB): Overview of the Field and Introduction to the Special Issue", *Journal of Macromarketing,* Volume 27, December, pp. 341-349.

Sirgy, M. Joseph, Dong-Jin Lee and Jeannie Bae (2006), "Developing a Measure of Internet Well being: Nomological (Predictive) Validation", *Social Indicators Research*, Volume 78, pp. 205-249.

Sivaramakrishnan, Subramanian, Fang Wan and Zaiyong Tang (2007), "Giving an 'E-Human Touch' to E-Tailing: The Moderating Roles of Static Information Quantity and Consumption Motive in the Effectiveness of an Anthropomorphic Information Agent", *Journal of Interactive Marketing, Volume 21, Number* 1, pp. 60-75.

Solomon, Michael R. (1983), "The Role of Products as Social Stimuli: A Symbolic Interactionism Perspective", *Journal of Consumer Research*, Volume 10, Number 3, pp. 319-329.

Song, Ji Hee and George M. Zinkhan (2008), "Determinants of Perceived Web Site Interactivity", *Journal of Marketing*, Volume 72, Number 2, pp. 99-113.

Spinello, Richard A. (2002), "The Use and Abuse of Metatags", *Ethics and Information Technology*, Volume 4, Number 1, pp. 23-30.

Spinello, Richard A. (2001), "Code and Moral Values in Cyberspace", *Ethics and Information Technology*, Volume 3, Number 2, pp. 137-150.

Steinhart, Eric (1999), "Emergent Values for Automatons: Ethical Problems of Life in the Generalized Internet", *Ethics and Information Technology*, Volume 1, Number 2, pp. 155-160.

Tapscott, Don (2000), *Digital Capita,* Boston, Harvard Business School Press.

Tapscott Don (1999), "Minds Over Matter," *Business 2.0*, January, pp. 89-97.

Tapscott, Don and Anthony D. Williams (2005), *Wikinomics: How Mass Collaboration Changes Everything*, New York, Penguin-Putnam.

Tung, Wei "Harvey," Robert Moore and Brian Engelland (2006), "Exploring Attitudes and Purchase Intentions in a Brand-Oriented, Highly Interactive Web Site Setting", *Marketing Management Journal*, Volume 16, Number 2, pp. 94-106.

Turkle, Sherry (1995), *Life on Screen*, New York, Simon and Schuster, Inc.

Turkle, Sherry (1984), *Second Self,* New York, Simon and Schuster, Inc.

Umiker-Sebeok, Jean, editor (1987), *Marketing and Semiotics: New Directions in the Study of Signs for Sale*, Berlin, Mounton de Gruyter.

Vargo, Stephen L. and Robert F. Lusch (2004), "Evolving to a New Dominant Logic for Marketing", *Journal of Marketing*, Volume 68, Number 1, pp. 1-17.

Venkatesh, Alladi, Laurie Meamber and A. Fuat Firat (1998), "Cyberspace as the Next Marketing Frontier? Questions and Issues", In *Consumer Research: Postcards from the Edge*, Stephen Brown and Darach Turley, editors, London, Routledge.

Venkatraman, Meera and Ruby R. Dholakia (1997), "Searching for Information in Marketspace: Does the Form (Product/Service) Matter?" *Journal of Services Marketing*, Volume 11, Number 5, pp. 303-316.

Weiss, Sholom M. and Nitin Indurkhya (1997), *Predictive Data Mining: A Practical Guide,* New York, Morgan Kaufmann.

White, Peter A. (1990), "Ideas about Causation in Philosophy and Psychology", *Psychological Bulletin*, Volume 108, Number 1, pp. 3-18.

Wilkinson, Ian F. and Louise C. Young (2005), "Toward a Normative Theory of Normative Marketing Theory", *Marketing Theory*, Volume 5, Number 4, pp. 363-396.

Williams, Russell (2002), "Memetics: A New Paradigm for Understanding Customer Behaviour?" *Marketing Intelligence and Planning*, Volume 20, Issue 3, pp. 162-167.

Williams, Russell (2000), "The Business of Memes: Memetic Possibilities for Marketing and Management", *Management Decision*, Volume 38, Issue 4, pp. 272-279.

Wirtz, Jochen, May O. Lwin and Jerome D. Williams (2007), "Causes and Consequences of Consumer Online Privacy Concern", *International Journal of Service Industry Management,* Volume 18, Issue 4, pp. 326-348.

Wood, Natalie T., Michael R. Solomon and Basil G. Englis (2005), "Personalisation of Online Avatars: Is the Messenger as Important as the Message?" *International Journal of Internet Marketing and Advertising*, Volume 2, Issue 1/2, pp. 143-161.

Wu, F., V. Mahajan and S. Balasubramanian (2003), "An Analysis of E-Business Adoption and Its Impact on Business Performance", *Journal of the Academy of Marketing Science*, Volume 31, Number 4, pp. 425-447.

Wu, Yufan and Barry Ardley (2007), "Brand Strategy and Brand Evolution: Welcome to the World of the Meme", *The Marketing Review*, Volume 7, Number 3, pp. 301-310.

Yi, Youjae and Taeshik Gong (2008), "The Electronic Service Quality Model: The Moderating Effect of Consumer Self-Efficacy", *Psychology & Marketing*, Volume 25, Issue 7, pp. 587-601.

Yoo, Chan Yun (2008), "Unconscious Processing of Web Advertising: Effects on Implicit Memory, Attitude Toward the Brand, and Consideration Set", *Journal of Interactive Marketing*, Volume 22, Issue 2, pp. 2-18.

Yoon, Doyle, Sejung Marina Choi and Dongyoung Sohn (2008), "Building Customer Relationships in an Electronic Age: The Role of Interactivity of E-Commerce Web Sites", *Psychology & Marketing*, Volume 25, Issue 7, pp. 602-618.

Zwick, David and Nikhilesh Dholakia (2004), "Whose Identity Is It Anyway? Consumer Representation in the Age of Database Marketing", *Journal of Macromarketing*, Volume 24, Number 1, pp. 31-43.