

# The New Digital Media Value Network: Proposing an Interactive Model of Digital Media Value Activities

*La nueva red de valor de los medios digitales:  
propuesta de un modelo interactivo para el análisis  
de las actividades de valor de los medios digitales*

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## **Abstract**

*This study models the dynamic nature of today's media markets using the framework of value-adding activities in the provision and consumption of media products. The proposed user-centric approach introduces the notion that the actions of external users, social media, and interfaces affect the internal value activities of media firms via a feedback loop, and therefore should themselves be considered value activities. The model also suggests a more comprehensive list of indicators for value assessment.*

### **Key Words**

*Brand equity - Digital media - Media management - Value activities - Value network*

## **Resumen**

*El estudio examina la actual naturaleza dinámica de los mercados de los medios de comunicación utilizando un marco de análisis de las actividades de valor añadido para evaluar el suministro y consumo de productos de medios de comunicación. El enfoque propuesto, centrado en el usuario, introduce la noción de que las acciones de los usuarios externos, las redes sociales, y las propias interfaces afectan a las actividades de valor internas de las empresas de los medios de comunicación a través de un circuito que se retroalimenta, pudiendo ser consideradas, en sí mismas, actividades de valor. El modelo ofrece también un listado completo de indicadores para la evaluación del valor de los medios digitales.*

### **Palabras clave**

*Valor de marca - Medios digitales - Gestión de medios - Cadena de valor - Red de valor*

# 1. Introduction

While the existence of user-led value activities may not be a reality for all industries, digital media has been so radically altered by the introduction of web 2.0 technologies that ignoring the changing role of the user during the design and creation of strategic management frameworks would be promoting value-subtracted innovation (Gilder, 1994). Should media managers only be provided with a framework that outlines the traditional value activities found in Porter's value chain they will have little synthesized guidance to address the loss of control over content creation, over what is deemed to be a quality production, and what their media brand stand for. This study is an attempt to conceptually model the dynamic nature of today's media markets using the framework of value-adding activities in the provision and consumption of media products. It is not intended to overwrite, but append Porter's value chain concept which demonstrates how firms can develop a competitive advantage by manipulating the linkages between inbound logistics, operations, outbound logistics, marketing and sales, as well as post-sale service (Porter & Millar, 1985). Rooted in Porter's concept of value creation activities and Wirtz's business model approach, the proposed model demonstrates how media firms can develop a competitive advantage in corporate branding by leveraging the linkages between users, social media, interfaces, and the firms themselves. In essence, technological advances have significantly altered the role of media consumers; giving them control of when and how they consume media; providing them with the means for creating and sharing content; and empowering them to dictate the way they interact with media firms, albeit directly or via the technological interfaces and social media platforms they use for content consumption. The proposed digital media value network provides media managers a framework to account for the impact users, social media, and interfaces have on their organizations' value activities, thus enabling the identification of new opportunities for nurturing brand equity.

## 2. Literature Review

### 2.2. Porter's Value Chain Revisited

Porter defined value activities as the distinct physical and technological activities a firm carries out to increase value (Porter & Millar, 1985). These activities were divided into two categories; primary activities: the physical creation of products or services, their marketing and delivery to buyers, and their support and service after sale (Porter & Millar, 1985); and support activities: acquiring the inputs required for the primary activities, assisting the primary activities, as well as serving other firm wide functions (Porter & Millar, 1985). The primary activities Porter presented were linear in progression starting with inbound logistics and then proceeding through operations, outbound logistics, marketing and sales, and finally service (Porter & Millar, 1985). The supporting activities included procurement, human resource management, firm infrastructure, and technology development (Porter & Millar, 1985).

It is important to consider that in a web 2.0 media marketplace, not all activities along the value chain are vertically-integrated or restricted to only be carried out by organizational representatives. While Porter and Millar (1985) acknowledged that technology is “transforming the way value activities are performed and the nature of linkages among them” (p. 4), the value chain model described above follows the traditional producer-to-user dichotomy without addressing the possibility of produsage, external user-led content creation and activities, that can affect a firm's performance (Bruns, 2008). While the existence of produsage may not translate to user-led value activities for all industries, digital media has been so radically altered by the introduction of mobile Internet technologies that ignoring their potential existence is likely to result in a strategic management knowledge gap.

### 2.2. Value Activities, Linkages & Technological Incompatibility

Porter's view of technology as, “one element of overall competitive strategy, that must be consistent and reinforced by the choices in other value activities,”

(Evans & Smith, 2004) implies a linear causal relationship between value activities and technology that is internally regulated. Many media and value chain theorists including Tapscott (1996), Ware, Gebauer, Hartman, Roldan (1998), Evans and Smith (2004) identify this internally-focused assumption as the source of the incompatibility between Porter's model and the Internet (Evans & Smith, 2004). Accordingly, current discourse maintains the importance of identifying and manipulating value activities for strategic planning (Evans & Smith, 2004), but accepts that the immense impact of the Internet could not have been anticipated when Porter first defined value activities and linkages in 1985 (Evans & Smith, 2004).

Linkages exist when the way one activity is performed affects the effectiveness of other activities (Porter & Millar, 1985). The explication of this model attempts to demonstrate that user-led activities on social media and interfaces external to the firm do impact the effectiveness of the firm's value activities. Accordingly, linkages may exist between the user-led activities being described by the digital media value network and the traditional value activities found on Porter's value chain. Hence why this model is not intended to overwrite, but append the value chain concept to account for the potential realization of new digital media value activities, defined as the distinct physical and technological activities a user carries out that leads to increased value for media firms (Porter & Millar, 1985). The catalyst for treating user-led actions on digital media as value activities is the web 2.0 feedback loop which has fostered the creation of new and unexpected linkages between users, social media, interfaces, and media firms (Wirtz, 2001). In an effort to establish a strategic management framework that is consistent with Porter's value chain, but simultaneously assists media managers in tracing the potential impacts of new user-led digital media value activities the following proposition is posited:

P1: The actions of external users, social media, and interfaces affect the internal value activities of media firms via a feedback loop, and therefore should themselves be considered value activities.

### 2.3. Technological Compatibility: The Business Model Approach & Existing Frameworks

An effective model of a digital business should capture the way a firm functions and creates value through the four prototypical value activities found online: 1) content creation and distribution; 2) online commerce via digital transactions; 3) context provisioning through the aggregating of online information; and 4) connection activities that are concerned with providing a physical or virtual network by which people can connect (Wirtz, Schilke, Ulrich, 2010).

While this study seeks to build what Wirtz would define as a process oriented Internet business model that accounts for the 4C typology described above, it will be functionally different from existing e-business models, specifically in the definition of the value being traced through the network. For example, Amit & Zott's (2001) value-drivers model defines value as new wealth creation, however to some users wealth creation is not the primary goal of content creation. Media products are faced with the duality of being both creative works and products that generate profits. Accordingly the dependency of media managers on strategic frameworks that only define value in terms of profit or wealth are ignoring the social, epistemic, and emotional, values (Sheth, Newman, & Gross, 1991) associated with user-generated content (UGC). While user-led value activities like content creation undoubtedly can lead to, "identifiable, measurable economic benefits that the firm expects to receive," (Burke & Logsdon, 1996, p.497) the electronic-word-of-mouth (eWOM) generated by a fan's response to a media product is not directly monetary in nature, and therefore could more accurately be described as the creation of positive or negative brand value. In an effort to establish a strategic management framework that will allow media managers to trace the indirect monetary value associated with the linkages between users, social media, interfaces, and media firms the following proposition is posited:

P2: As a result of the indirect monetary value of UGC, eWOM, and other user-led value activities, value can no longer be measured in terms of revenue alone.

## 2.4. Brand Equity as the Measure of Value Activity Outcome

For this study, the indirect monetary value described in the aforementioned proposition refers to brand value, an intangible resource that may lead to a competitive advantage over other media firms if correctly exploited. Recent developments in corporate branding research grounded in the resource based view (RBV) of the firm have argued for the inclusion of corporate branding as a strategic resource that meets the parameters of an intangible knowledge-based resource (Otubanjo, 2010). Otubanjo's (2010) in-depth interviews with strategy and branding practitioners working for Accenture, Ernst & Young, KPMG, Deloitte, and PwC, confirm the appropriateness of treating a corporate brand as a strategic intangible resource, that can lead to a competitive advantage. Tracing the value activities portrayed in the digital media value network can help media managers develop and implement sustainable and successful brand strategies that will translate a media brand into a competitive advantage (Otubanjo, 2010; Wirtz, 2011). As current literature in brand management research has not achieved consensus on a single standardized measurement for brand equity, four potential measures are proposed here based on brand equity constructs and media product characteristics. They are: 1) Trending, 2) Perceived Quality, 3) Brand Image Stability, and 4) Brand Loyalty (Keller, 2008). A cumulative combination of these measures will cohesively capture how the distinct physical and technological activities a user carries out can lead to increased value for media firms (Porter & Millar, 1985).

### *Trending*

Trending refers to the ability of a brand to remain current as perceived by consumers and to maintain a consistent level of consumer awareness (Seetharaman, Nadzir, Gunalan, 2001). Generating positive brand value through trending requires the consumer's acceptance of the brand as current, relevant, and popular. Trending is a reflection of the eWOM and UGC exchanged by users on social media, as the prominence of trending categorical and quantitative data found on Twitter and other social networks is determined by the cumulative value placed by users. For example, the number of times any Tweets ascribed to a television show were seen by other Twitter users has been captured by Nielsen's Twitter TV Ratings (Nielsen, 2015). This user-generated metric of brand equity might translate to

positive brand value for a media firm as highly trending content has a level of brand awareness that is either dominant: a consumer can recall the media brand; or top-of-mind: the brand is the first one recalled for a specific genre of media (Seetharaman, Nadzir, Gunalan, 2001).

### ***Perceived Quality***

Perceived quality is a widely accepted measure of brand equity that is particularly useful when assessing experience goods. It is generally derived by using a competitor as a frame of reference (Motameni & Shahrokhi, 1998). Consumers are usually able to decipher if one brand is of high quality, average quality, or inferior quality relative to a different brand (Motameni & Shahrokhi, 1998). Aaker and Keller (1990) found that brands with a high perceived quality among consumers are more likely to have the same consumers give serious consideration to brand extension products (Hoeffler & Keller, 2003). Brand extension refers to a firm choosing to market a different product category under the same brand as a result of the strength of the initial brand. An example includes *Frasier*, as a spin-off of the television series *Cheers*. Aaker and Keller (1990) also found that a high quality brand can be stretched farther and therefore reach more diverse product categories than a brand perceived as average or inferior (Hoeffler & Keller, 2003). This concept of brand extension is very relevant to media managers as multiplatform consumption and cross-media marketing are becoming contemporary norms.

### ***Brand Image Stability***

Brand image stability refers to a firm's ability to maintain their positive brand image over a long period of time (Seetharaman, Bin, Gunalan, 2001). Brand image is the perception that customers have towards the branded firm factoring in the cumulative interactions they have had across all media touch-points. As brand image is a high-level summation of a consumer's feelings towards the brand in question it can be greatly influenced by all used-led value activities described by the digital media value network. A high level of brand image stability is beneficial to a media firm as it is generally positively correlated to market share (Hoeffler & Keller, 2003). Studies conducted by Smith and Basu (2002) found that a brand image of market dominance generally resulted in a higher market share (Hoeffler & Keller, 2003). Furthermore, Tse and Lee (2001) found that a strong positive brand



image can be used to overcome unfavorable product evaluations (e.g., negative reviews) (Hoeffler & Keller, 2003).

### ***Brand Loyalty***

Brand Loyalty refers to the commitment of a consumer to purchase and support a specific brand (Motameni & Shahrokhi, 1998). This relationship is generally developed post-purchase and is most stable for brands that are market leaders (Hoeffler & Keller, 2003). Studies have shown a positive correlation between online market communications and customer loyalty (Mumel, Hocevar, & Snoj, 2007). This means that when users interact with social media, media firms, and interfaces, there is likelihood for increased brand involvement and exposure not previously offered by traditional one-way media content consumption. Empirical studies have also suggested that brand loyalty fends off competition when consumers are faced with difficult choice situations such as higher prices and negative information (Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010). Such differential attachment to a brand is especially critical in today's noisy media environment with fragmented content and platforms. In an effort to establish a strategic management framework that adheres to the parameters of a 4C process oriented Internet business model, but differs from existing models by tracing the positive and negative brand value associated with the linkages between users, social media, interfaces, and media firms the following proposition is posited:

P3: Consumer-based brand equity is a more comprehensive indicator of the cumulative value being generated across all actors in the digital media value network.

## **3. Building the Network & Operational Definitions**

The explication of this model is conducted through an examination of industry developments in contemporary media markets, and is intended to produce a heuristically provocative conceptual network with high explanatory and organizing power. The digital media value network identifies four specific actors: users, social media, interfaces, and media firms (see Figure 1). While individual users are the ones utilizing social media and interfaces, it must be acknowledged

that the technological infrastructures provided by social media sites and technologically converged interfaces often mediate and determine how a user interacts with a media firm. Accordingly, the actions taken by the firms that create and disseminate these technologies are important to address and should not necessarily be attributed to individual users directly. It is for this reason that the model displays users, social media, and interfaces separately, as each actor can operate in collaboration with another actor, or individually for its own goals. This is conceptually consistent with Bruno Latour's (2005) actor-network theory which argues that non-human actors exist. It further postulates that when exploring relational ties in society technology should be treated as an actor, as to not presume that humans are the driving social force in a given situation. While the framework being formed was heavily influenced by the work of Porter (1985) and Wirtz (2011), it does not exactly fit the definition of a traditional value chain or adhere to the parameters of the business model approach. As a value network is defined as, "a model that relies on mediating technology to link clients or customers who are or wish to be interdependent (Stabell & Fjeldstad, 1998, p.427); and where "the firm itself is not the network [but] provides a networking service," (p.427) it is our view that the framework being explicated is representative of a value network.

Various market developments that are elaborated upon within the actor-specific inquiries below have shaped the way the four actors of the digital media value network operate and interact with one another. All four actors maintain linkages in the overall value network by creating inputs for each other's value activities. Each actor contributes an input to at least one value activity, and receives an output from at least one value activity. The value activities themselves will be discussed in greater detail once the individual roles of each actor and how they are influenced by the specific market and consumption factors are presented. The following four sections are actor-specific inquiries which examine the major market and consumer dynamics contextually relevant to each actor, their potential for affecting a firm's brand equity, and ultimately why the proposed digital media value network is needed.

## 4. Explication: The Actors & Opportunities for Brand Equity

### *Users: Content Creators and the Advent of “Producer”*

A major catalyst that created the need for a digital media value network is the increasing frequency of media users as content producers of the aptly named user generated content (UGC). Bruns (2008) suggests that the traditional defined roles of consumers and users are now interwoven with the roles of producers and creators, coining the term, “producer.” Complementary UGC is content that is not intended to directly replace industry produced content, but extend the brand narrative being told through its distribution via social media (Ha & Ganahl, 2004). Substitutive UGC is produced with the intention to develop its own audience as an alternative to industry produced content (Ha & Ganahl, 2004). UGC, either complementary or substitutive, is dynamic, always evolving, and never finished (Bruns, 2008). This is not in reference to their narratives, but to their position in the marketplace. An example is that a negative YouTube review about an episode of a television program that is disseminated immediately through social media can be just as swiftly replaced with a glowing review the following week. Another example is that the creator of an alternative program may start his/her own YouTube channel and commercialize their content, thus creating competition to existing television programs that appeal to the same target audience. This demonstrates the need for a paradigm shift in how content creation is traditionally addressed by strategic frameworks that attempt to adhere to the 4C typology. While content creation remains an important value proposition, it can no longer be defined as, “firms collecting, selecting, compiling, distributing, and or presenting online content” (Wirtz, Schilke, Ulrich, 2010, p. 275) While UGC fits von Hippel’s (2005) definition of a user-developed innovation, it is important for media managers to remember that user-developed innovations become more valuable to society through widespread distribution. Accordingly, media firms could look to partner with producers, providing them access to distribution on a mass level, and changing a potential competitor into a new collaborator.

***Users: Opinion Leaders and the Power of eWOM***

As consumers have evolved past the one-directional receiver external to the traditional media value chain, they can now take on the role of opinion leader (Sharma & Pandey, 2011). As an opinion leader, the user exchanges electronic-word-of-mouth (eWOM) with other users. Common examples of eWOM include suggestions, recommendations, opinions, and comments (Sharma & Pandey, 2011). It is estimated that the eWOM disseminated by one user has the potential to affect the behavior of approximately eight other people (Sharma & Pandey, 2011). This can be leveraged by media firms to contribute to brand value by increasing viewership through inexpensive means of audience acquisition and retention (e.g., Facebook pages, Twitter feeds); enhance customer satisfaction by exposing managers to customer feedback regarding what requires improvement (e.g., production value, quality of hosts); and help identify ideas for new content through viewers' suggestions (Sharma & Pandey, 2011). eWOM is an ongoing, dynamic entity that is not completely subject to the control mechanisms of media firms, and therefore influences audience decisions whether a firm is aware of it or not. Accordingly, it is incumbent on a media firm to not limit itself to the value created by its internal marketing and sales activities outlined on Porter's value chain, but identify the eWOM channels used frequently by its audience to formulate plans for creating brand value through other users. While the 4C typology's "connection" remains an important value proposition, it can no longer be defined exclusively as, "firms providing virtual network infrastructure...for exchange of information over the Internet," (Wirtz, Schilke, Ulrich, 2010, p. 275) as users are building their own eWOM networks.

***Users: Media as Public and Experience Goods***

The digital media value network, can have a user contribute to inbound logistics via social media platforms, while simultaneously receiving outbound media products as audience members (Porter, 1998). This duality represents a unique feature of media products that can create a beneficial economies of scale cost structure, with high fixed costs and low marginal costs. Specifically, because media products are often considered "public goods," they do not prevent simultaneous or future consumption by another after a single user's consumption. Accordingly, each additional user creates little to no additional cost for the firm (Varian, 2010), and

therefore mass duplication in a scenario with low marginal costs is an especially desirable attribute for media firms looking to improve profitability. eWOM via social media also has the potential to generate long-term consumer demand for out-of-date content, thus further enhancing the scale economic cost structure. From a critical perspective, users that would be classified as late adopters may find media products more attractive if that content has already attained a critical mass of other socially engaged viewers (Lin & Atkin, 2002). As a result of this critical mass, the late adopter may achieve higher levels of value from their media consumption (Lin & Atkin, 2002), as they are able to take part in the existing online and offline user communities founded by opinion leaders. The fact that media goods are experience goods further solidifies the role of the user in the value network, and the need for a media specific value model. Research has shown that eWOM is most effective for experience goods, products for which the quality is uncertain before consumption; accordingly relevant information from credible sources is valued when making consumption decisions, and is used to reduce risk and uncertainty (Reinstein & Snyder, 2005; d'Astous & Touil, 1999). Thus, eWOM from opinion leaders coupled with the aforementioned critical mass of consumers has the potential to generate crucial brand equity, adding value to a media firm that is not accounted for by the internal marketing and sales activities outlined on Porter's value chain.

### ***Social Media: User-Controlled Digital Distribution***

Social media has a direct impact on the value activities associated with digital distribution throughout the value network. Facebook, Twitter, YouTube, and other social media sites represent a primary distribution method for users. As this means of distribution is controlled by the user, it also represents a channel for the transference of brand value. Social media can consist of social networks like Facebook and Ning; blogs and microblogs like Blogger and Twitter; content sharing sites like YouTube and Pinterest; customer reviews included on the pages of Amazon.com and ePinions.com; and personal websites that are often powered by content management systems like WordPress or Joomla! The universal accessibility of these sites makes them ideal forums for users interested in immediate many-to-many distribution of their eWOM and UGC. The power of accessibility and control in a digital environment places the user at the forefront of the value adding activities captured by the digital media value network.

The concept of a public good is also applicable here as most forms of social media are both non-excludable and non-rivalrous, achieving a critical mass of users that maintain its appeal long after early adoption (Lin & Atkin, 2002). Accordingly, media firms must not view this critical mass as a competitor, but recognize the opportunity for value activities in the form of: reputation management, alternative distribution, extracting marketing intelligence, and new forms of viewer engagement. In a survey of 953 Americans age 18 and older who either use Internet, email, or download apps on their cell phone, as high as 20% of them actually went online to see what other people were saying about the program they were watching, and 19% posted their own comments (Duggan & Rainie, 2012). This example of social TV demonstrates the potential for virtual brand communities to grow around popular media content. While the value proposition of social TV is to aggregate and organize virtual information about a program through the use of hashtags, this framework deviates from the “context” based business models described by the 4C typology, by acknowledging that users external to media firms can be the aggregators.

### ***Social Media: Complementary Distribution Platform and Touchpoints***

Content sharing websites represent an opportunity for media firms to engage in additional distribution of their media products and/or marketing communications. New social media platforms may strategically complement existing distribution systems by offering better accessibility that is responsive to users’ preferences. Catherine-Gail Reinhard (2010), Vice-president of Product Marketing at Store-Bound, explains “there has been a noticeable shift in corporate adoption of the platform [YouTube]” (para. 1), and that “Just about every corporation and small business is creating a branded channel on YouTube” (Reinhard, 2010, para. 2). While the exact number of media firms harnessing the distribution mechanism of YouTube is up for debate, the platform’s potential for creating brand value is widely accepted. Toyota uses YouTube for generating brand recognition of their Sienna minivan line, by urging customers during their high-profile television commercials to visit their YouTube channel for more information (Reinhard, 2010). In this case, the YouTube channel represents an inexpensive method for marketing communications relative to the traditional high-profile television commercial.

It is important to note that the YouTube channel in this example is not being used as a substitutive distribution method for the television commercial, but as an additional media touchpoint (Jenkins, 2006). The brand equity Toyota gained from their cross-media advertising campaign was measured as cumulative brand equity gained across all media touchpoints (Jenkins, 2006). Alternative media touchpoints, like YouTube, provide superior emotional resonance by allowing for the curation of branded content that is of particular relevance to the consumer. This example demonstrates why the digital media value network does not intend to overwrite, but append Porter's value chain concept, as the brand value added by using social media as an alternative distribution channel should complement existing outbound logistics.

### ***Social Media: Reviews and Search Functionality***

While customer reviews have existed long before social media, their impact on consumers' purchasing decisions have been drastically increased as a result of the improved search and cataloging functionalities enabled by web 2.0 technologies. User-created links and tags allow users to rank the quality of experience-based goods how they see fit, removing the need for media firms to formulate some type of classification system (Shirky, 2005). The combination of the link, tag, and intelligent search functionality has been successfully applied by Amazon.com, to provide relevant customer reviews and information on the product quality of experience-based goods. For example, instead of determining what qualifies as helpful information Amazon asks, "Was this review helpful to you?" (Mudambi & Schuff, 2010, p.186), allowing users to tag and link what they deem as high-quality media products. This information is later accessible via the search functionality which displays helpful reviews more prominently (Mudambi & Schuff, 2010). The relevance of this for media firms is that if you have a strong experienced-based good you can build brand equity through the implementation of a user-generated customer review system, which can share strong content with other users more prominently, while simultaneously helping you identify weaker performing content. Once again, this deviates from the "context" based business models described by the 4C typology, by acknowledging that users external to media firms can be the ones providing structure to the navigation of other Internet users, through the development of user-generated folksonomies (Anderson, 2006).

***Interfaces: Convergence***

The inclusion of interfaces as an independent actor within the network depicted by the proposed model is an acknowledgement of the multi-platform nature of the market and the impact new devices can have on a media firm's strategic options. The digital media interfaces we use are converging into a single networked communication system where value cannot be measured in terms of a single device represented by a linear sequence of value activities, but through the cumulative distribution potential of the entire network (Jenkins, 2006). It is important to note that the emphasis on "convergence" here is in reference to the seamless integration of access and content from device to device and platform to platform from the viewpoint of the user, and not necessarily on the effectiveness of hardware/device integration (e.g., Internet ready TV sets). From a brand equity perspective, this networked communication system represent a critical mass of interfaces that produce a positive network value each time a new device is added, as each new device added to the network links another user to the brand messaging embedded within the network's content. While this differs greatly from the linear progression found in Porter's value chain, it is not unlike the "connection" value proposition described by the 4C typology. In fact, the assertion that firms are generally providing the physical network infrastructure necessary for the exchange of information on the Internet is upheld (Wirtz, Schilke, Ulrich, 2010) as our examination of users demonstrated that while they maintain control over the physical layer of the Internet in regards to choice of platform, few are actually engaging in the development of new physical "connection" devices (e.g., a home-made smartphone), while many are building virtual "connection" networks (e.g., virtual brand communities).

***Interfaces: Access Flow***

Successful digital content distributors like Netflix and Pandora prioritize the users' freedom to pass from one medium to another uninterrupted (Netflix, 2012; Pandora, 2012). For example, when audiences begin watching a movie on a PC and are interrupted due to an obligation, they can continue watching that movie on their mobile phones from exactly where they left off as they travel to a new destination (Netflix, 2012). Pandora promotes that the customized radio stations one creates via their Internet radio website are available on all major mobile devices (Pandora, 2012). "Pandora on mobile devices is fully integrated with Pandora on



the web, so everything you create and personalize on your device appears next time you're back on the web" (Pandora, 2012, para. 1). While the convergence of platforms is essential in the brave new world of digital media, activities that enhance the provision of user-centric access and universal consumption experiences are where the value resides. While current market developments support the notion that many users are building virtual "connection" networks (Wirtz, Schilke, Ulrich, 2010), should user-centric innovations lead to the proliferation of novelty products developed by users for their own use (von Hippel, 2005), perhaps the access flow strategy could be applied to allow industry developed software to function on personally developed physical "connection" devices (e.g. a home-made smartphone).

### ***Interfaces: Remediation***

Remediation, the refashioning of traditional media forms by new media, is another important consideration in regards to interfaces (Bolter & Grusin, 2000). An example of this is how books are being digitized in order to allow for their distribution on e-readers. While remediation carries immense brand value as the brand messages embedded within the content are also remediated to the new platforms, it sometimes also represents a threat to intellectual property. Remediation, as defined, is supposed to be an organic process that happens naturally over time as a reflection of the audience's appreciation for the media being refashioned. However, a trend of user-led remediation is expediting this process through the encoding and re-distribution of copyrighted content on other mediums. An example of this could include an illegitimate YouTube video of a local television show, or the scanning and distribution of an entire book that is intended by the publisher to only be available in print. These actions do not currently reconcile with existing intellectual property legislation; however, they do represent opportunities to impact brand value and therefore should be considered value activities.

How a firm deals with these situations can affect a consumer's perception of that firm, and while they are fully within their rights to protect their intellectual property through the use of control mechanisms like digital rights management (DRM) technologies, the possible brand effects should be factored into how these rights are enforced. A strong approach in protecting one's intellectual property

can create negative brand value among net-neutrality advocates. While it could be argued that a weak approach towards DRM could be frustrating to consumers who spend the money to legitimately purchase their media content, recent studies have demonstrated that removing DRM often leads to an increase in sales (Vernik, Purohit, & Desai, 2011). This is attributed to DRM's sharing restrictions hindering new product discovery for the legal consumer, which in turn makes the search costs associated with pirated media more tolerable (Vernik, Purohit, & Desai, 2011). The potential for the realization of the "commerce" value proposition found within the 4C typology is threatened by user-driven remediation of professionally produced media content, yet this is not presently addressed by Wirtz's business model approach.

### ***Media Firms: Network Externalities***

The concept of network externalities was touched upon earlier in terms of how it frames social media as public goods for users. Moving to the perspective of media firms, this concept will now be explored in greater detail within an organizational context. A positive network externality is created when a node added to a network causes an increase in value for the entire network. A negative externality is created when a node is added to a network, causing a decline in value for the entire network, usually the result of noise or network congestion. A popular example of a positive externality is the addition of a telephone to an existing network of telephones. The additional phone results in each node of the network having more people to call. A computer being connected to the Internet is another example of a positive network externality; however it is also an example of an indirect network externality. An indirect network externality creates a two-way contingency between the demand for one product, and the demand for another product. A computer being connected to the Internet creates a demand for software, cameras, and web content to get the full value of the computer (Gupta, Jain, & Sawhney, 1999).

The notion of network externalities is important for the proposed digital media value network in that the many-to-many, multidirectional nature of social media creates an enormous indirect network externality for more content. Innovative media firms and those willing to adapt to capitalize on the power of

social media are in a great position to add value to their products. For instance, by successfully integrating social media functions with traditional television viewing (e.g., live tweeting), a television firm might enhance the value of its existing programs through a positive network externality, which in turn, might stimulate the production of other relevant content products (e.g., continuing episodes via social media platforms). Network externalities treat the Internet as a continuum that exists external from any one individual or organization, and therefore its potential impact on value activities can more accurately be traced through a framework that seeks to apply Wirtz's process oriented business model approach, than a traditional value chain which treats technology as a physical resource that a firm can choose to deploy.

### ***Media Firms: Firm Initiated Digital Interactions***

A media firm's presence on social platforms is not limited to reactionary actions like reputation management, trend spotting, and data mining, but could be a proactive marketing initiative used to increase the audience of offline brands. An example of a media firm proactively engaging in social media to create positive brand value is NBC's London 2012 Olympics' Social Media Partnerships. NBC Olympics used Facebook, Twitter, You Tube, Shazam, Google +, Instagram, and Tumblr as outlets for the distribution of complementary Olympic content in addition to what was being provided offline (NBC, 2012). The end result was record Olympic television viewership in the United States with 219.4 million viewers (NBC, 2012), and record digital traffic of 2 billion pages views and 159.3 million video streams (NBC, 2012) surpassing the digital traffic of the 2012 Super Bowl, 2012 Grammys, 2012 Oscars, 2012 Golden Globes, and all seven games of the 2011 World Series (NBC, 2012).

"Actively joining the social conversation through our partnerships with these platforms, as well as calling out Olympic social trends and highlights in our linear television coverage, aided us in reassembling the ever fragmenting media audience, most notably among that elusive younger demographic," (NBC, 2012, para. 3) said Gary Zenkel, President, NBC Olympics. The threat of viewers migrating from television to the Internet can often cloud the potential opportunities for innovation and audience gains offered by social media sites, but what NBC demonstrated is that a

strategically planned digital presence can not only improve brand equity, but also bring people back to the offline linear television coverage. This suggests that a proactive approach to UGC, that allows media managers to track the creation of positive and negative brand value, can reduce the risk of relinquishing control over value activities traditionally conducted within the firm (Porter, 1998) and facilitate the creation of positive brand equity in offline and online user communities (Hiernerth, Lettl, Keinz, 2014).

### ***Media Firms: Dynamic Networks and Control Mechanisms***

The infrastructure of the Internet was originally envisioned under the ideology of net neutrality (Lessig, 2002). This ideology argued for the free flow of data whenever possible, and if the situation arises where it must be controlled then do so in a way that is democratic to users giving each person the same restrictions that must be met in order to access it (Benkler, 2000; Lessig, 2002). As corporations are highly protective of their privacy and intellectual property, it was inevitable that control mechanisms that did not adhere to the net neutrality ideology were introduced.

Benkler (2000) explains that a control mechanism can be introduced at either the physical (hardware), logical (software), or communication (content) layer of the Internet. Examples of control mechanisms at the physical layer include the fees charged and content restrictions administered by an Internet service provider (Benkler, 2000). Examples of control mechanisms at the logical layer would be a firewall. Finally examples of control mechanisms at the communication level would be password protected websites (Benkler, 2000). The decision a firm makes to implement a control mechanism to protect its privacy and intellectual property should not be taken lightly as this action too can impact a brand positively or negatively. Implementing too many control mechanisms would restrict a user's ability to interact with a firm via social media, and therefore limit the amount of market intelligence that could be extracted and/or damage goodwill from consumers. Having too few control mechanisms could result in challenges to intellectual property rights and/or users being exposed to unfiltered, unintended brand messages. While it is important to note that recent studies have demonstrated that removing DRM control mechanisms often leads to an increase

in sales (Vernik, Purohit, & Desai, 2011), other control mechanisms like brand guardians, forum moderators, or employees empowered to act as social media brand hosts could play a crucial role in maintaining a firm's brand image. Control mechanisms and their potential positive and negative effects on a firm's value activities have yet to be addressed by Porter's value chain or Wirtz's business model approach.

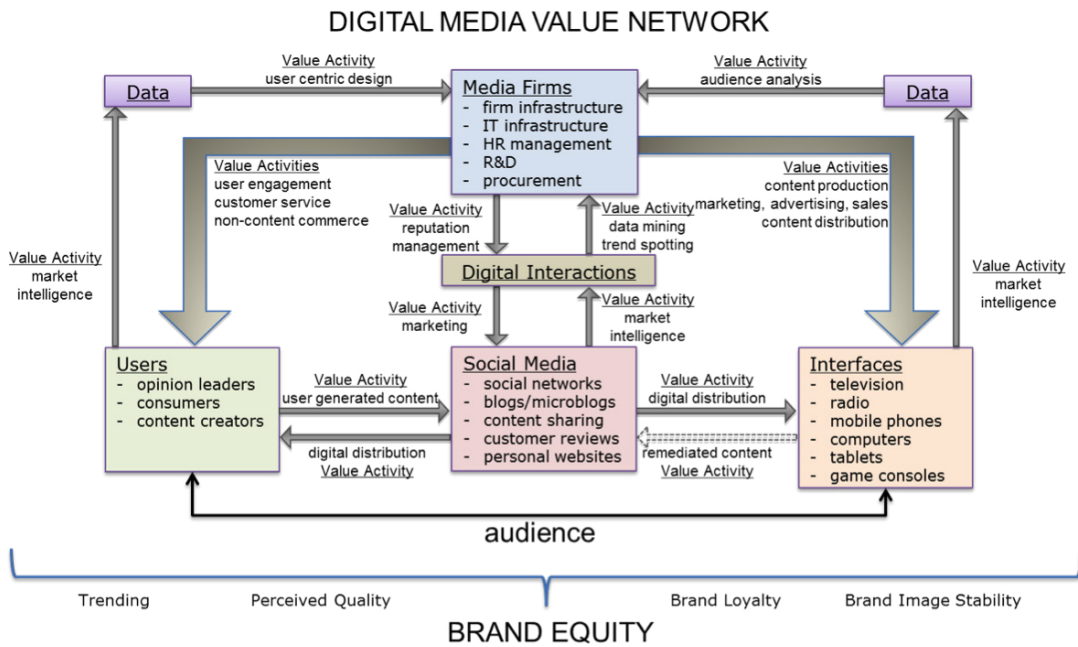


Figure 1: Proposed Digital Media Value Network

Explication: Proposed Value Activities and Relationships between Actors

With the aforementioned digital media market and consumer considerations in mind, the following sections elaborate on the linkages proposed in the value network (see Figure 1).

## 4.1. Users and their Value Activities

While all users consume media products, some users also act as opinion leaders who exercise influence, intentionally or unintentionally over others, and some actually create content to be distributed in the network. The main value activities from the perspective of these users center around two areas: user generated content and market intelligence. Both value activities have the opportunity to have an impact on brand equity. Users create UGC, which acts as an input to social media sites, which digitally distribute this content to firms, interfaces, and back to other users. The UGC content can create value for a media firm if it complements existing products or incubates new products. The market intelligence value is created through the aggregation of user data, which can be used to enhance all aspects of firm activities so they are designed with the user in mind. The user also receives the output of value activities conducted by social media and media firms. Social media sites digitally distribute content that can consist of professionally produced media content, other users' UGC, eWOM, or feedback to the initial user's original posting. Media firms reach out to users when they engage viewers for input, provide customer service, or sell merchandise and other commerce offerings. Note that all users, as audiences, generally interact with interfaces to access content.

## 4.2. Social Media and their Value Activities

Social media interacts with other actors in the digital media value network through two main value activities: digital interactions and market intelligence. Social networks, blogs, content sharing sites, customer review platforms, and personal websites provide a mechanism for digital interactions, through the distribution of UGC (including both comments and consumable content), as well as through professionally produced content (including both market communications and consumable content) that is consumed by users and other media firms. Based on these digital interactions, social media is able to deliver a wealth of consumer information that would help media firms assess audience feedback/preferences and spot trends and new product ideas. Social media also receives the output of value activities conducted by users, interfaces, and media firms. As discussed,

users utilize social media sites as digital interaction platforms by infusing them with content and comments. Interfaces also contribute to the variety and quantity of content accessible on social media by remediating content intended for other platforms and by pushing content users might be interested in, directly to them. Finally, social media also receives the output of media firms' digital management activities in the form of marketing campaigns and reputation management, as well as professionally produced content looking for an alternative distribution method.

### **4.3. Interfaces and their Value Activities**

Interfaces interact with the other actors in the digital media value network through remediating content and market intelligence. As previously discussed, interfaces contribute to the content accessible on social media by enabling the remediation of content intended for other platforms. Interfaces also generate significant consumer usage information that can be used to enhance other value activities at media firms. Interfaces are also the final contact point with consumers for media firms. Specifically, interfaces present to the users the content product and market communications produced and distributed by the media firms. How content is presented and integrated throughout the interface can add or diminish the value of the message.

### **4.4. Media Firms and their Value Activities**

Media firms interact with the other actors in the digital media value network through four main types of value activities:

1. Content related activities such as the production and distribution of content
2. Market intelligence related activities such as data mining, trend spotting, and other consumer information collection and analysis
3. Marketing related activities such as market communications, reputation management via social media, and other advertising/sales activities

4. Consumer centric actions such as the implementation of interactive, engaging activities, customer service, and non-content commerce.

Note that value activities such as data mining/trend spotting and reputation management are contemporary digital interactions that emerged as a result of web 2.0 technologies. They moderate the connection between media firms and social media. This moderation acknowledges that the flow of information between social media and media firms should be controlled by a strategic, thoughtful mechanism so desirable market intelligence is gathered and appropriate brand messages are put forth. Users and interfaces are two more sources of market intelligence in the proposed value network. The ability of the firm to collect information and communicate with the audience directly is perhaps the most unique aspect of the proposed value network.

## 5. Discussion and Conclusion

The digital media value network attempts to conceptually address the value generating potential of users, social media, and interfaces external to media firms. The aforementioned actors perform differential value generating activities that are not accounted for by Porter's value chain framework (Evans & Smith, 2004). Accordingly, a process oriented business model approach must be used in collaboration with Porter's conceptual definitions of value activities and linkages in order to capture the digital media value activities being proposed (e.g., the creation of UGC). Wirtz's 4C typology outlines that any effective model of digital business should address the value propositions associated with content creation and distribution, online commerce, the aggregation of information, and the connection activities that allow people to physically or virtually connect (Wirtz, Schilke, Ulrich, 2010). While this model aspires to adhere to the 4C typology it differs from existing process oriented e-business models, in the value it attempts to trace. The digital media value chain looks to trace the creation of brand value between users, social media, interfaces, and media firms, thus enabling the identification of new opportunities for nurturing brand equity, in hopes of translating a corporate brand strategy into a competitive advantage.



Another element of this framework that differentiates it from other strategic business models is the treatment of social media and interface technologies as actors that are not necessarily under the influence of a human user. This decision was to account for the possibility of technologies driving human behavior. McLuhan (1964), Postman (1985), and Latour (2005) have all suggested to varying degrees that when exploring relational ties in society it should not be assumed that humans are the driving social force in a given situation, as it is possible the existence of social media and web 2.0 interfaces drives users to create cultural content. Ultimately, the treatment of technology as an actor deviates from the business model approach to an extent that the strategic model formed is likely more representative of a value network (Stabell & Fjeldstad, 1998). The value activity linkages that exist between the actors in the digital media value network (see Figure 1) are a result of industry developments that have fostered new opportunities for generating brand equity (e.g., data mining and trend spotting). Media managers must become familiar with these activities and treat them as tools that can be used to foster the growth of brand equity, specifically in situations where user-generated competition appears substitutable in nature. The explication of the digital media value network provides numerous suggestions as to how to transform the loss of control over content creation, quality, and brand value into meaningful brand equity, which can have a differential effect on a consumer's purchasing decision or willingness to engage with a brand. The fundamental component of all of the strategies suggested is a willingness on the firm's part to recognize good ideas that are generated from users on social media and interfaces outside of the firm. This paradigm is known as, open innovation, and assumes the boundaries between a firm and their environment have become more flexible (Chesbrough, 2005).

As this framework is a conceptualization, further refinement both conceptually and empirically from other scholars would help achieve consensus on conceptual definitions and provide opportunities for empirical testing. Nevertheless, in the process of modifying the value activities and/or the characterization/flow of the actors, two core principles should remain consistent: 1) user, social media, and interface value activities outside of a typical media firm's value chain can add or remove value from the firm, and 2) the output of value activities should be measured in ways that combine both financial and brand equity. Based on the current

proposed framework, future empirical investigations might first focus on assessing social media's empirical contribution to brand equity in terms of trending, quality, stability, and loyalty. Once a baseline is established further research might be conducted regarding the applicability of this model to media firms of different sizes and structure, as well as an assessment of its effectiveness as a tool

for strategic planning outside of media firms. Ultimately, the digital media value network presents a framework designed to assist media managers with identifying and leveraging the user-led value activities that can affect brand equity, and thus the extraction of competitive advantages through the application and refinement of this tool will be the ultimate assessment of its significance (Corbitt, 2000).

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