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## Social Perspectives of Globalizing VoIP Technology

Wenshin Chen, Abu Dhabi University, UAE, wenshinchen@hotmail.com

### Abstract

Based on theoretical lenses of fads and fashions and isomorphic pressures, this research in progress proposes social perspectives that help understand the rapid penetration of Voice over Internet Protocol (VoIP) in the global market. Online interviews between sixteen undergraduate students and their interviewees worldwide provided preliminary understanding which revealed that users often developed awareness of VoIP technology because of their social contacts and their purpose for using VoIP was mostly for maintaining social connections. The potential contribution of such social perspectives on VoIP technology in the global market could thus be expected.

**Keywords:** Voice over Internet Protocol (VoIP), social perspectives, fads and fashions, isomorphic pressure.

### 1. Introduction

In contrast to traditional telephone service PSTN (Public Switched Telephone Network) which is based on circuit switching technology, emerging Voice over Internet Protocol (VoIP) utilizes packet switching technology that allows the transmission of voice over the Internet. This packet switching protocol, unlike circuit switching technology, would not occupy communication circuits and thus allow multiple transmissions simultaneously. To the end users, it denotes a much more affordable and convenient voice communication over the Internet and in turn captures increasing attention in the marketplace. By the end of 2008, VoIP (or IP telephony) is estimated to increase to 40 percent of consumer phone calls in the US [25]. Vonage, one of the largest VoIP providers, has acquired 600,000 subscribers by 2005 and the overall market in the US is estimated to reach its pinnacle in the timeframe of 2010 to 2014 [6]. While various standards and regulations might present challenges or obstacles [18][26], this cost efficient technology is perceived to increasingly revolutionize the next generation of telephony [25]. Empirical research has also embarked on investigating factors hindering adoption behavior in specific marketplaces [24].

In line with these emerging interests of VoIP in the business world and research community, this research in progress seeks to understand how VoIP technology rapidly penetrated global markets in recent years. Specific research questions include “How do users develop awareness of VoIP” and “To what extent does social contact influence the use of VoIP.” Drawing from social perspectives [1][12], this study argues that the reasoning behind an individual’s choice of a specific VoIP technology is driven more by social purpose than by economics practice. In other words, end users often come to understand their preferred VoIP technology or applications because of their social contacts; and they continuously use the technology also mostly for social connection and networking purpose rather than economic efficiency or productivity. These social perspectives challenge traditional IT (information technology) implementation literature that is strongly dominated by economics perspectives such as productivity [7], efficiency [5], and profitability [15], or by widely cited theoretical models such as technology acceptance model (TAM) [11] and diffusion of innovation [20].

### 2. Social Perspectives

Two specific social perspectives on which this proposed study is based are fads and fashions [1][4] and isomorphic pressures [12][16][21]. By the notion of fads and fashions [1] Abrahamson argues that technology users often imitate a fashion setter because fashion setters often inspire others to “trust their choices of technologies and to imitate them” (p.596) and thus frequently shape collective adoption behavior [2]. Specifically pertaining to emerging technology, imitating fashion setters might help avoid risk and uncertainty, confirm emergent norms of innovation practice and in turn gain higher recognition in the field. As the number of users increases, such imitating action is often further urged by “bandwagon pressures” [3][23].

While the notion of fads and fashion focuses on imitation and norms, institutional theorists further articulate three isomorphic pressures emerged from social and institutional context that specifically shape collective rationality and action in the field [12]. According to DiMaggio and Powell, those pressures stem from coercive, mimetic and normative forces that an actor faces in the institutional landscape [16][19]. Coercive pressure is a dominant force that

requires actors to comply with certain collective practice or face severe consequences. At the individual or group level, coercive pressure is most likely to emerge when individual actors fear to be left behind [1] or be excluded from a social group [9].

Mimetic pressure, in contrast, is mostly shaped by environmental and technological uncertainty [21]. As emerging technology (e.g. VoIP) rapidly develops, risks associated with technology uncertainty would become inevitable. While facing such uncertainty, actors in a social group would often fear to be different [1] and in turn tend to model after those who have successfully legitimized themselves in the field [8][12]. Such modeling process is often advocated by opinion leaders that influence those who are inexperienced or less knowledgeable in innovation [13][20] and could be considered as a form of interpersonal reproduction that witnesses emerging technology being widely diffused among users [28].

Finally, normative pressure is largely derived from social norms [10] and often caused by the exchange of information among group members [12]. Such information exchange inevitably creates comparison among group members [14][17] and in turn urges them to retain group identity and legitimacy by complying with social norms that are commonly expected in the group [16]. As more members identify themselves with such collective practices, certain bandwagon effects are likely to emerge and further urge remaining members to act similarly [22][27]. In other words, the more widely diffused an innovation, the higher the normative pressure faced [3].

Based on these social perspectives, this ongoing study proposes that individual choices of VoIP technology are largely driven by social contacts and networking purpose instead of economic evaluation. The specific VoIP technology chosen for this research investigation is Skype for its rapidly increasing popularity and universally accessible features. Within the length limitation, this research in progress only reports below some preliminary findings gathered from interview conversations among frequent users of a specific VoIP technology. While the preliminary understanding is consistent with arguments provided by social perspectives, it supports the potential contribution of this proposed study in that such social perspectives could shed new light on how VoIP providers or IT managers might better market their products and manage their customers.

### 3. Preliminary Understanding

At the current phase, online interviews between sixteen undergraduate students enrolled in an upper level MIS course in the US and Skype users worldwide provided preliminary understanding of VoIP user behaviors. Each student was requested to follow the same guideline and conducted two interviews with Skype users from countries other than the US or other students' choices. As a result, a majority of Skype users globally indicated that their first contact of the technology was attributed to their social affiliation and the main reason for their continuous usage was for social contact and networking purpose. Below are some of the highlights extracted from interview conversations.

"I learned about Skype from a person that I work with... [I use Skype] to keep in contact with friends and regular customers and also for networking purposes" (male exotic dancer, Brazil)

"Some of my friends used it, and so I started to use it... [I use Skype] because it is easier to communicate" (male college student, Austria)

"My co-employee just tells about it... [I use Skype] so we can communicate faster relating to my job" (female payroll assistant, Philippines)

"I don't remember [how to come to know about Skype] probably from friends... [I use Skype] for connection with my friends being abroad" (female graduate student, Georgia)

"I heard about it from a friend... [I use Skype because] I was told by one of my friend and he told me there is nice people chatting here, and I am looking for a nice girl, I need honest one, and it is too hard to get honest one this time" (male sales director, Lebanon).

### 4. Discussion and Future Directions

While these online conversations only briefly highlighted certain global Skype users' technology behaviors, they provided some basic understanding of how users came to know about this particular VoIP technology and why they used it for daily routines. Evidently, the introductory contact with technology, regardless of country of origin, mostly came from social contacts, (e.g. friends or co-workers). In addition to cultural differences, these users also ranged from a variety of educational and occupational backgrounds. It might thus suggest that as VoIP technology penetrates the

global market, individual users, as long as accessibility to the technology is present to them, would tend to take advantage of social networking functionalities provided by the technology. Whether these social networking purposes are for keeping in contact with friends, connecting with friends overseas, or searching for future significant others, the presence of VoIP technology in general and Skype in particular might continuously shape social lives of individual users in the future.

This preliminary understanding well reflects proposed research questions and theoretical foundation. It might thus imply that a deeper understanding of social perspectives on the use of VoIP technology could significantly benefit the business world and the research community. To practitioners, the marketing strategy to globalize VoIP technology might need to consider not just economic efficiency and technology functionality but also social networking approach whose bandwagon effects could lead to a rapid penetration rate. To researchers, emerging understanding of social perspectives could extend the existing main stream literature that is dominant by economic and technology considerations. The potential contribution of this proposed research is thus expected.

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