Preference for New Product Information Sources

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Abstract

This paper examines the preferences of advice seekers for human information sources. We focus on advice providers who are high in technical expertise (technical knowledge) and/or social connections (are connected to many others). Somewhat contrary to intuition, information sources who are high on social connectivity are relatively more attractive for more innovative products. Consistent with this, a meta-analysis indicates that the correlation between knowledge and opinion leadership is lower for more innovative products. Study 2 demonstrates that less innovative individuals perceive a socially connected information source has more relevant advice for them while more innovative people believe experts are more relevant. Studies 3 and 4 show that innovators consistently prefer to consult with people who are high on technical expertise, while those who are less innovative prefer to consult with socially connected individuals for more radical new products. Finally, study 5 shows that while even less innovative consumers prefer to consult with experts about technical performance attributes for radical innovations, they prefer to talk to a socially connected person for information about attributes that require skill to use.

Introduction

Searching for information is a common activity when considering a new product. Such a search can employ a variety of sources including printed material, TV and radio ads, and Internet sites. Information also often comes unsolicited from human sources both in casual conversations and at point of sale (including both sales persons and other customers). In spite of (or maybe because of) this plethora of information, potential buyers often actively seek out information from others. The focus of this paper is on who an individual will seek information from concerning a new product. More narrowly, we focus on whether people who are high on technical expertise or social connectivity will be the preferred information source for various levels of product and individual innovativeness.

Numerous criteria may be employed in deciding from whom to seek advice. These include convenience/availability, level of technical expertise, similarity, empathy, their understanding of how to use the product, communication (simple vs. technical language), and how "connected" they are to other typical users. Obviously there are many combinations of technical knowledge, social connections, empathy, ability to communicate, credibility, etc. across potential human information sources. For example, an expert can be socially connected, empathetic, and good at communicating and a socially connected person can know technical details. Put differently, a well-connected empathetic expert who has credibility and is good at communicating is the ideal (albeit rare) information source. By the same logic, an unempathetic main market consumer who has not used the product and is not connected to anyone is the least useful. Therefore, we contrast two specific hypothetical types of individuals: experts who are not necessarily connected and socially connected people who are not experts (and in fact may never have used the product). Interestingly, while expertise has been covered widely in the marketing literature on opinion leadership, until

recently (Van den Bulte and Joshi 2007, Watts and Dodds, 2007, Goldenberg, Han, Lehmann and Hong, 2008; Trusov, Bodapati and Bucklin 2008) social connectivity has attracted relatively less attention. In a series of studies, we examine which of these two traits are preferred for products that vary in their level of newness and by individuals who vary in expertise and innovativeness.

We begin with a literature review followed by a meta analysis of the opinion leadership literature that shows that as product innovativeness increases, the correlation between opinion leadership and product knowledge is lower, suggesting that expertise may be less relevant for radical innovations. We then examine what type of information people expect to get from two hypothetical information sources: an expert or someone high on social connectivity. Next, in study 3 we show that the type of innovation (radical vs. incremental) as well as the type of consumer (their degree of innovativeness) lead people to seek recommendations from different information sources (i.e., technical experts or socially connected individuals). We replicate these findings in a different setup using an internet panel in study 4. Finally we show that for attributes that relate to the skills needed to use a new product, less innovative consumers prefer to consult with socially connected individuals who are familiar with the experiences of "normal" consumers. For factual/technical information, on the other hand, all consumers tend to look to experts' for advice.

Background

When considering the purchase of a new product, consumers often rely heavily on word of mouth (hereafter w-o-m) for information and advice (Arndt 1967; Herr, Kardes, and Kim 1991; Sheth 1971). W-o-m communications are immediate, participatory, and provide credible and sought-after information and are thus thought to be more effective than impersonal sources of information (Day 1971; Dichter 1966; Gilly et al. 1998). For example, research indicated that w-o-m is seven times more

effective than newspaper advertising, five times stronger than a personal sales pitch, twice as effective as radio advertising (Katz and Lazarsfeld 1955), and ten times more effective than media advertising in forming favorable attitudes towards an innovation (Goldenberg, Libai, and Muller 2001; see also Day 1971).

In general, consumer decision making is strongly influenced by word-of-mouth. For example, over 40% of Americans actively seek the advice of family and friends when shopping for services such as doctors, lawyers and auto mechanics (Walker, 1995). W-o-m also constitutes a major input to the deliberations of potential consumers regarding the purchase of new products (Rogers, 1995). Furthermore, the increasing use of the Internet, which enables consumers to communicate quickly with relative ease, has established the contemporary version of this phenomenon, known as “Internet w-o-m”, "word of web", or “word of mouse”, as an important marketing communication channel. Companies are investing considerable efforts in what is sometimes labeled “viral marketing” to trigger word of mouse and accelerate product purchase (Schwartz, 1998; Oberndorf, 2000).

Most of research on advice in marketing has been within the framework of a particular type of W-o-m, that driven by people who are considered to be opinion leaders. Their significant role in the dissemination of market information is widely acknowledged among both practitioners and academics (Eliashberg, Jonker, Sawhney and Wierenga, 2000; Krider and Weinberg, 1998; Reichheld, 1996; Herr, Kardes and Kim, 1991; Mahajan, Muller and Kerin, 1984; Godes and Mayzlin, 2004; Mahajan, Muller and Wind, 2000). We use this literature as an important part of the support for our proposed theory.

Weimann (1991) suggested that influence is as a combination of personal and social factors: (1) the personification of certain values (or “who one is”); (2)

competence ("what one knows") and (3) strategic social location ("whom one knows"). Nevertheless, the majority of researchers, applying self designation scales, have tended to describe opinion leadership as uni-dimensional, generally slanted toward the knowledge aspect.

Some might argue that expertise is the dominant criterion, i.e., more is better. Ceteris paribus that is probably true. However, experts often come with additional characteristics which are less desired. These include the use of technical language, limited appreciation for the difficulty non-experts have in using a product, and a limited similarity to and empathy toward non-experts (e.g., IT personnel, many doctors). When this is the case, potential purchasers often turn to non-experts (e.g., current users, patients) for information. Here we examine this intuitive (at least after the fact) but important behavior.

In this paper we are not interested in the people who give advice but rather who advice seekers choose to seek advice from. Hence, it is not important whether experts who are limited in their connections to others or socially connected people who are not experts exist. Here we use these types experimentally to uncover the preferences of the advice seekers. In the studies that follow, we demonstrate that no simple explanation such as fit (e.g., typical users always want information from typical users) consistently explains the results. Rather, a combination of source, product, and person characteristics determines preferred information sources.

1) Human Information Sources

Many aspects of a human information source can influence its attractiveness. Here we concentrate on two traits: expertise and connections to other people.

a) Technical Knowledge and Expertise.

Understanding product advantages (relative advantage) and technical details is an important aspect of advice. In general, people who often provide advice are more

knowledgeable about and enduringly involved with the relevant product class (e.g., Richins and Root-Shaffar 1988; Venkatraman 1988). Myers and Robertson (1972) examined the "knowledgeability" of opinion leaders in twelve categories using 400 households in the Los Angeles area. The correlations between opinion leadership and various measures of knowledge and interest were moderate to high, ranging from a low of .37 (interest in household furnishing) to a high of .87 (knowledge about cosmetics and personal care).

A related concept is market mavenism (e.g Arbat, Nel- Deon, Christo, 1995; Coulter et al., 2002; Engelland., Hopkins & Larson, 2001; Feick & Price, 1987; Goldsmith, Flynn & Goldsmith, 2003; Steenkamp & Gielens, 2003). Feick and Price (1987) highlight the knowledge market mavens have about products and places to shop as well as their tendency to initiate discussions with consumers and offer unsolicited information. As suggested by Coulter et al. (2002), because opinion leaders are involved in the product category and spend time shopping, they may also acquire general marketplace expertise. Researchers have found a positive but far from perfect correlation between opinion leadership and market mavenism (e.g. Coulter et al., 2002; Engelland et al., 2001), suggesting they are distinct constructs. For example Feick and Price (1987) reported a .23 (food) and a .24 (drugs) correlation between opinion leadership and market mavenism while Goldsmith et al., (2003) reported a .45 correlation between the two constructs. Several product related attributes correlate with opinion leadership, such as involvement and interest (e.g., Coulter, Feick and Price, 2002; Myers and Robertson, 1972; Richins and Root-Schaffer, 1988; Summers, 1970; Venkatraman, 1990), knowledge (e.g., Coulter et al., 2002; Flynn et al., 1994; Flynn et al., 1996; Myers and Robertson,1972; Summers, 1970; Venkatraman, 1990), usage (e.g., Coulter et al., 2002), awareness (Coulter et al., 2002; Goldsmith and

Desborde, 1991), product ownership (Childers, 1986), and confidence in choices (Coulter et al., 2002). Regardless, both the opinion leadership and market mavin literatures suggests that expertise is a dominant factor when giving advice.

b) Network Properties

Two network properties are particularly relevant for social contagion of innovations; cohesion and structural equivalence. Cohesion focuses on socialization between members in network. The more empathic the communication, the stronger the influence. Structurally equivalent people have similar connections to other members in the network, leading to similar tastes, habits and preferences and therefore greater influence on each other. Burt (1987), in the case of medical innovation, showed that structural equivalence was the dominant factor behind contingency. Both factors suggest an important role of socially connected people in information diffusion.

Another aspect which may influence information source desirability is how many (and which) other people a source is connected to. There is growing agreement among practitioners and academics on the fundamental role social networks play in the way information reaches consumers, channel members, and suppliers, (Achrol and Kotler 1999; Iacobucci 1996; Rosen 2000), Van Den Bulte and Wuyts 2007). Recent research has tied social network properties to the success of marketing actions such as pricing and promotion strategies (Mayzlin 2002; Shi 2003). Much of the empirical research in this area has focused on relatively small networks (see Houston et al 2004 for a review), tie strength (Brown and Reingen 1987; Rindfleisch and Moorman 2001) or social capital (Ronchetto, Hutt and Reingen 1989).

Connections provide indirect information; the larger the number of connections, the greater the information possessed (ignoring issues of mis-communication and bias). Schott (1987), in examining interpersonal influence in science, suggested that a

national community's influence is enhanced by its expertise (indicated by its number of Nobel laureates) and that the influence of one community on another is promoted by collegial and educational ties between them (indicated by co-authorships and student exchanges, respectively). Similarly, Weimann (1994) suggested that centrally positioned scholars, i.e., scientific opinion leaders, determine the direction of scientific progress because innovations adopted by central figures are more widely accepted by other members of the profession. Opinion leaders in a field tend to be inter- connected, thus creating a powerful "invisible college" that dominates the adoption or the rejection of new scientific models, ideas and methods (p. 205). Keller and Berry (2003) discuss people who influence others and their relatively large numbers of social links. Similarly, Gladwell (2000) describes "connectors" as people with mega-influence on their surroundings not because they are experts but rather because they are acquainted with an order of magnitude more people than others.

An important concept that supports the value of social connectivity is *social capital* (Burt, 1997). Burt demonstrates how the value of social capital to an individual is contingent on the number of people doing the same work. People with high social capital have the advantage of bridging structural holes - disconnections between different "nodes" in a network. The study focused on senior managers and showed how the average value of social capital is high for the managers. Burt argues that people with high social capital stand at the crossroads of an organization and therefore have the option of bringing together otherwise disconnected individuals in the network. Because their contacts are more diverse, they are more likely to be a candidate for inclusion in new opportunities.

From a network point of view, access to a diversity of resources typically requires connection to a diversity of actors. Such status can be obtained by having high Degree

(number of ties) and Betweeness (linking different groups) centralities. These two centralities are typically correlated because people with an extremely high degree have a higher probability of being connected to different social circles. In general, the extent to which someone has an information advantage depends on crossing structural holes, which means linking separate parts of the network (Burt 1992). Put differently, being connected to many interconnected people leads to an information advantage from collecting different bits of information sooner than the average network member (Van den Bulte and Wuyts, 2007).

In the initial stages of product growth, few people inside the social circle of an individual considering adoption have already adopted it. In such cases one may turn to people who may not have the product, but have information from others about it, i.e. those who are widely connected.

Obviously other characteristics of information sources can also impact source attractiveness, e.g., source credibility, language, empathy, and similarity (homophily). We discuss these further in the hypotheses section.

2) The Advice Seeker

A huge variety of individual characteristics have been studied in the diffusion and information processing literatures. Here we focus on innovativeness and expertise.

Innovators often have a greater need for a product and/or are less risk averse. For them, the benefits of a new product outweigh the risks associated with it and hence they are more motivated by its advantages than concerned with problems that may arise. By contrast, less innovative individuals are more likely to be concerned about how to, and whether they can easily, use a new product than its most advanced features.

It is believed that adopters seek guidance from innovators who are also opinion leaders, and whose influence lies in their tendency to spread information by word-of-

mouth (Perreault and McCarthy, 1996). This view is supported by Rogers, who suggests that early adopters show a high degree of opinion leadership (Rogers, 1995, p. 274). Indeed, Midgley and Dowling (1978) defined innovators as those who are prepared to adopt an innovation without personal or social support.

However, there is evidence of limited communications between early adopters and less innovative consumers. Moore (1991) was one of the first to suggest that a discontinuity exists in the diffusion process after about 16% of the population adopts an innovative product. The contagion process slows at this point because later adopters (usually called the main market) are reluctant to rely upon early adopters for information. He argued that at least for high-tech products, early adopters have limited influence over those who have yet to adopt the product (Moore, 1991; 1995). In high-tech markets, a common premise is that adopters in the early market are meaningfully different from main market adopters, and thus require a significantly different product and / or marketing strategy. Early adopters are often characterized as technophiles, fascinated by cutting-edge technology and applications, while main market consumers are described as more utilitarian, risk averse and value conscious and view learning about new products as a burden.

This view is supported by the existence of segments of adopters that differ in their inclination to adopt new concepts and innovative products (see, for example, Goldenberg, Libai and Muller, 2002; Lehmann and Esteban-Bravo, 2006; Tanny and Derzko, 1988; Rogers, 1995, Van den Bulte and Joshi, 2007). A fundamental characteristic of this dual market is strong word-of-mouth effects *within* each market, and weaker communication ties *between* them. Both Van Den Bulte and Joshi (2006) and Lehmann and Esteban-Bravo (2006) include two adopter segments. The first

segment, influentials, affects the second segment, imitators, but adoptions by imitators do not affect influentials.

3) The Product (product innovativeness)

Perceived self-efficacy affects many behaviors (Bandura, 1997), including innovation adoption (Bandura, 1986). Competency requires not only skills, but also belief in one's abilities to use those skills. Modeling influences must, therefore, be designed to build self-efficacy as well as convey knowledge and rules of behavior. Multiple modeling can increase adoptive behavior (Bandura, 1986). If new products are highly conspicuous and similar to current ones, they can be adopted directly without requiring interaction among adopters. However, when new products are difficult to understand and use, they receive more consideration due to usage difficulties and risks (Tornatzky & Klein, 1982). In such cases people are likely to search for information.

Products differ on multiple dimensions including complexity and whether they are hedonic or utilitarian. Here we again concentrate on the fundamental aspect of newness. Discontinuous (really new) products often involve large differences in both performance and usage skills vis-à-vis the products they replace. Research shows that more innovative products elicit greater levels of w-o-m than less original products (e.g. Bone 1992; Feick and Price 1987). In this case a reliable recommendation could come from someone who already has the new product, and therefore can share the problems, risks, and skills that have to be developed in order to properly use the new product.

Product complexity, which is related to difficulty of use, increases perceived consumer risk and hence the efforts in and investments required for the acquisition of operating skills (Davis, 1989). Hoyer (2001) has shown that when a product is more complex, novel attributes reduce the propensity to adopt it. Therefore consumers

engage in risk-reducing information seeking (see Arndt, 1967) concerning product use. In this case experts may not be their best information source because of the communication and knowledge gaps between them and the rest of the population.

4) Information Needed

The type of information needed may also influence choice of information sources. While many categorizations are possible, here we focus on two types of information. Performance characteristics and technical specifications are important in many categories (e.g., memory capacity in PC's). They also are more easily understood by people with greater experience and expertise. By contrast, basic issues involving operation and use (e.g., how to establish a wireless connection) and the difficulty thereof are also important, especially to less experienced users (e.g., first time buyers or for radically new products). In general, we expect experts to be more interested in technical information and non-experts to be relatively more concerned with basic questions about usability/ease of use.

To summarize, the basic premise of this work is that how desirable a human information source is depends on four major categories of variables: characteristics of the potential sources, of the advice seeker, of the product category, and of the information needed (see Figure 1). Because information search is costly, we expect individuals will be selective in choosing whom they chose to seek advice from.

Hypotheses

This section presents the rational behind a set of hypotheses about how advice seekers in the context of innovation choose a human source based on traits of the source (i.e., individuals who are high on technical expertise or social connectivity), the advice seeker's innovativeness, product innovativeness, and information needed. We highlight potential differences by comparing two hypothetical sources:

individuals who are high on technical expertise but low on social connectivity and individuals who are low on technical expertise but high on social connectivity.

a) Type of knowledge

Experts are often defined as those who possess "both knowledge and experience in applying knowledge to a variety of problems within a domain" (Hinds, 2001) . Novices, on the other hand, may have only a limited amount of experience in a domain and are less proficient in performing tasks within it. Comparisons of experts and novices across a variety of domains have yielded similar conclusions (Ericsson and Smith, 1991): when experts are faced with a task within their domain of expertise, they tend to automatically retrieve a solution. Ignoring advisers that are both expert and socially connected, it is plausible to assume that experts have greater technical knowledge which is essentially facts on product features and attributes. Socially connected individuals, however, are generally not experts and their information consists of what they have heard from acquaintances about usage experiences and problems.

b) Communication Style.

Some individuals communicate in simple language, others in technical "code" (e.g., IT specialists, medical doctors). While this is fine with and efficient for other experts, it is not for non-experts, who may not understand the language, terms, and implications.

Experts' knowledge in their domain is more accessible in comparison to novices' (e.g., Johnson et al., 1981). Experts' memory and response times for problems within their domain are far superior to those of novices, and experts' processing of problems within their domain may become virtually automatic (e.g., Reingold, Charness, Schultetus, & Stampe, 2001). Their knowledge is organized with a great degree of connectedness and cross-referencing of concepts, forming a cohesive structure

(Bedard & Chi, 1992). New information within the problem domain is quickly and effectively integrated with the existing body of knowledge (Patel & Groen, 1986).

c) Similarity.

It is logical to assume that individuals trust information from peers more. A related concept is homophily, the degree to which pairs of individuals are similar in terms of certain attributes. (Rogers 1995). Brown and Reingen (1987) argued that homophily, although related to tie strength, is a different construct and showed that it is a major factor in information flow. Homophily fosters trust and reciprocity: it easier to trust someone who is similar and hence solicit information from them.

d) Empathy.

Especially when dealing with uncertainty (which new products inherently have), individuals appreciate a sympathetic person to talk to. When asking for advice, it is important to the advice seeker to know that the adviser can understand their problems and needs, and "tailor" advice to them. Granovetter suggested (1973) that four dimensions comprise this construct: time spent, emotional intensity, intimacy, and reciprocity. Although empathy does not directly determine tie strength, it is plausible that it contributes to all four dimensions. An optimal fit occurs if the adviser provides the right knowledge, using a similar language, has a similar set of needs and talents, and is empathic to the specific needs of the advice seeker.

The main focus in this paper is which type of person a consumer will approach (and rely on) for information about new products, as well as on how this depends on both the type of the product and the type of consumer. When faced with a new product, a major question is how to use it and, more specifically, whether its use is compatible with past usage patterns. For product modifications in an existing category, how to use it is obvious and incompatibility is not a serious issue. Consequently, for product modifications the decision to adopt will rest primarily on

the product's (relative) advantages. By contrast, for a substantially (really) new product, consumers may not be sure what to use it for, much less how to use it. They may also suspect that their lack of knowledge and skill reduces its utility, especially for a complex/really new product. Technical experts are very good with product details but less aware of usage difficulty and may communicate through technical language full of terms few regular people understand.

Thus, our first hypothesis is:

H1: For more innovative new products, the expertise of an information source becomes less important.

Turning to the advice seekers, the fact that people differ in their innovativeness may lead them to seek different kinds of information. Innovators are less concerned with technology risks, and may have enough confidence in their own skills and knowledge so they are mainly interested in the new benefits or attributes a new product has to offer. If consumers are less skilled, their lack of understanding may decrease a product's utility. While people who are less innovative also are interested in benefits, they need information not only about a product's capabilities but also about the interaction between themselves or people like themselves and the product.

Hauser, Urban and Weinberg (1993) suggested that when perceived risk increases, consumers increase information search to reduce uncertainty. Therefore products that have attributes that are hard to understand or are associated with a high risk level will generate more w-o-m (Arndt 1967; Bansal and Voyer 2000; Buttle 1998; Smith and Vogt 1995). Unknown or novel product attributes require more skill or learning and hence attract more w-o-m activity (Bone 1992; Derbaix and Vanhamme 2003). Unique benefits of a product also increase w-o-m activity (Sundaram, Mitra, and Webster 1998).

As discussed above, experts are not necessarily a good source for information about product use for less innovative consumers since experts do not understand the problems "ordinary" people face and may not speak a language “normal” people can understand. They are not similar, and only if they are empathic will they bridge the barrier and be trusted. Therefore for *radical* innovations, less innovative consumers will reduce their reliance on experts' advice. A socially connected source, however, may have exactly the information novices need (usage experiences, problems etc.). Because they have multiple connections they may be more empathic. Further, they are probably not experts, and thus more similar to the advice seekers than experts. In addition, the greater the level of difficulty of a task, the greater the importance of affective cues in the decision process (Duhan, et al, 1997). Socially connected people seem to be better sources for affective cues, and their importance is therefore higher when a radical product is under consideration.

When an innovation is incremental, i.e. based on current products or technology, risk and the need for learning new skills are lower and the differences between experiences of using the new product and the current one are minimal and more predictable. Therefore less innovative consumers are likely to be less concerned about risks, uncertainties, and knowledge compatibility than in the case of a radical innovation. Because of the simplicity of the product, communication problems are less serious, and so is the lack of similarity. In such cases, an experts' advice may be more desirable because it contains details about new features and their advantages.

Our second hypothesis is therefore a 3 way interaction:

H2: Innovators will prefer to consult with experts for both radical and incremental innovations. However, less innovative consumers will prefer to consult with socially connected individuals in the case of a radical innovation and experts in the case of an incremental innovation.

Information acquisition research (e.g., Biggs, Bedard, Gaber, & Linsmeier, 1985; Creyer, Bettman, & Payne, 1990; Payne, Bettman, & Johnson, 1988; Payne et al., 1993; Redd, 2002; Sundstrom, 1987) posits that decision-makers actively consider the costs and benefits of various decision strategies, and attempt to select the strategy that provides the highest accuracy for a given effort level. As decision tasks become more complex, decision-makers choose strategies to lessen the cognitive effort required while approximating the accuracy level of more accurate and effortful strategies (Payne et al., 1993).

Less innovative consumers are generally aware of their shortcomings and lower level of technological training and skills. For them, those attributes that require learning and skill development demand more attention, and the complexity of a new product is driven mainly by what they have to do in order to use it. A less knowledgeable user may not know how to press the right buttons or how to set the right levels of each attribute. In the extreme, they may "get stuck" because there is a mismatch between their skills and those that are needed to properly use the product. For example, if they do not know how to set up a Palm navigator, or how to install the right map on it, they won't be able to use it.

For information about usage skill attributes, it can be pointless for non experts to seek advice from experts because the latter do not comprehend their lack of skill. For information on such attributes, social connectors may be more useful because they may both have a similar skill level and the required information about usage problems. By contrast, for attributes that are factual product traits (e.g., speed of a computer), experts are the preferred information source. As before, innovators are expected to prefer experts for both types of attributes.

Our last hypothesis is therefore a complex one:

H3a: In the case of a radical product, for information about attributes that require active consumer involvement and skill to use, less innovative consumers will prefer to speak to individuals who are high on social connectivity. For information on attributes that do not require skill or active involvement, even for a radical product, all consumers will prefer to speak to individuals who are high on expertise.

H3b: Innovators will consistently seek information from individuals who are high on expertise.

Study 1 provides, through a meta analysis, some evidence on how the importance of product knowledge varies across product categories using existing results. In Study 2 we examine how different information needs impact on the desirability of seeking information from different information sources. Study 3 examines the impact of individual and product innovativeness on advice seeking in a lab setting. Study 4 replicates Study 3 using an Internet panel. Finally, Study 5 focuses at the specific attribute level, explicitly comparing those related to operating skills with those that indicate performance futures.

Study 1: A Meta analysis of the Relation between Expertise and Opinion Leadership

The purpose of the study is to show that when product innovativeness is increased, expertise becomes less important (H1). Given the limited literature on advice seeking for new products, we examine the related literature on opinion leadership. Past research has reported positive but widely varying correlations between opinion leadership and product knowledge, ranging from .17 to .87. We performed a small meta- analysis to try to uncover determinants of this variation.[1]

Data: The ABI Inform and Psychlit indices were used to identify studies that linked expertise and opinion leadership. First we searched for papers using the phrase opinion leader or opinion leadership. From these we identified papers that reported the correlation between opinion leadership (which mainly used a self designation

[1] When performing the meta- analysis we use only the overall correlation reported at the category level. The range in the correlations in Table 3 is less than .17 to .87 because the Table reports study averages and not more disaggregate correlations.

scale) and product knowledge (in two cases the scale was labeled "product awareness" but examination of the items revealed they fit well with the more general scale of product knowledge). Twelve articles passed the screening criteria. Overall we have 19 correlations representing 4570 individual observations. (*See Table A1in the appendix for editors and reviewers*).

Results

The average correlation between opinion leadership and product knowledge was .51, with a 95% confidence interval of .44 to .58. The Q value (201.60, df = 18) and the var(e) to var(r) ratio (9.4%) suggest (following Hedges and Olkin, 1985, Hunter and Schmidt, 1990) that the observed variance cannot be attributed solely to random sampling error, and that there are possible moderators for the correlation between the two constructs. We assessed the impact of required skill for usage because it is a key construct in our theory. To account for category differences, we chose four general variables to serve as co-variates. Specifically, we had judges code the product categories studied on five variables:

1. required skill for usage: the skill required to start and use or operate the product (0 = low, 1= high)
2. visibility of the product while in use (0 = low,1= high)
3. risk of making a wrong decision (0 = low, 1 = high)
4. hedonic vs. non hedonic products (0 = non hedonic, 1= hedonic)
5. durables vs. non durables (0 = non - durables, 1- durables)

As an example, wine was classified as a product that does not require skill that is consumed in social occasions (i.e. visible) and computers as products that do require skill but are not used in social settings. The coding was performed by three marketing PhD candidates who were studying new product development and innovation. The agreement level between judges was high. Disagreements were resolved through discussions.

The simple correlations between the five variables with the correlation between opinion leadership and knowledge are reported in Table 1. Some sizeable correlations emerge even though the five variables are binary. Basically, opinion leadership was less related to knowledge for categories requiring skill, involving risk, and for durable goods and more related for hedonic goods.

Insert Table 1 about here

A regression analyses was performed with the correlation between opinion leadership and product knowledge as the dependent variable and two dummy independent variables: the required skills to use a product and visibility (which is highly correlated with and hence a proxy for risks, non-hedonic, and durable goods and was chosen to represent the factor that captured these four highly correlated variables). The regression had an adjusted R^2 of .46. Interestingly, both requires new skills (standardized beta = - .75) and visibility (.49) were significant ($p < .01$). Expertise is less important when a product involves usage skills. The positive sign of visibility suggests that when product use is more easily observable and hence the information that a social opinion leader can offer is less unique, specific features and performance, the kind of information offered mainly by experts, become more desired. These findings thus provide some support for H2.

The goal of the next four studies was to examine the effect of a product's innovativeness and consumers' innovativeness on which type of opinion leader will be sought for their advice. While none of these studies is on its own conclusive, in combination they provide good support for the hypotheses.

Study2: Type of Information Sought

The purpose of this study is to examine whether people who are socially connected are perceived of as good information sources and, if so, for what kind of information. We also look for differences between more innovative and less innovative advice

seekers. We suggest that information about experience with the product and information that better fit the advice seeker is likely to be associated with people who are socially connected.

Method

Ninety five students (52% male, mean age 35) volunteered to participate in this study. Participants were individuals who work in a city who were intercepted during their lunch break. Participants were randomly assigned to one of the two conditions in a between subject design based on the type of information source (an expert vs. a socially connected individual). Each participant read a scenario in which they were told to imagine they were considering purchasing a new upgraded version of the software they already have (e.g., Windows or Office). The new version has some new features but has a look and user interface similar to the software they currently use. Among other things, the software combines anti-virus with anti-spam features and prevents spam by identifying the writing style of the senders.

Respondents then received a description of either a socially connected person or an expert they could consult with before making a purchase decision. The expert description was: "Dan is an expert on technology. He is well informed regarding new developments and products in the electronics' market, as well as with the products' technical details and their operation. People often consult with him for assistance in understanding technical aspects of electronic products".

The socially connected person description was: "Dan is a sociable person who has a wide circle of friends and tends to converse with them on various subjects, but especially new products available in the market. Because Dan likes talking about these things and knows a lot of people, he has a good sense of what people like as

well as what they complain about. His friends often come to him for advice, partly because he is familiar with other people's experience with new products".

Each respondent indicated on a 1-7 scale (1 "not at all" to 7 " to a very large extent") the extent to which four sentences described the potential information source: can provide information about people's experiences with the product, can provide advice which applies specifically to you, can understand your needs and can relate to your needs when providing advice.

The level of innovativeness of the participants was assessed using three questions adopted from the innovativeness scale of Goldsmith and Hofacker (1991). The full list of questions is given in Appendix 1.

Results

The convergent validity of the four ratings of the information source was high (alpha =.80), and they were averaged to define a construct we label as "relevant advice". The three innovativeness items were averaged as well (alpha = .88). We used a median split to define high vs. low innovativeness. In order to test the effectiveness of the manipulation, we had a separate sample of 26 rate six products (those used in Studies 2-4) on product innovativeness and an "is the product radical" question on 7 point scales. The mean differences were 1.42 and 1.58 respectively, both significant at the .01 level which indicates that the manipulation was successful.

A two way ANOVA was run with the relevant advice score as the dependent variable and the type of information source (socially connected vs. expert) and innovativeness of the respondent as independent variables. As can be seen in Figure 2, there is a significant crossover interaction ($F(1, 92) = 5.4$, $p = .02$). Less innovative individuals perceive the socially connected information source to have more relevant

advice. On the other hand, more innovative people believe experts have more relevant advice.

Insert Figure 2 about here

Study 3: Which Person's Advice is Preferred?

We examine how a product's innovativeness as well as the innovativeness of an individual influences whom a person prefers to consult with. According to the hypotheses, people from the mainstream market (who are less innovative) will prefer to consult with an expert before making a purchase decision when the new product is an *incremental innovation* and with a social information source when the new product is a *radical innovation*. We also expect that people who are innovators will consistently prefer to consult with experts.

Method

Ninety seven students (65% male, mean age 33) volunteered to participate in this study. As in study 2, participants were intercepted during a lunch break. Participants were randomly assigned to one of the four conditions in a between subject design based on product newness (radical vs. incremental) and the information source (expert vs. socially connected individual). Each participant read a scenario in which they were told to imagine they had just been assigned responsibility for a new project in the company they work for that demands extensive use of e-mail. Each participant then received a description of either a radical or incremental new e-mail software product that they could use. The incremental software combines anti - virus with anti - spam features and prevents spam by identifying the writing style of the senders. The radical software enables an automatic reply according to specific characteristics of the sender and message that could be defined in advance and can also automatically schedule meetings and notify the attendees.

Respondents then received a description of either a socially connected or expert person they could consult with before making a purchase decision. The descriptions were based on the items in Study 1. The expert description was: "Simon is an expert on technology. He is well informed regarding new developments and products in the electronics' market, as well as with the products' technical details and their operation. People often consult with him for assistance in understanding technical aspects of electronic products".

The socially connected person description was: "Dan is a sociable person who has a wide circle of friends and tends to converse with them on various subjects, but especially new products available in the market. Because Dan likes talking about these things and knows a lot of people, he has a good sense of what people like as well as what they complain about. His friends often come to him for advice, partly because he is familiar with other people's experience with new products".

Each respondent answered three questions about the extent they would like to consult with the person described on a 7 point scale (1 "not at all" 7 "to a very large extent"). The level of innovativeness of the participants was again assessed using three questions adopted from the innovativeness scale of Goldsmith and Hofacker (1991). The full list of questions is given in Appendix 1.

Results

The convergent validity of the four constructs was high (propensity to consult, alpha = .93; product's innovativeness, $\bar{r}$ =.64; product requires skill, $\bar{r}$ = .81; participant's innovativeness, alpha = .81). The radical product was rated as more radical than the incremental one (M = 3.71 vs 3.19, t (94) = 1.79, p = 0.04 one-tail). A larger difference between the two products was found on the dimension of requires skill with the radical product perceived as requiring significantly more skill (M = 4.6

vs. 3.05, t (94) = 5.33, p<0.01). As a manipulation check, twenty six different individuals were asked to rate six products, including the two used in this study, on innovativeness and the extent to which each product is radical. The mean differences for the two products used in this study are 1.42 for innovativeness and 1.58 for "is the product radical", both significant at the .01 level.

A two way ANOVA was run with desirability to consult as the dependent variable and the type of person (socially connected vs. expert) and innovativeness of the product (radical vs. incremental) as independent variables (Figure 3a). Overall the expert was more desirable to consult with than the socially connected person (p =. 08). No main effect for product innovativeness was found (p =.7). More important, in accordance with our hypothesis, a significant interaction of product and type of person was found (F (1, 96) = 8.16, p =.05). Preference to consult with the expert is significantly larger when the product is an incremental innovation and disappears for the radical one. Put differently, for radical products the desire to consult with a socially connected individual goes up and the desire to consult with an expert goes down.

We also tested for a three way interaction of information source x product innovativeness x innovativeness of the respondent. The sample was split at the median in terms of respondent innovativeness. Consistent with our hypothesis, the three way interaction was significant, (F (1,96) = 6.9, p =.05). Less innovative consumers (Figure 3b) prefer to consult with an expert for an incremental product and with a socially connected person for a radical product. More innovative individuals (Figure 3c), however, consistently prefer to consult with experts who seem to be "their kind of people".

Insert Figure 3 about here

Study 4: A Replication

The purpose of this study is to extend the earlier results using a different respondent pool and a more radical product. To enhance external validity, we used subjects from an Internet panel. A mixed between and within subjects design was used. Similar to Study 3, participants were presented with either a radical or incremental product and asked to rate the extent to which they would like to consult with both types of information sources.

Method

Six hundred adult participants from a large country in Europe (50% female, mean age 30) were selected by a marketing research firm (Brain Juicer) out of their regular panel. Subjects were paid $2 for their participation. Participants were randomly assigned to one of the two conditions based on product newness (radical vs. incremental).

Each participant read a scenario in which they were told to imagine they had just been assigned responsibility for a new project in the company where they work. The project requires a great deal of typing on a computer and for that purpose they are considering purchasing a new keyboard. Each participant then received a description of either a radically or incrementally new keyboard. The radical product was described as "an IBM glove-like keyboard that recognizes finger movement, transfers it to the correct letters and sends the letters to the computer". The incremental product was described as an IBM three-dimensional, wave-shaped keyboard, organized in three different groups of keys, allowing for more convenient hand positioning, reducing palm fatigue and enabling higher typing speed. (Although the radical product does exist, it is not known to the general public.)

Respondents then received a description of both a socially connected and an expert person they could consult with before making a purchase decision. The descriptions were very similar to those used in Study 3.

Each respondent answered questions about the extent they would consult with each person described and how helpful they expected their advice would be on a 7 point scale (1 "not at all" to 7 "to a very large extent"). In addition, there were two questions regarding the extent to which the product is radical. Finally, respondents rated themselves on scales to assess their innovativeness using the same scales as Study 3 (see Appendix 1).

Results

The convergent validity of the innovativeness scales was high (product innovativeness r = .61; participant's innovativeness alpha = .84) so we again used the averages of the relevant items to measure the constructs. For the dependent variable we used the average of two questions that asses the participants' desire to consult with the person ("how much time would you invest in consulting with?" and "how helpful do you think the advice would be related to?, r = .67).

Twenty six different respondents rated the products in terms of innovativeness and radicalness. The mean difference was 3.31 for innovativeness and 2.73 for the "is the product radical" question, both significant at the .01 level which indicates the manipulation was successful.

Because of the tendency to consult with both types of people (as demonstrated in Study 1), those who do not consider a product to be radical or incremental may not have a strong preference for either type of information source. Here we focus analysis on respondents who considered the radical product most innovative (top 20%) vs those who considered the incremental one less innovative (lowest 20%). (We also performed the analyses for the entire sample using a continuous variable for

innovativeness. While directionally consistent, this result no longer was statistically significant.)

A mixed between (i.e., product newness)-within (i.e., type of information source)-subjects ANOVA was conducted, using desire to consult with the information source as the dependent variable. The results are presented in Figure 4a.

Insert Figure 4 about here

Once again a main effect was found for the type of information source. Consistent with Study 3, people rated the expert more desirable to consult with than the socially connected individual ($p = .01$). However, there was a main effect for product innovativeness as well ($p < .01$). Perhaps surprisingly, respondents intend to spend more time consulting in the case of an incremental innovation.

In accordance with our hypothesis, a marginally significant interaction of product and information source was found ($F(1, 296) = 2.84$, $p = .08$). As in Study 2, the desire to consult with an expert is significantly higher than the desire to consult with a social connector when the product is an incremental innovation, but not when the product is radical.

Next we tested for a three way interaction of information source x product innovativeness x innovativeness of the respondent. The sample was split at the median in terms of respondent innovativeness as in the previous study. Consistent with our hypothesis, the three way interaction was significant ($F(1,294) = 3.6$, $p = .03$). Less innovative consumers prefer to consult with an expert for an incremental product but not when the product is radical (Figure 4b). However, more innovative individuals (Figure 4c) consistently prefer to consult with experts ($F(1, 128) = 3.6$, $p = .06$).

Study 5: Information Source Preference by Type of Attribute

The results so far have supported Hypotheses 1 and 2. More innovative consumers prefer to consult with experts, but less innovative consumers prefer to talk to socially connected individuals when a product is radically new and experts when a new product is incremental. This study addresses Hypothesis 3 which suggests that less innovative consumers make their decisions about the person to consult with based on the required knowledge and skills to operate the product.

To confirm that the choice of which types of person to consult with depends on the type of information they possess, we asked a sample of 36 individuals to indicate whether they would prefer to consult with an expert or social connector for 13 different types of information on a 1 to 7 scale where 7 means they prefer to consult with a social connector (described as one who knows a lot of people). Unsurprisingly (Table 2), the respondents overwhelmingly prefer an expert for information on technical details (mean = 1.75) and advantages and disadvantages (2.97) and social connectors for information about others' satisfaction (5.69) and experience (6.03).

Insert Table 2 about here

The results suggest that indeed different types of advisers are preferred for different types of information, and therefore it is plausible that the preference to consult with them will vary based on the required information.

Method

One hundred and fifty one participants (45% female, mean age 26) were recruited from an MBA program to answer a pen and paper questionnaire. Subjects were not paid for their participation, and did not receive any course credit. Participants were randomly assigned to one of the two conditions based on product newness (radical vs. incremental). The product category used was personal computers. The selection of the radical product was based on a preliminary study which assessed the innovativeness

of 5 different new products in the computer category. Similar to Study 3, the information source (expert vs. social connector) was a within subjects factor. However, in this study participants were asked separate questions about whom they would prefer to consult with for six different product attributes. The attributes were selected through a preliminary study to be of two types: 1) attributes that specifically require set up or active involvement and usage skills (ability to make 3D presentations, online support, and the design of the keyboard and screen and their effect on the hand and eye fatigue) and 2) attributes that do not require active involvement (or skills) or set up by the user (memory size, hard disk speed and quality, and the time between failures).

Each participant read a scenario in which they were told to imagine they were working in a Hi-tech firm that had successfully developed a prototype. They were told they had been assigned to make a long and extensive tour in which they would be required to give presentations to potential investors. The respondents were then asked to imagine they had decided to purchase a new laptop in order to be able to also work on other projects during the tour. Each participant then received a description of either a radical or incremental new laptop. This time the product was presented both in a figure and in a verbal description. The radical product (see Figure A1 in appendix A for editor and reviewers) was described as a set of pen-like bars with each bar a different computer component. One bar projects to a screen, another projects through laser beams from a virtual keyboard on the table (the user could punch the virtual keys similarly to an ordinary keyboard). Two other bars function as a hard disk (storage) and as a cpu. The incremental product (Figure A1b) was described as an integration of a laptop and a projector into an "all in one" device, with special

software that helps tuning the projector for efficient presentation on walls or improvised curtains.

Respondents then received a description of both a socially connected person and an expert person they could consult with before making a purchase decision. The descriptions were very similar to those used in Studies 2 and 3.

Respondents next answered questions about the relative extent they would consult with the two persons described on each attribute on a 1-7 scale (1 "person A" to 7 "person B"), where A and B were randomly assigned to the expert or socially connected person descriptions. In addition, respondents rated themselves on scales to assess their innovativeness using the same scales as Study 2 (Appendix 1).

Results

The convergent validity of the innovativeness scale was high (alpha = .0.85) so we again used averages of the relevant items to measure consumer innovativeness. The manipulation check suggested the manipulation was successful; the mean differences of 1.96 for product innovativeness and 2.15 for the “is the product radical” question are both significant at the .01 level.

A mixed between (i.e., product newness)-within (i.e., type of information source)-subjects ANOVA was conducted, using intentions to consult with the information source as the dependent variable. The analysis was performed separately for attributes that require skill (consumer active involvement) and those that do not. We combined each attribute set by averaging results across the 3 attributes. ANOVA was also performed separately for more and less innovative consumers. The results are presented in Table 3.

A main effect was found for the type of information source for those product attributes that do not require consumer involvement or skill. Both innovators and less innovative consumers prefer to consult with experts rather than with social connectors

about these attribute ($p<0.01$ for both). No main effect for product innovativeness was found here.

For the attributes that require involvement and skill, in accordance with our hypothesis a significant interaction of product and type of information source was found ($F(1, 66) = 9.2$, $p < 0.01$). Similar to Study 2, the desire to consult with an expert is significantly larger when the product is an incremental innovation. For the radical innovation, however, less innovative consumers prefer the socially connected person. By contrast, this interaction is not significant ($F(1, 66) = 1.30$, p = n.s) for the attributes that consist of factual information and require no skill or involvement. While innovative consumers had a definite preference for experts for attributes that do not require usage skill, this preference disappears for those attributes that require it.

Insert Table 3 about here

Discussion

This paper has suggested that two different types of information sources exist in the case of innovations: experts (who are high in knowledge) and socially connected individuals. A meta-analysis of past studies indicated that the correlation between knowledge and opinion leadership is lower for more innovative products, supporting this finding

Studies 3 and 4 demonstrated that the innovativeness of a consumer influences the type of person they desire to consult with. Innovators consistently prefer to consult with experts, whereas those who are less innovative prefer to consult with a social connector for more radical new products. Study 5 then demonstrated that preference to consult with an information source depends on the attribute information needed. For radical products, less innovative consumers prefer to consult with social connectors for those attributes relating to usage skills while for factual attributes they prefer consulting with experts.

These results suggest that there are subtle relations involved in how different individuals influence new product adoption. Specifically, characteristics of the new product (radical vs. incremental), the influential (product expert vs. social connector), the consumer (innovator vs. not), and the attribute (technical performance vs. skill required to use) interact to determine influence.

The role of socially connected people has attracted a lot of attention recently (e.g. Watts and Dodds, 2007, Trusov, Bodapati and Bucklin (2008). Watts and Dodds (2007), based on simulation, report cascades of influence can be driven not by hubs (they use the term influentials) but by a critical mass of easily influenced individuals. Nonetheless, they also found conditions in which hubs are disproportionately responsible for triggering large-scale "cascades" of influence. They emphasize that their results do not exclude the possibility that hubs can be important and suggest that examination of the role of hubs requires more careful specification and testing than it has received so far. In a different paper, Goldenberg, Han,. Lehmann and Hong, (2008) show empirically that socially connected people have a central role in market success and in accelerating the diffusion process. Our paper helps explain these results. When a product is less radical, the number of social ties may become less important and the effect of the social connected people on the diffusion process is smaller. However, when a product is radical their advice become more relevant and hence their influence is greater.

Recently Trusov, Bodapati and Bucklin (2008) found that the average individual in an internet social network is influenced by few other individuals and also influences only a few others. In addition, strong heterogeneity was observed with a small proportion of users participating in a substantial share of the influential dyads identified in the network. More precisely, they found some users whose total network

impact is greater by a factor of 8 than that of most others. However, they did not find that having many links (high degree) makes users influential per se. While their research focuses on network activity rather than adoption processes, it suggests that the socially connected may indeed be important for diffusion.

How do socially connected people obtain information on the product in early stages? Goldenberg, Han, Lehmann and Hong (2008) examine a mapped network with multiple documented diffusion processes. One of their hypotheses is that socially connected people who are not innovative will still be among the first to adopt not because of their innovativeness but because they are exposed sooner to the innovation, thanks to their many connections. They show that the socially connected individuals determine product success or failure much more than innovators (who mainly speed up the process). Thus our results here seem to have relevance for the burgeoning research in the social network area.

Limitations

Of course our results are not conclusive. For one thing, we measured desire to consult with information sources rather than actual influence. Further, some covariates may exist which could impact the results. Similarly, given plenty of time and budget, a consumer might want to search for both types of information sources. Hence our results strictly apply only to who they would prefer to speak to first. Also, we have treated experts and socially connected individuals as distinct; clearly, someone could be both an expert and socially connected. Talking to such a person would, assuming they can communicate to a typical consumer, be a dominant solution.

Our findings may not be relevant to all categories. In study 5, even for radical products individual who are less innovative prefer to consult with experts (vs socially connected sources) when the attributes involved did not require much skill to use In

some categories even radical products do not require much skill and the only risk is the cost of the product. For example, having an extremely innovative entree in a restaurant may prove to be a bad decision. Still for this decision, it is less important to consult with a social connected individual because no skills are required during consumption. On the other hand, for electronic / technical product categories experts may be detached from most peoples' tastes and beliefs, and our results should hold. Future research may explore the generalizability of our findings to other categories.

It is also not clear whether the same results would be found in case of services. On one hand many services and products are similar when it comes to requiring skills and innovativeness (e.g., the first online banking systems, new financial tools). On the other hand, services have their own unique characteristics. It is hard to predict what the 3 way interaction demonstrated here will look like in the case of services.

Another limitation is the fact that in all the studies the scenarios focused on information search through personal contact. While this is still a major channel for recommendations, there is growing use of Internet forums and advice from anonymous peers. Internet recommendations in a network has been explored in Godes David and Dina Mayzlin (2004), Trusov, Bodapati and Bucklin (2008); Goldenberg Han Lehmann and Hong, (2008). It will be interesting to see whether cues on expertise vs. social connectivity in the Internet have similar or different effects. Interestingly, both popular sites like Annie's list and components of other sites (e.g., user reactions on CNET) suggest people crave reactions from fellow consumers.

Future Research

Future research may try to tease apart the related reasons someone may want to talk to a social connector including usage skills/procedural knowledge, ease of understanding, type of risk, etc. Another interesting question is whether the source of

advice varies when considering whether the new product should be adopted vs. what specific product version is best.

While we used only one adviser in our studies, most people consult with multiple advisers. An interesting research direction would be to explore the optimal "portfolio of advisers" people would prefer for various situations.

Also, a number of other factors could influence search such as the strength and perceived risk and are fruitful directions for future work. Further, while we addressed who an individual might want to talk to, we did not measure actual influence.

Managerial Implications

Assuming our findings are generalizable, some managerial implications emerge. Recently, word of mouth management has become significant in the marketing efforts of firms (e.g. P & G and Tremors). Locating human information sources and taking advantage of their activities is an interesting strategy. Contrary to the belief that experts lead the adoption process, however, and consistent with the "chasm" view, the main market relies on social connectors for certain types of information. Since blogs serve as de-factor social connectors, they in effect become information sources. In the case of radical innovations that require skill to use, firms should focus on social connectors who serve as hubs for information dissemination about product experiences.

More broadly the value of a customer to the firm is more than the sum of their purchases, it also includes the effect that individuals have on others. Some "influentials" have substantially higher value than previously realized. Our findings suggest that for radical innovations, it may be less efficient to target experts because thy influence more innovative people who may be likely to adopt largely on their own. If firms wish to introduce a radical innovation to the mass market, socially connected people may be better agents.

While the identity of social connectors is likely to be only weakly related to easily observed characteristics such as demographics, our results suggest that efforts to identify them may be worthwhile. While experts are most probably relevant to one or two categories, socially connected people are relevant to many categories. Thus efforts to identify them may provide a resource for future new product introductions. More broadly, we hope this paper influences others to further study diffusion in social networks in general and the role of passive advice givers in particular.

Tables

Table 1:

Correlations with opinion leadership

	Correlation between OL and PK	Requires skills	Visibility	Risk	Hedonic /non hedonic	Durable/non -durable
Average agreement % between judges		**100%**	**76%**	**89%**	**82%**	**86%**
Correlation between OL and PK	1					
Requires skills	-.55**	1				
Visibility	.18	.41*	1			
Risk	-.76**	.82**	.20*	1		
Hedonic /non hedonic	.59**	-.58**	-.03	-.75**	1	
Durable/non-durable	-.53**	.93**	.35*	.75**	-.64	1

** significant at p< .01 level, *significant at p< .05 level.

Table 2:

Preference for social connector vs. expert consultant

Information Sought	**Mean**	**STD**
Technical details	1.75	1.10
Advantages and disadvantages	2.97	1.34
Easy to use	3.42	2.00
Company reliability	3.47	1.80
The consequences of using the product	3.5	1.50
Product reliability	3.69	1.47
Is the product worth purchasing	4.14	1.38
Good places to purchase the product	4.72	1.41
The success of the product in the market	4.86	1.31
Problems with the product	5.33	1.37
How many purchased the products	5.69	1.49
Others' satisfaction from the product	5.69	1.43
Others experience with the product	6.03	1.15

Table 3:

Information Source Ratings by Attribute Type

		Attributes that require skills		***Attributes that do not require skills***	
		Incremental	**Radical**	**Incremental**	**Radical**
Less innovative consumers	Consult with Experts	5.4	5.0	5.9	5.9
	Consult with Social OL	4.9	5.5	4.9	5.4
More innovative consumers	Consult with Experts	5.3	5.2	5.9	6.2
	Consult with Social OL	5.1	5.2	4.7	4.7

Figures

Figure 1

Conceptual Framework: Major Constructs Considered

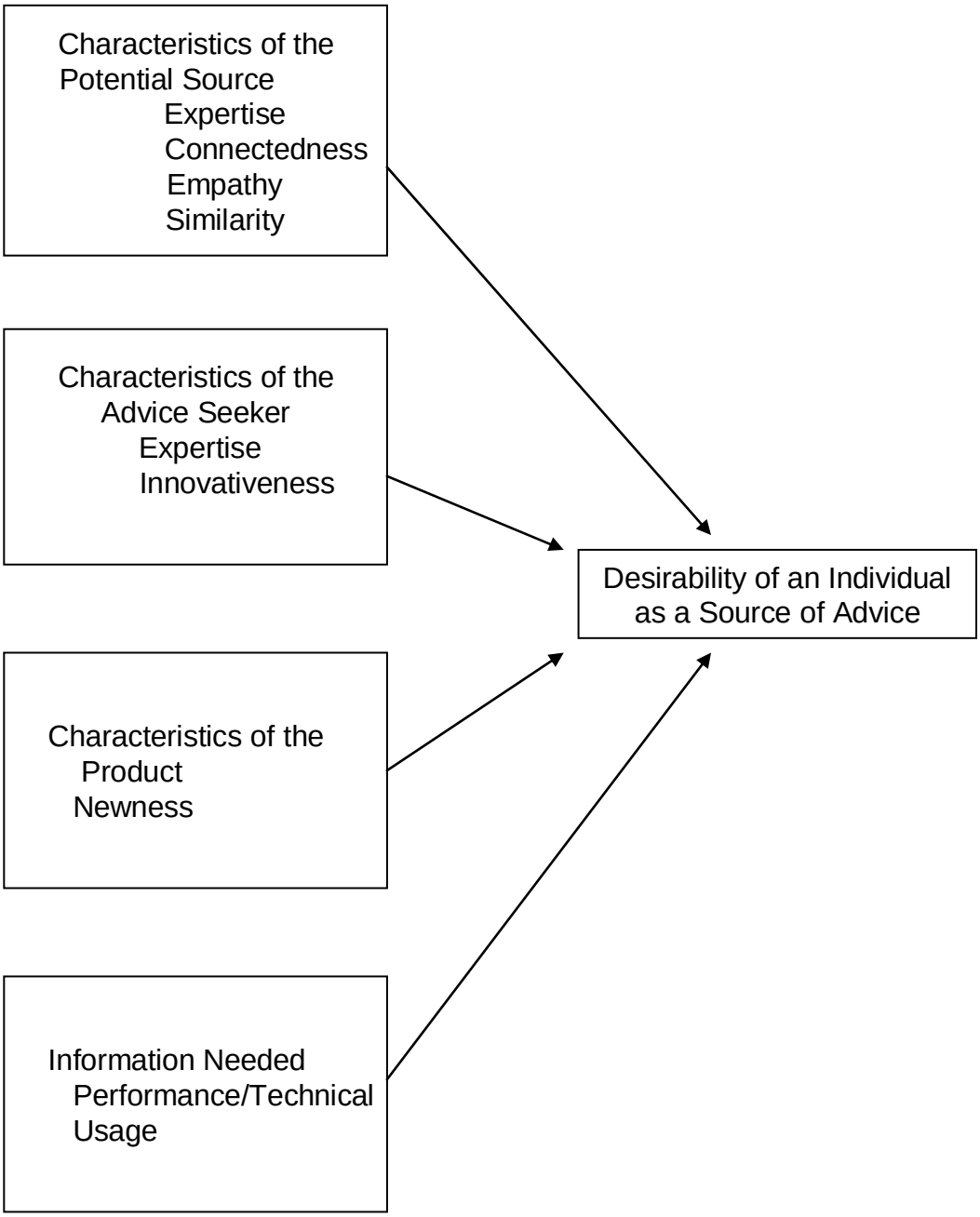
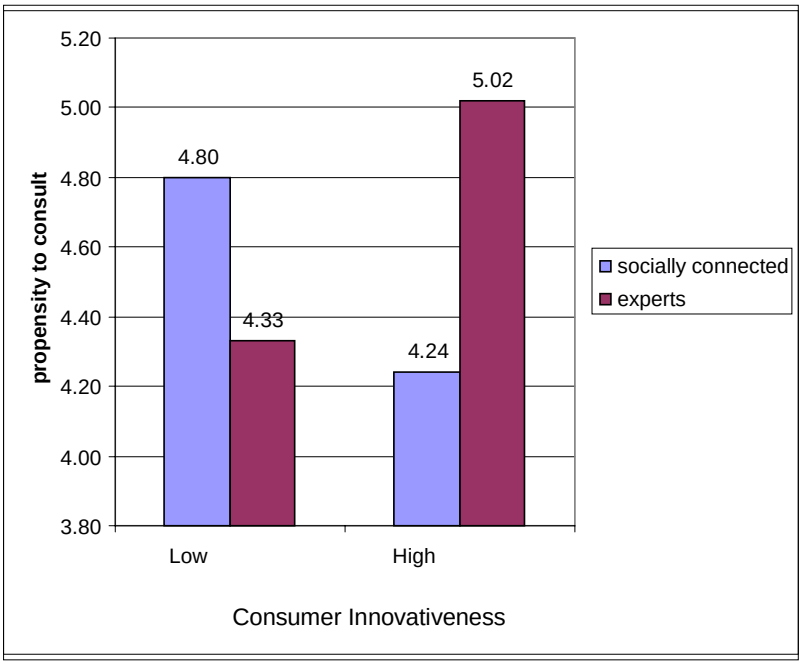


Figure 2:

Relevant Advice Rating vs. Information Source and Product Innovativeness: Study 2



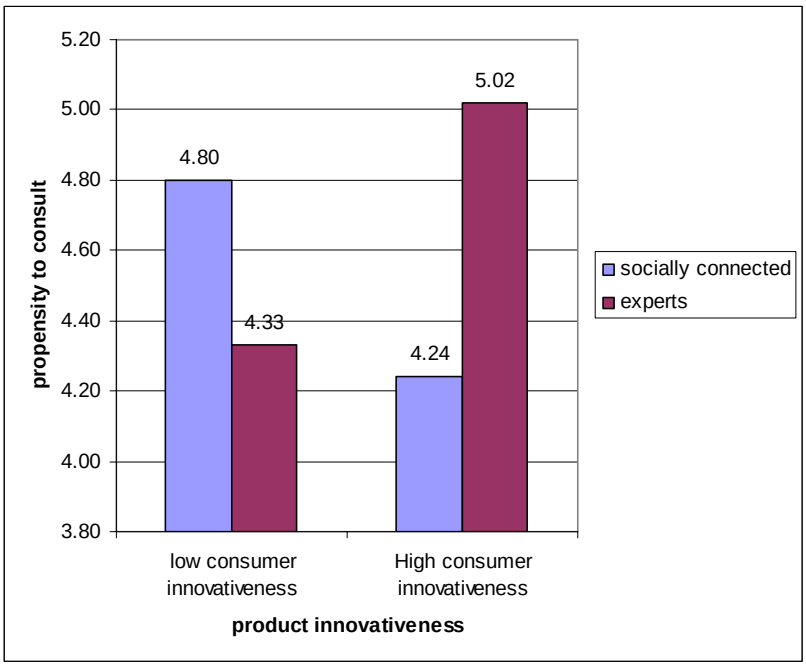
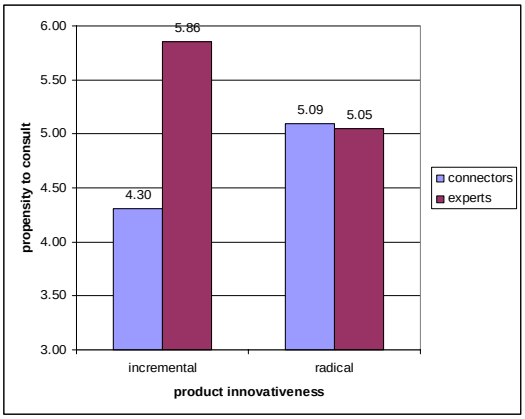
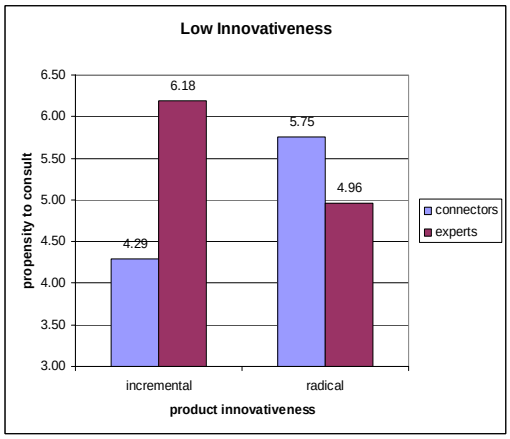


Figure 3

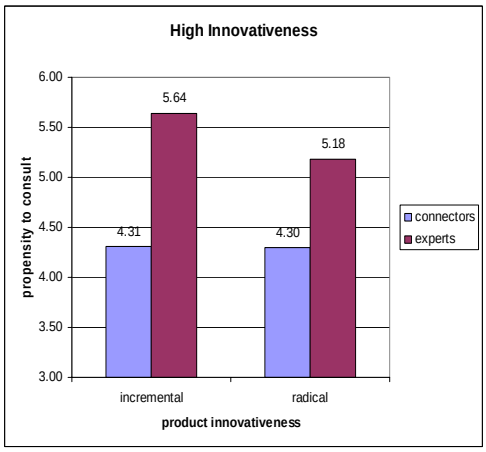
Study 3: Propensity to consult with experts and social connectors



a Total Sample



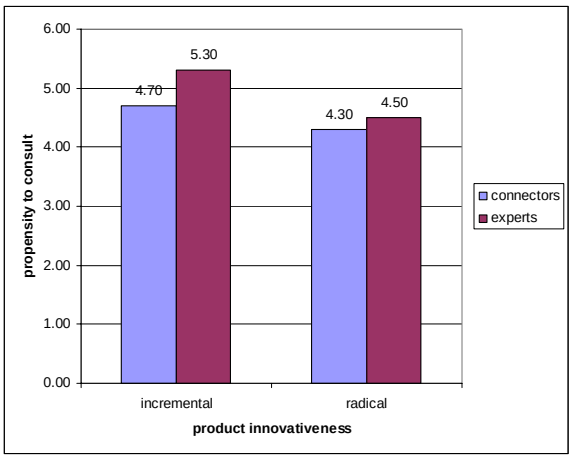
b Low Innovativeness Individuals



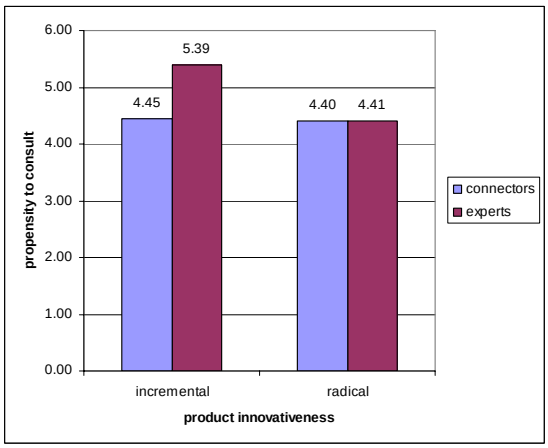
c High Innovativeness Individuals

Figure 4

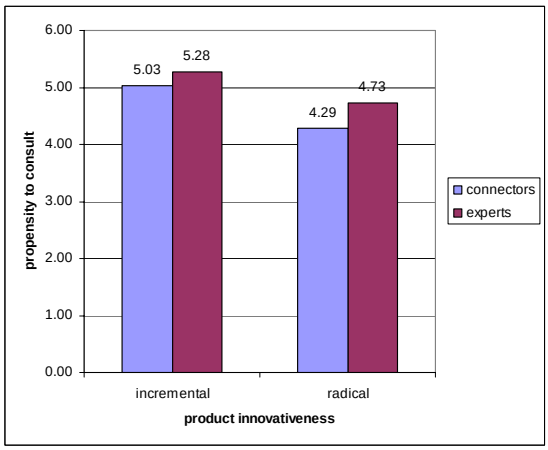
Study 4: Propensity to consult with experts and social connectors



a Total Sample



b Low Innovativeness Individuals



c High Innovativeness Individuals

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Appendix A: Additional material for the editor and reviewers.

Questions used in study 2

Propensity to consult

1. Would you like to consult with X before purchasing the product?
2. Do you think that X can provide relevant information to the decision whether to purchase the product?
3. Do you think that X is a good source of information about the product in compare to other people you know?

Product Innovativeness

4. This product is a radical innovation?
5. This product is novel for this category?

Required skill

6. The product requires skill?
7. I will have to invest (learn) in order to attain the required skills?

participant's Innovativeness

8. In general, I am among the last in my circle of friend to buy a new electronic product when it appears on the market
9. I own few electronic products in comparison with my friends
10. In general, I am among the last in my circle of friend to know the latest electronic product

Alpha values:

Item 1-3: alpha = .93 (want to consult)

Items 6-7: = alpha= .78 r=.638 (product's innovativeness)

Items 8-9: alpha= .89 r= .811(product requires skill)

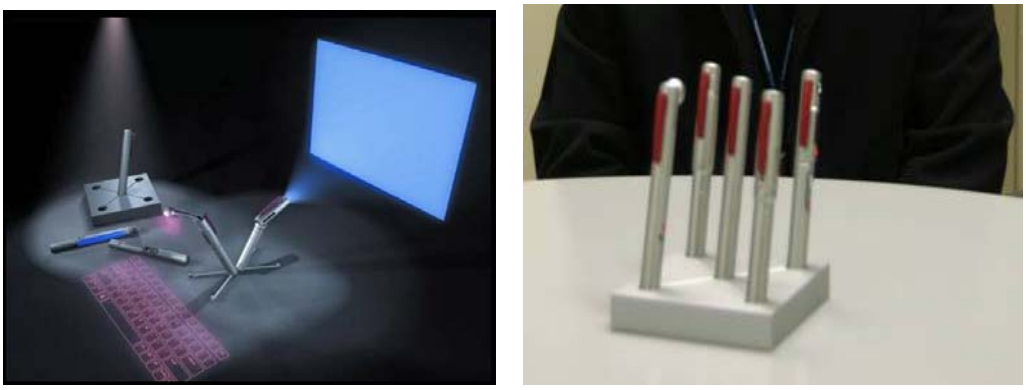
Items 14-16: alpha= .81 (participant's innovativeness)

Table A1

Papers and studies covered in the meta analysis

	Authors (year)	No. of Studies	No. of observations	Sample type	Observed correlation	Product category
1	Chan & Misra (1990)	1	262	undergraduate students	.60	Wine
2	Coulter, Feick & Price (2002)	1	321	adult women	.62	cosmetics
3	Dawar, Parker & Price (1996)	1	619	MBA students	.35	electronic products
4	Flynn & Goldsmith (1999)	5	263	Adult	.74	Wine
5	Flynn, Goldsmith & Eastman (1994)	3	247	business undergraduates	.54	rock music
6	"	4	185	Adults	.54	vacation travel
7	Flynn, Goldsmith & Eastman (1996)	2	263	Students	.59	rock music
8	"	3	391	Students	.69	fashionable clothing
9	"	4	99	adult women	.50	"green"/ environmentally friendly products
10	"	5	127	Students	.50	rock music
11	Gilly, Graham, Wolfinbarger & Yale (1998)	1	94	Adults	.41	VCR
12	"	2	133	undergraduate students	.36	a variety of products
13	Goldsmith & Desborde (1991)	1	187	undergraduate business students	.46	rock music
14	Goldsmith & Hofacker (1991)	2	274	Students	.39	rock music
15	"	3	97	Students	.55	designer fashion
16	Grewal Mehta & Kardes (2000)	1	224	undergraduate students	.22	Cars; computers
17	Myers & Robertson (1972)	1	246	Housewives	.67	home entertainment; household furnishing; household appliances; home cleaning and upkeep; recreation and travel; politics; children's behavior and upbringing; women's clothing and fashion; family medical care; cosmetics and personal care; cooking, recipes and new foods; automobiles;
18	O'Cass (2002)	1	238	Adults	.65	electoral behavior
19	Placek (1974/5)	1	300	welfare mothers	.23	4 birth control issues

Figure A-1: Study 5 Stimuli



a) Radical New Product

b) Incremental New Product