THE USE OF GROUP SUPPORT SYSTEMS IN FOCUS GROUPS: INFORMATION TECHNOLOGY MEETS QUALITATIVE RESEARCH

Esther E. Klein[*]
Department of Business Computer Information Systems/Quantitative Methods
Zarb School of Business
Hofstra University
211 Weller Hall
Hempstead, NY 11549, USA
Telephone: 516 - 463 - 4529
FAX: 516-463-4834
e-mail: *eklein9@aol.com*
OR
acseek@hofstra.edu

Thomas Tellefsen
Department of Business (Marketing)
Graduate Center and College of Staten Island, City University of New York
2800 Victory Boulevard, Room #3N – 211
Staten Island, NY 10314, USA

Paul J. Herskovitz
Department of Business (Law)
College of Staten Island, City University of New York
2800 Victory Boulevard, Room #3N – 206
Staten Island, NY 10314, USA

[*] **Corresponding author**

The Use of Group Support Systems in Focus Groups: Information Technology Meets Qualitative Research

Abstract

This paper explores focus groups supported by group support systems (GSS) with anonymous interaction capability in two configurations: same time/ same place and same time/ different place. After reviewing the literature, we compare and contrast these anonymity-featured GSS-supported focus groups with traditional focus groups and discuss their benefits and limitations. We suggest directions for future research concerning GSS-supported focus groups with respect to technological implications (typing skills and connection speeds), national culture (high and low context; power distance), and lying behavior (adaptation of model of Hancock, Thom-Santelli, and Ritchie [2004], whereby lying is a function of three design factors: synchronicity, recordability, and distributedness).

Keywords: Anonymity; Computer-mediated communication (CMC); Focus groups; Group support systems (GSS); Marketing research; Qualitative research.

1. Introduction

Advances in information technology (IT) and research in computer-supported cooperative work (CSCW)[1] have drastically transformed intellectual teamwork, a staple of today's business environment. In fact, collaborative software has been "identified as an emerging area of importance that will change business practices" (Veverka, 2004, p. T2; see also McGrath

[1] Kline and McGrath (1999, p. 265) have described CSCW thus: "The focus of this field is how technology affects groups that work together — often with groups located in different places and time zones — with the goal of enhancing that work."

& Berdahl, 1998, p. 205). According to Jones and Kochtanek (2004, p, 2), "[c]ollaborative technologies can enable people in distributed environments to work together seamlessly irrespective of location, time or functional area."[2] Such progress is a welcome development as contemporary organizational life is characterized by cognitive work increasingly being conducted in groups because groups "have more resources than do single individuals, and therefore the potential for highly effective performance is very much present in most groups" (Hackman & Kaplan, 1974, p. 461).

However, group interaction is not without its drawbacks, which include "limited amount of time for presenting individual ideas (air fragmentation), domination by one member, reluctance to express ideas due to fear of public speaking or due to evaluation apprehension … [and] normative influence" (Klein, 2003, pp. 92-93). Moreover, research has indicated "that more than half the time spent in meetings is wasted" (Vreede, Davison, & Briggs, 2003, p. 96).

1.1. Group support systems

In order to overcome the problems inherent in group work, various group support systems (GSS), also referred to as groupware (e.g., see Morison, 2004, pp. 137-140), have been designed to assist groups with their intellectual tasks. GSS is an interactive networked computer information system, consisting of software and hardware, that structures, supports, and facilitates group interaction, thereby potentially enhancing intellectual collaborative work, such as issue discussion, idea generation, problem solving, and decision making (Klein, 2000; Klein, Clark, & Herskovitz, 2003; Klein & Dologite, 2000; Kline & McGrath, 1999; Nunamaker, Briggs, Mittleman, & Vogel, 1996/1997; see also Ackermann & Eden, 1994; Adkins, Shearer,

[2] Jones and Kochtanek (2004, p, 2) have observed that "[b]y sharing a common goal in a networked environment, virtual teams can create synergistic relationships and quality output via collaborative knowledge sharing."

Nunamaker, Romero, & Simcox, 1998; Bastress & Harbaugh, 2003, p. 131; Zigurs & Buckland, 1998; Zigurs, Buckland, Connolly, & Wilson, 1999). "The benefit of using GSS stems from three principle features of the technology: anonymity of participation, parallel communication, and group memory" (Reinig & Mejias, 2003, p. 1).

GSS "allows a group of users to collaborate electronically, sharing and updating a common database while allowing for intergroup communications" (Ullrick, 2000, p. 11; see also Ahalt, 2000, p. 1159; Hopkins, 1998, p. 96, note 5). Vreede, Davison, and Briggs (2003, p. 96) have described GSS thus: "With GSS, people share, organize, and evaluate concepts, make decisions, and plan for action. GSS users may work face-to-face or across the globe. Their contributions, anonymous or identified, are available for later recall [via group memory embodied in transcript]."

By allowing parallel communication, GSS permits group members to input their comments simultaneously. Rodgers, Dean, and Nunamaker (2004, p. 3) have explained the advantages of parallel communication thus:

> GSS allows people to work in parallel and to see the contributions of others (group memory). In contrast with manual face-to-face meetings where only one person can speak at a time and other participants listen and wait until the speaker is finished, GSS makes parallel communication possible by allowing participants to type comments at the same time into a shared electronic workspace.

The capability for group members' contributions to be unidentified, referred to as GSS anonymity, is a key feature in many implementations of GSS and confers a number of advantages:

> With the anonymity component of a GSS, the fear of embarrassment, social disapproval, and the sanction of an ill-received remark may be greatly reduced. Anonymity thus enables group members to speak freely and contribute ideas openly and honestly without fear of direct reprisals, especially when participants feel concerned about their personal or professional security. In addition, anonymity promotes the honest, objective evaluation of contributions based solely on the merit of the idea and not the author. Consequently, participants should generate, and better evaluate, more ideas and make better decisions. (Wilson & Jessup, 1995, pp. 212-213)

Although GSS first emerged two decades ago (Klein, 2003; Vreede & Bruijn, 1999; Vreede, Jones, & Mgaya, 1998/1999) and has been adopted by an increasing number of organizations (Dennis & Garfield, 2003; see also Briggs, Nunamaker, & Sprague, 1997/1998), it is only recently that a number of researchers (e.g., see Clapper & Massey, 1996; Debreceny, Putterill, Tung, & Gilbert, 2002; Easton, Easton, & Belch, 2003; Franklin & Lowry, 2001; Jones & Miller, 1997; Klein, 2002, 2003; Kontio, Lehtola, & Bragge, 2004; Parent, Gallupe, Salisbury, & Handelman, 2000; Soutar, Whiteley, & Callan, 1996; Sweeney, Soutar, Hausknecht, Dallin, & Johnson, 1997) have attempted to expand the domain of GSS to qualitative research by calling for or endorsing the adoption of GSS to support focus groups, which are moderator-led interactive discussion groups (see below). An aim of this paper is to advance these efforts by reviewing the literature and suggesting directions for future research.

1.2. Traditional focus groups

Social scientists and market researchers have used a variety of qualitative research methods, including focus groups (Bruseberg & McDonagh-Philp, 2002; McDonagh-Philp, Denton, & Bruseberg, 2000), in order to help them "understand people and the social and cultural contexts within which they live" (Myers, 1997, § 3, ¶ 4). Qualitative research methods "are those in which the observed data exist in a nonnumerical form, such as reports of conversations in participant-observer research and ethnographic research" (Rosnow & Rosenthal, 1999, p. 81), and "involve a small number of respondents who provide descriptive information on their thought and feelings not easily projected to the whole population" (Dillon, Madden, & Firtle, 1987, p. 131). "[T]he goals of qualitative research involve understanding a phenomenon from the point of view of the participants" (Kaplan & Maxwell, 1994, p. 47). Seeking the answer to the question "why," qualitative research potentially offers "fascinating insights into consumer behavior" (Hanson & Kysar, 1999, p. 1432). According to Henderson:

> All of qualitative market research is based on the 'why premise.' Our goal is to understand why customers do or don't buy something, why they like or don't like an ad, why they haven't changed their style of eye makeup since 1957, and so forth. (Henderson & Langer, 2003, p. 52)

Zaltman (2003, p. 15) has encapsulated the importance of obtaining the answer to the "why" question thus:

> [K]nowing *that* [italics in original] customers prefer a container that has a round shape rather than a square shape is important. Knowing *why* [italics in original] they prefer this shape is even more important, because it may suggest a desirable configuration that is neither round nor square.

"Perhaps [the] most commonly used and well-known" qualitative research method (Hanson & Kyser, 1999, p. 1433), the focus group interview is a technique in which a researcher, referred to as a moderator, conducts a one- to two-hour depth interview with a group of 6 to 12 participants drawn from a target population (Krueger, 1988, p. 27; Morgan, 1997, p. 43; Rubin & Rubin, 1995, p. 140). (Hereinafter, we will use "researcher" and "moderator" interchangeably.) The moderator attempts to create a highly synergistic environment in which participants openly share their perceptions (Clapper & Massey, 1996; see also Rubin & Rubin, 1995, p. 140; Van Ryzin & Lado, 1999, p. 2567), build on each others' ideas, and jointly develop new insights (Calder, 1977).[3] In this way, the moderator attempts to develop a deeper understanding of the issue and to see it from the participants' perspective (Krueger & Casey, 2000). Hensler (1999) has described the process thus:

> [T]he researcher assembles a small number of individuals to engage in a wide-ranging conversation about a specific topic. The group leader has a protocol for guiding the conversation, but the participants themselves may take the conversation in directions not anticipated by the researcher and may offer detailed examples to support their statements that suggest still other areas of questioning. (p. 714)

This technique was developed in the 1930's in response to social scientists' dissatisfaction with the traditional method of conducting depth interviews with one subject at a

[3] Bruseberg and McDonagh-Philp (2001, p. 436) have thus defined focus groups:

> Focus groups are a purposefully selected assembly of individuals to take part in a group discussion. A moderator (a chairperson or "facilitator") leads the group through a number of topics and activities. The group concentrates on a particular set of issues or concerns. It relies on a common interest between the participants — because the synergy between the discussion contributors provides data through sharing and comparing knowledge, rather than individual questioning.

time, which cast the participant in a passive role of simply answering questions. As an alternative, some social scientists began to interview several respondents simultaneously, thereby enabling the participants to play a more active role as they engaged in an open discussion on the topic. This focus group technique was initially used to test the effect of radio broadcasting on consumers and then to study morale issues during the Second World War. Commercial researchers in the 1950's started using focus groups to study a wide range of marketing issues (Rook, 2003). By the 1980's, academic researchers were using the technique not only for marketing research but also for areas such as organizational behavior, sociology, and political science (Krueger & Casey, 2000; Morgan, 1997).

In the past decade, focus groups have continued to grow in popularity. In 2001, commercial researchers spent $300 million conducting over 100,000 focus groups (O'Connell, 2002). "The brainchild of the social sciences and the favorite stepchild of marketing research — the focus group method of inquiry — has found increasing favor in all areas of research" (Franklin & Lowry, 2001, p. 169). For example, focus groups have been used to study consumer needs and preferences (Cowan, 2004, p. 390, note 243; Durgee, 1987), new products ideas (Fern, 1982), advertising campaigns (Szybillo & Berger, 1979), school curricula (Hendershott & Wright, 1993), and "the public's reaction to proposed names to replace [a company's current name]" (*Citigroup Inc. v. City Holding Co.*, 2003).[4] According to Lichtenstein and Swatman

[4] Recently, Zaltman (2003, p. 122) has cautioned that focus groups may be "misused" in consumer research, suggesting that they are appropriate in some situations and "contraindicated" in others:

> Like every research method, focus groups do have a place in the research toolbox. For example, they can provide feedback on the attractiveness of an existing product design and ease of product use. Contrary to conventional wisdom, they are not effective when developing and evaluating new product ideas, testing ads, or evaluating brand images.

Similarly, Wellner (2003, p. 31), posing and answering the question "Whither online focus groups?," has observed:

(2003, p. 209), "[o]rganisations also use focus groups to investigate their customers' beliefs, attitudes and perceptions about current business policies, programmes and services." Trial attorneys, as part of their case preparation, use focus group as an aid "in uncovering the jury's perceptions" concerning particular issues or witnesses (Ratcliff, 2002, pp. 45-46; see also, Giannelli, 2004, p. 1370, note 427; Green, 2004, p. 517, note 56; Hays & Eaton, 2004).[5] Academic researchers also make regular use of the focus group technique. In fact, focus groups now appear in more than 100 academic articles each year as researchers use them as both a primary and supplemental method of research (Morgan, 1997; see also McDonagh-Philp & Bruseberg, 2000).

1.2.1. Benefits of traditional focus groups

There are several reasons for the popularity of focus groups. Firstly, focus groups build on the potential for individuals to think synergistically in a group setting. As participants interact, they feed off each other's ideas, potentially creating a snowballing effect and enabling them to develop new insights that they might not have been able to develop independently (Catterall & Maclaran, 1998; Dreachslin, 1998; Montell, 1999; Parent et al., 2000). For example, researchers have used this approach to identify consumer needs and desires that the participants could not conceptualize or articulate until they worked in a group setting (Ulwick, 2002).

> In gauging respondents' emotional reaction to a product or an advertising campaign — one of the key goals of qualitative research — focus groups that were assembled online were never as effective as those that met in person. However, online groups were particularly well suited to examining Web-based business.

[5] "[F]ocus groups can reveal the strengths and weaknesses of the respective positions, the potential value of the case, as well as the probability of wining or losing" (Ratcliff, 2002, p. 40).

Secondly, by allowing researchers to discover the consumer's everyday, subjective experiences with a product (Calder, 1977), focus groups can be used for phenomenological research, whereby phenomena are described from the actor's perspective. Focus groups, then, can enable researchers to view a topic from the consumer's point of view (Ulwick, 2002) and to understand the language that consumers use to describe those experiences (Szybillo & Berger, 1979). Thirdly, focus groups can provide a window for observing how social interactions may affect consumer attitudes and guide consumer behavior. By observing social interactions within focus groups, researchers can gain insights into how such interaction effects may occur in the marketplace (Schindler, 1992). Fourthly, because of their flexibility, focus groups can provide a useful forum for exploring broadly defined issues and identifying sub-components or antecedents that might not come to light with more directed research techniques (Calder, 1977).

Finally, the moderator of a focus group will have access to "the nonverbal nuances and emotional content that are reflected in voice patterns (vocal cues, such as pitch, rate, loudness, and tone), body movement, eye contact, and other physical gestures" (Klein et al., 2003, p. 363). According to Franklin and Lowry (2001, p. 170), "[d]uring a focus group session, the researcher can match nonverbal and verbal cues to develop a profile of a respondent's attitude." Such cues supply context to focus group participants' comments.

1.2.2. Limitations of traditional focus groups

Despite these advantages, traditional focus groups also face several drawbacks. One significant hurdle is cost. The expenses for a traditional focus group usually include the moderator's salary, travel expenses, rental of the research facility, payments to participants, tape production expenses, and transcription fees (Clapper & Massey, 1996). In a typical commercial

study involving twelve focus groups (three in each of four geographic regions), these expenses can add up to $100,000, with travel accounting for approximately one third of the cost (Seidler, 2003).

Another problem associated with traditional focus groups is the difficulty of assembling the participants in one central location. Some potential participants may not be able to travel, while others may feel that their time is too valuable to be willing to do so without a considerable inducement (Morgan, 1997). Concerning the latter, the primary obstacle for such individuals is money (see Tuckel, Leppo, & Kaplan, 1992). Thus, researchers must pay approximately $25 to $250 per respondent (Morgan, 1997; O'Connell, 2002).

There are also group dynamics that can inhibit the behavior of participants in a traditional focus group. When individuals are in a focus group social setting, they may be unwilling to openly discuss sensitive or personal issues (Morgan, 1997), they may be affected by self-presentational concerns (social desirability effect), and they may want to maintain a certain image with the other members of the group even though they may never see them again. Thus, traditional focus group participants may respond in a socially desirable manner that does not reflect their true feelings (Wooten & Reed, 2000). For example, focus groups participants often respond negatively to advertisements in which a company makes disparaging comparisons with its competitors because they do not want to admit to the group that they approve of advertisements that are boastful or derogatory (Felten, 2000). However, these types of advertisements are extremely effective in the marketplace. Lichtenstein and Swatman (2003, p. 209) have summarized and listed the major drawbacks of traditional focus groups thus:

> limited generalisability due to the small number of people participating, together with the possibility that these participants may not be a representative sample;

their inadequacy for forming conclusive opinions and yes/no decision-making; the significant effect of the moderator, who must maintain control of the forum so that forceful personalities do not sway the group, and in order that the timid and polite get a chance to speak up; the tendency for participants to "play into the hands of the researcher" by agreeing with ideas that they may not believe in reality; and the insufficiency of this research method when employed as the sole source of data.

1.3. Group diversity: Weakness and strength

Diversity within a traditional focus group can be both a source of weakness and strength. In assembling a focus group, researchers need to decide upon the degree of diversity among the participants. Such diversity represents "the full range of human similarity and differences in group affiliation including gender, race/ethnicity, social class, role within an organization, age, religion, sexual orientation, physical ability, and other group identities" (Dreachslin, 1998, p. 813). A high degree of diversity can inhibit group discussion. If there are wide gaps in the socioeconomic backgrounds or lifestyles of the participants, such participants may feel uncomfortable being completely open, thereby intentionally limiting their contributions or adjusting their answers to meet perceived group expectations (Montoya-Weiss, Massey, & Clapper, 1998). Similarly, when a focus group consists of both men and women, differences in gender-related communication styles can stifle communication, and, in particular, constrain the input of women (Tannen, 1995). The same pattern can occur when the focus group is comprised of individuals from different cultures that have significantly different communication standards.

In such a case, the cultural norms of the different members may clash and cause some members to withdraw from participation (Dreachslin, 1998).

Because of the aforementioned potential problems, it has been standard practice to create focus groups that are homogeneous (Montoya-Weiss et al., 1998). Researchers may divide the pool of potential participants by variables such as gender, race, age, and social class and attempt to create groups with similar demographics. Such homogeneity can reduce the potential for interaction biases (Morgan, 1997) and increase participant comfort (Krueger & Casey, 2000). It can also foster a sense of kinship and trust within the group and increase the members' willingness to discuss sensitive issues (Madriz, 1998).

If the target population is diverse, then the researchers may create a series of different focus groups, each of which contains members from one subset of the population. In this way, the researchers can maintain homogeneity within each group, and can compare the results between groups to determine if there are any significant topic-related differences between the different subsets (Krueger & Casey, 2000). However, such homogenization of groups can miss the potential benefits of diversity (Dreachslin, 1998). In general, more diverse groups have richer interactions because the greater variety of backgrounds, experiences, and perceptions enable such groups to consider a broader range of ideas and develop more creative synergies (Montoya-Weiss et al., 1998, p. 715). A diversified focus group may have more extensive discussions as participants attempt to explain their views and opinions to other group members who have not heard such perspectives before (Bates, 1999). In addition, a diversified focus group can perform complex tasks more effectively than a homogeneous group (Clapper & Massey, 1996). Thus, if researchers can find a way to overcome the interaction problems created by

diversity, this would enable them to create focus groups that are more internally diverse, and that would be able to benefit from more productive sessions.

2. GSS-Supported Focus Groups

A number of researchers have attempted to overcome these challenges by using GSS to enhance traditional focus groups and create opportunities for new types of focus groups (e.g., see Clapper & Massey, 1996; Parent et al., 2000; Soutar et al., 1996; Sweeney et al., 1997). In using computer-mediated communication (CMC), GSS-supported focus groups hold much promise because its potential benefits "include lower cost, no travel expenses, automatic capture of the discussion data, and the ability to reach remote populations for participation" (Underhill & Olmsted, 2003, p. 506). Moreover, in a study comparing information quantity and quality in traditional and computer-mediated focus groups, Underhill and Olmsted have found no significant differences between the two conditions.

There are four possible configurations of GSS and, hence, of GSS-supported focus groups: same time/ same place; same time/ different place; different time/ same place; and different time/different place. This paper is limited to exploring the first two configurations, referred to collectively as synchronous focus groups, for it is only in these configurations that there can be an "in-depth exploration of a topic within a group dynamic" (Franklin & Lowry, 2001, p.181). By contrast, asynchronous focus groups (different time/ same place; different time/ different place), which can be conducted via e-mail, online bulletin boards, or chat rooms (see Franklin & Lowry, 2001; see also Aoki, 1999; Burton & Bruening, 2003; Downes-Le Guin, Kendall, & Gupta, 2002; Lim & Tan, 2001; Ngwenya & Keim, 2001; Rezabek, 2000; Walston & Lissitz, 2000), lack the real-time interaction of group members and the resultant synergistic

group dynamics that are the essence of focus groups as traditionally defined.[6] In fact, asynchronous focus groups resemble nominal and Delphi groups, where "interaction among members is minimized or nonexistent" (Frey & Fontana, 1993, p. 31; see also Bainbridge, 2002, pp. 23-24; Foer, 2003, pp. 41-42; Menkel-Meadow, 2001, p. 123; Mixon & Otto, 1994, p. 451, note 215; Neiger, Barnes, Thackeray, & Lindman, 2001, p. 113; Seielstad, 2002, p. 505, note 183; Young, Pittman, & Spengler, 2004, pp. 3-6).

When GSS is implemented in a traditional focus group setting (same time/ same place), the participants still gather around a table and are guided by a moderator, but rather than discuss their ideas orally, the participants interact electronically. Each participant sits in front of a computer terminal. As the moderator prompts the group with questions or comments, the participants type their thoughts into the system. Their entries appear on all the individual participants' screens and/or on one large central screen in the room (see Sweeney et al., 1997). As GSS has the capability for anonymous interaction, these entries may be displayed without identifying the contributors.

An alternative approach is to conduct a GSS-supported focus group with the participants in different locations (same time/different place). Because the interactions are all electronic, there is no need for the participants to be in visual or auditory contact. Such a focus group can "meet" electronically over the Internet or other network (e.g., Intranet, Extranet, LAN), with the

[6] The key characteristic of a focus group, as traditionally conceived, lies in the synergistic interaction of the group participants. According to Montoya-Weiss, Massey, and Clapper (1998, p. 713), "[t]he functional efficacy of a focus group grows out of the spontaneity and synergy of the group dynamic." Similarly, Franklin and Lowry (2001, pp. 180-181) have observed that "the value of a focus group methodology to naturalistic inquiry is providing a venue for in-depth exploration of a topic within a group dynamic." Clapper and Massey (1996, p. 44) have explained the function of a focus group thus:

> The purpose of focus groups is to generate ideas, opinions, attitudes, and perspectives. Inputs of one member can prompt quick and sometimes innovative responses in another, and a genuinely creative outcome may occur. However, success is dependent on the creation of a non-inhibiting, synergistic environment in which group members are comfortable sharing ideas.

group members having the same degree of interaction that they would have in a face-to-face setting (see Bowers, 1999).

2.1. GSS-Supported Focus Group Benefits

Researchers involved in both consumer goods (Buckley, 2002; see also Richards, 2000) and industrial goods (Collins, 2000) are increasingly turning to the Internet for new opportunities to improve their research.[7] For example, the percentage of all market research funds that are being spent on Web-based surveys has grown from 10% in 2000 to 33% in 2002 (Jackson, 2003). The primary reasons that are cited for this trend are high speed and low cost (Bowers, 1999). Conducting a survey of online shopping habits, one research firm used the Internet to gather data from 100,000 people in 17 days at a cost of $150,000. Had the same study been conducted by telephone, it would have taken one year to complete and would have cost almost $5 million (White, 2000).

GSS-supported focus groups meeting via the Internet or other network would have similar time and cost savings.[8] When GSS is used to conduct a focus group, the respondents can participate from their homes or offices (same time/ different place), thereby resulting in no time lost in travel (Tse, 1999). For example, GSS makes it is makes it easier and cheaper to arrange sessions with geographically dispersed participants (Weissman, 1998), professionals, and frequent business travelers, who all may have difficulty gathering in one location at the same

---

[7] For a discussion of how online focus groups can assist attorneys in trial preparation, see Kritzer, 1999.

[8] The time and cost savings generated by GSS-supported focus groups only apply when the groups are conducted over the Internet or other network. When GSS is used in a face-to-face setting (same time/ same place), there are no time savings because all the focus group participants still must travel to the central location where the focus group is being conducted. In addition, face-to-face GSS-supported focus groups can increase the expense of the session for the researcher must pay for the equipment and technical support necessary to implement the GSS (Sweeney, Soutar, Hausknecht, Dallin, & Johnson, 1997).

time (Rezabek, 2000). Moreover, such online focus groups typically cost one-half to one-fifth as much as traditional focus groups (Parks, 1997).

GSS-supported focus groups, whether face to face (same time/ same place) or geographically dispersed (same time/ different place), also have a profound effect on the dynamics of the group interactions. In traditional focus groups, the basic communication pattern is one-to-many, that is, one person speaks while all others listen, thereby enabling an aggressive participant to dominate the session and causing the discussion to be stifled by premature group consensus (Krueger & Casey, 2000). With GSS, the communication pattern is many-to-many (Tse, 1999), thus allowing all group members to communicate simultaneously (Montoya-Weiss et al., 1998). The advantages of simultaneous communication include decreasing the ability of any group member to dominate the session (White, 2000), fostering the involvement of quieter members of the group (Walston & Lissitz, 2000), and equalizing participation of all members (Tse, 1999).

GSS with anonymous interaction capability alters group dynamics by providing a "cloak of anonymity" in that, during the session, each participant's comments are presented to the group without identifying the contributor (Franklin & Lowry, 2001, p. 178). Moreover, because there are no visual or auditory cues, it is more difficult for a group member to determine the gender, race, or social class of other group members (Walston & Lissitz, 2000). GSS anonymity, then, creates a "non-inhibiting synergistic environment" (Montoya-Weiss et al., 1998, p. 714). As the participants' identities are hidden, participants tend to feel less apprehension about discussing sensitive topics (Walston & Lissitz, 2000), have less need to conform to group expectations (Clapper & Massey, 1996), and have less desire to censor their comments (Supphellen, 2000). Furthermore, because members of anonymity-featured GSS-supported focus groups cannot

determine each other's gender, race, or class, such groups are less affected by the social norms and inhibitions that can emerge within highly diverse groups (Montoya-Weiss et al., 1998; Walston & Lissitz, 2000). Thus, GSS-supported focus groups provide an environment that encourages the expression of differing opinions (see Morrison, Haley, Sheehan, & Taylor, 2002, p. 82). Another potential benefit of having GSS support is an increase in the overall productivity of a diversified focus group (see Tse, 1999). In such a focus group, participants tend to ask more questions and generate more comments (Clapper & Massey, 1996), create more unique and relevant ideas (Parent et al., 2000), and produce more total information (Kiely, 1998) than traditional face-to-face focus groups.

By the researcher randomly assigning a number to each computer workstation, an anonymity-featured GSS-supported focus group in a same time/ same place configuration can allow for participant anonymity as far as focus group members are concerned but permit participant identifiability with respect to the researcher (see Franklin & Lowry, 2001, p. 176). Thus, it is possible to for the researcher to have access to and to record the nonverbal cues of the focus group participants (e.g., facial expressions, body language), which provide context to participants comments.

Moreover, GSS support automates several steps in the post-session analysis. Once a focus group session is completed, the researcher must create a detailed transcript. For a typical two-hour traditional focus group, the transcription process can take 8 to 12 hours and result in a 30- to 50-page transcript (Krueger & Casey, 2000). This work can be further complicated if the researcher wants to identify the speaker for each comment. Some researchers believe that such identification is necessary so that the analyst can trace the evolution of each participant's ideas over the course of the session (Catterall & Maclaran, 1997). In order to accomplish this

identification in a traditional focus group, the researcher must videotape the session and then review the tape to confirm the speakers (Morgan, 1997). With a GSS-supported focus group session, the transcript is prepared automatically. As the participants type their comments, the GSS software automatically records their entries in an electronic file. Additionally, the GSS software can identify the contributor for each comment by recording the identification number of the terminal from which each comment originated (Franklin & Lowry, 2001). The electronic file can then be uploaded into special software packages for additional coding and analyses (Catterall & Maclaran, 1997). The result, then, of the automatic creation of a transcript can be to save considerable time, effort, and money in the post-session analysis.

2.2. GSS-Supported Focus Group Limitations

Despite the above-mentioned advantages, the use of GSS can also create several potential problems within focus groups. For example, some focus group members may have difficulty participating because of "fear of technology" (Rezabek, 2000, § 5 ¶ 3)[9] or weak keyboarding skills (Tse, 1999), thereby restricting the pool of respondents that can be used in GSS-supported focus groups. Moreover, the moderator of the focus group may miss some of the richness of the communication process because GSS does not provide visual or auditory cues. Thus, the moderator cannot read the body language or facial expressions of the participants, making it more difficult to judge each participant's true intention and level of participation (Rezabek, 2000; Weissman, 1998).

Finally, if the GSS-supported focus groups are conducted over the Internet, it may be difficult to obtain representative samples because Internet users tend to be younger, have higher

[9] Fear of technology has been referred to as "technophobia," which is defined as being "uncomfortable with computers and other telecommunications technologies" (Townsend, DeMarie, & Hendrickson, 1998, p. 27).

incomes, and have a greater proportion of males than the general population (Buckman, 2000). Merkes (2003) has remarked:

> [I]t is not possible to access samples representative of the general population because Internet access and use vary for different populations. [With respect to the resultant sample,] Riva (2001) argued that people who participate in online research are self-selected and by no means randomly representative of the general population. In particular, they are usually skewed toward the high end of the socioeconomic and educational spectrum. (pp. 133-134)

Accordingly, the results of research conducted with Internet participants may be projectable only within the realm of Internet users (see Bowers, 1999).

3. Directions for Future Research

3.1 Technological Implications for GSS-Supported Focus Groups

GSS technology may have unintended consequences concerning group dynamics because of differential typing skills and varying connection speeds. Specifically, the use of GSS in a focus group gives faster typists and those with higher connection speeds an advantage in posting comments, thereby creating the opportunity for them to dominate the group.

All participants in a GSS-supported focus group interact through a keyboard, although not all participants have equal keyboarding skills ("competence in making contributions of electronic text" [Lim & Tan, 2001, p. 59]). Thus, some focus group members will be more adept at using GSS technology than others. Researchers have found that, in GSS-supported focus groups, faster typists were able to complete each response ahead of the rest of the group (Franklin & Lowry, 2001). If such is the case, then there is the potential for such individuals to

dominate the group by typing a greater volume, thereby filling the computer screen and reducing the space available to other participants.

Another route for domination by faster typists is their influence over the group because of the posting of their ideas first. The literature on judgment and decision making within the fields of social psychology and decision sciences suggests that this influence results from two sources: the primacy effect and the anchoring and adjustment heuristic, which often work in tandem (Prentice, 2000, pp. 163-168; 2002, p. 1483, note 413; 2003, pp. 373-374; Prentice & Koehler, 2003, pp. 602-604).

The primacy effect refers to the social psychological phenomenon whereby "early-presented information has an undue influence on final judgment," thereby "bias[ing] the interpretation of later-encountered information" (Nisbett & Ross, 1980, p. 172; see also Diamond, Vidmar, Rose, Ellis, & Murphy, 2003, pp. 12-14; Hogarth, 1987, p. 55; Koehler, 2001, p. 1292; McArthur, 1982, p. 166; J. B. Mitchell, 2000, p. 176; Prentice, 2003, pp. 373-374).[10] According to Devine and Ostrom (1988, p. 238), "[a] primacy effect occurs when information presented first is more influential in determining the final impression." Thus, "[f]irst impressions are powerful influences on judgment and seem to provide the prism through which subsequent information is filtered" (Prentice & Koehler, 2003, p. 604).

Anchoring and adjustment refers to "the tendency of judgments to be anchored on initially presented values" (Slovic, Fischhoff, & Lichtenstein, 1982, p. 481; see also Einhorn & Hogarth, 1987, pp. 46-48; Fiske & Taylor, 1991, pp. 389-390; Guthrie, Rachlinski, & Wistrich, 2001, pp. 787-794; Hogarth, 1987, p. 54; G. Mitchell, 2002, p. 1997; Northcraft & Neale, 1987;

[10] Nisbett and Ross (1980, p. 172) have noted: "Although order of presentation of information sometimes has no net effect on final judgment, and recency effects sometimes are found, these are the exception; several decades of psychological research have shown that primacy effects are overwhelmingly more probable."

Prentice, 2000, pp. 163-168; 2002, pp. 1483-1485; Rachlinski, 2003, p. 1171; Wansink, Kent, & Hoch, 1998). Tversky and Kahneman (1982, p. 14) have explained this cognitive heuristic thus:

> In many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer. The initial value, or starting point, may be suggested by the formulation of the problem . . . . [D]ifferent starting points yield different estimates, which are biased toward the initial value.

According to Dawes (1988, p. 121): "What happens is that people will adjust their estimates *from* [italics in original] this anchor but nevertheless remain close to it. We 'underadjust.'" Russo and Schoemaker (2002, p. 98) have observed that the anchoring and adjustment heuristic "can affect complex qualitative judgments as well as numerical estimates" (see also Bazerman, 2002, pp. 27-30; Dawes, 1988; Guthrie et al., 2001, p. 788; Kruglanski & Freund, 1983; Rachlinski, 2003, p. 1171; Wansink et al., 1998).[11]

The fastest typist's views will carry greater weight because they are presented first (primacy effect). Moreover, the fastest typist's views may serve as an anchor in that other focus group members will take the fastest typist's views as a starting point for their own views. Although other group members may adjust and modify the fastest typist's views, the former's positions will nevertheless bear the stamp of the fastest typist's influence (anchoring and adjustment). Thus, faster typists can frame and shape the focus group discussion.

Those focus group members that are swift at keyboarding, then, may dominate by virtue of overwhelming other typists with their comments or because the operation of the primacy

[11] Concerning the influence of the anchoring and adjustment heuristic on qualitative judgments, Dawes (1988, p. 121) has provided the following examples:

> [I]f we know (individually or vicariously) a particular professional football player, we expect other professional football players to be a lot like him. If we have had a good meal in a particular restaurant, we expect the restaurant's other offerings to be equally tasty.

effect and/or use of the anchoring and adjusting heuristic. Accordingly, it may be suggested that individuals with better typing skills who type faster will be more likely to dominate a GSS-supported focus group than participants who are slower typists. Conclusively establishing the relationship between typing skills and dominant behavior in GSS-supported focus groups will require experimental studies, which should be a high priority for future researchers.

Similarly, the group process may be affected by the type of network connectivity that is used by different participants. Focus group members with high speed network connections will be able to post messages quicker than those with slower connections, potentially giving the former an advantage in the timing and the size of their responses (see Ten-Pow, 2003). As with faster typists, focus group members with high speed connections may dominate the group, even if inadvertently, by virtue of posting their comments in such volume that they overwhelm participants with slower network connections and/or by virtue of posting their ideas first (primacy effect and anchoring and adjustment heuristic). Thus, it may be suggested that individuals with faster network connections will be more likely to dominate a GSS-supported focus group than participants with slower connections. Future empirical studies are required to confirm this proposition.

3.2. Effect of National Culture on GSS-Supported Focus Groups

3.2.1. High and low context

The advent of globalization holds the promise of conducting GSS-supported focus groups dispersed across national boundaries and cultures. Researchers are already making use of online focus groups in the United States, Canada, and Western Europe, while "[t]he rest of the world, and the lion's share of untapped consumer and business markets, is struggling to play catch-up"

(Parmar, 2003, p. 52). As Asia, Latin America, Central Europe, and Eastern Europe will expand their base of Internet users, there will be opportunities for the expansion of online focus groups, including those supported by GSS, to these regions (see Parmar, 2003). However, researchers will have to sensitize themselves to the way in which different national cultures interact with the unique nature of GSS-supported focus groups.[12] In fact, the recognition that "[GSS] technologies [are] less effective when they are incompatible with the cultural norms of the environment in which they are implemented" has spawned "a growing interest in exploring how GSS affects group processes and outcomes in non-Western cultures, such as Asia" (Reinig & Mejias, 2003, p. 1).

Researchers need to pay particularly close attention to cultural context, which refers to the degree to which members of a culture emphasize situational factors in communication (Hall, 1976; Hall & Hall, 1990).[13] Hall (1976) has ranked cultures (vis-à-vis their communication style) on a continuum with low context and high context as endpoints.[14] According to Hall:

> A high-context (HC) communication or message is one in which most of the information is either in the physical context or internalized in the person, while

[12] Tan , Wei, Watson, & Walczuch (1998, p. 120) have observed:

> People from dissimilar national cultures have different ways of doing business and disparate values for guiding human behavior. With a better appreciation of the cultural factor, scholars are emphasizing the need to assess the cultural robustness of existing theories and practices to distinguish universal from culture-specific knowledge.

[13] According to Hall and Hall (1987, p. 7):

> "Context" is the information that surrounds an event and is inextricably bound up with the meaning of that event. The elements that combine to produce a given meaning — events and context — are in different proportions depending on the culture. It is thus possible to order the cultures of the world on a scale from high to low context.

[14] Montoya (2000, p. 276) has delineated the difference between low and high context communication thus:

> Linguists use the term "low-context communication" to refer to direct and precise statements in which meanings are embedded in the message being transmitted and "high-context communication" to language systems that involve understanding, indirect statements, and the interpretation of pauses in conversation.

> very little is in the coded, explicit, transmitted part of the message. A low-context (LC) communication is just the opposite; i.e., the mass of the information is vested in the explicit code. (p. 79)[15]

Randazza (2002, p. 832) has encapsulated the difference between low and high context cultures thus:

> High context cultures are ones in which the message communicated is more dependent upon the physical context of the communication, but less is in the explicit and expressed word content of the message. In contrast, low-context cultures place a higher value on the words and a lower value on the surrounding circumstances.

Similarly, Nylander (2003, ¶ 2) has distinguished low and high context cultures by observing:

> In a low-context culture, people rely on external clues such as spoken and written words to evaluate the information that a person is trying to communicate. On the other hand, high-context cultures use nonverbal signs, family status, age differences and other factors that carry more meaning.

Accordingly, in low context cultures (e.g., United States, Canada, England, Germany, Sweden, Switzerland) the emphasis is placed on the explicit communication (i.e., the actual words), and situational factors exert little or no influence on the interpretation. By contrast, high context cultures (e.g., Asian, Arab, and Latin American countries), there is a greater reliance on nonverbal cues, with the explicit communication being interpreted within the broader context of

[15] Hall and Hall (1987, p. 158) have elaborated on the definition of context thus:

> Context refers to the fact that when people communicate they take for granted how much the listener knows about the subject under discussion. In low-context communication, the listener knows very little and so must be told practically everything. In high-context communication, the listener is already "contexted," and so does not need to be told very much.

voice inflections, physical gestures, and the overall flow of events within which the communication takes place (Hall & Hall, 1987).

Focus group moderators need to be aware of the cultural context of the participants and should accordingly adapt their communications styles and efforts at building rapport (Dreachslin, 1998). Thus, researchers conducting GSS-supported focus groups should consider how the cultural context may interact with the technology. As a text-based medium, GSS creates a low context environment devoid of voice inflections, facial expressions, and body language, thereby not transmitting the situational cues that are associated with a given statement.[16] It follows, then, that GSS-supported focus groups will be less effective in high context cultures, where such situational cues are important to understanding the speaker's true meaning, and will be more effective in low context cultures, where "meanings are embedded in the messages being transmitted" (Montoya, 2000, p. 276; see also Barker, 1996, p. 32; Condon, 1997, p. 356; Daly, 2001, pp. 234-235; Köszegi, Vetschera, & Kersten, 2003; Ting-Toomey, 1989; Wright, 1996, p. 62). By virtue of its text-centeredness, the GSS environment emphasizes the explicit communications of the focus group participants and thus is compatible with low context

[16] As a text-based, contextually impoverished medium, GSS may foster miscommunication. "Without nonverbal cues to accompany and clarify the message in GSS, there is the danger that the message received by the recipient will not be understood in the manner intended by the sender" (Klein, Clark, & Herskovitz, 2003, p. 364). With respect to this shortcoming in online focus groups, also referred to as virtual focus groups and electronic focus groups, Aoki (1999, ¶ 7) has observed:

> One of the major drawbacks of virtual focus groups is its lack of nonverbal cues. In a virtual focus group, facial expressions, tones of voice, and body language are all absent and only the typed text on screen can be observed. Emoticons can supplement the text in expressing such nonverbal aspects of communication, but to a very limited degree. Unconscious acts of most nonverbal responses cannot be replaced by the conscious act of typing emoticons. This lack of nonverbal cues makes it difficult for the moderator to regulate the flow of conversation, facilitate turn taking, and decipher subtle meanings of participants' messages.

It is suggested that the absence of nonverbal cues in online focus groups, including GSS-supported focus groups, is a more pronounced disadvantage in high context cultures than in low context cultures.

respondents. Accordingly, it is suggested that GSS-supported focus groups will work more effectively in low context cultures than in high context cultures.

3.2.2. Power distance

Another cultural dimension that warrants examination with respect to GSS-supported focus groups is power distance, which refers to "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally" (Hofstede, 1991, p. 28; see also Blankenburg, 1998; Chase, 1997; Hofstede, 1980, pp. 92-152; Koudriachov, 2002, pp. 27-28; Tan, Wei, Watson, & Walczuch, 1998, p. 122; Visser, 2003, pp. 71-72). Accordingly, "members of low power-distance cultures (i.e., U.S.) may be more inclined to adopt technologies [like GSS] that reduce power distance" (Reinig & Mejias, 2003, p.2).

In cultures having high power distance, status influence tends to be high, while in cultures having low power distance, status influence tends to be low (Tan et al., 1998). Studies in the United States have found that GSS with anonymous interaction capability masks status cues and thereby increases participation (see Klein et al., 2003). This is an important advantage because studies have indicated that "[i]n mixed-status groups, higher status group members tend to dominate meetings by talking more and exerting control over the meeting's agenda and goals," thereby "preventing others from providing input" (Davis, Zaner, Farnham, Marcjan, & McCarthy, 2003, p. 2). According to Tan, Watson, and Wei (1995, p. 83):

> [A] GSS can often promote more equal participation in North American groups because such behavior is in accordance with the egalitarian philosophy of the culture (Benbaset & Lim, 1993). However, it is not clear whether a GSS can

> achieve the same effect if used in a culture where inequality of participation has been accepted as a norm for centuries.

Reinig and Mejias (2003, p. 1) have put the matter thus:

> With GSS . . . there is an assumption that it is more desirable for participants to be anonymous and equal than to be identified and unequal. While this assumption may be reasonable in [low power distance] Western cultures, it may not be appropriate in certain [high power distance] Asian cultures.

Despite the resultant concern — borne of a reasonable expectation — that "GSS can dampen power distance effects" only in low power distance cultures (e.g., U.S.) but not in high power distance cultures (e.g., Asia) (Tan et al., 1995, p. 86), research, in fact, has found that GSS reduces status influence and thereby increases participation irrespective of national culture (Reinig & Mejias, 2003; see also Tan et al., 1995; Tan et al., 1998). In a study with Chinese respondents comparing online and traditional focus groups, Tse (1999) has reported higher levels of participation in the online focus group condition. The aforementioned studies strongly suggest that the proposition that anonymity-featured GSS-supported focus groups mask status cues and thereby increase participation rates is culturally robust. Future researchers will need to confirm this proposition by conducting cross-cultural (i.e., low power distance cultures versus high power distance cultures) studies comparing GSS-supported and traditional focus groups.

3.3. Lying behavior

The success of a focus group interview depends on the truthfulness of its participants. To the extent that lying takes place in a focus group, the research results are undermined. Focus group participants may lie for a variety of reasons (see Gross, 2003; Zaltman, 2003), including

the wish to appear socially desirable, the reluctance to truthfully answer sensitive or socially embarrassing questions, and the lack of sincerity on the part of "professional respondents," who "are motivated to join a [focus] group because of the compensation they will receive for their involvement" (Albrecht, Johnson, & Walther, 1993, p. 63). Whatever the motivation, deception is a "threat to validity" (p. 63).

Lying in focus groups is part of the larger problem of the high incidence of lying in regular social interactions (e.g., see George & Marett, 2004b). Research from social psychology indicates "that as much as one-third of daily conversations include some form of deception, broadly construed to include concealed, evasive, ambiguous, or exaggerated information as well as outright lies" (Burgoon, Stoner, Bonito, & Dunbar, 2003, p. 1). Bok (1989, pp. xvii-xviii) has summed up the state of affairs thus: "The fact is that reasons to lie occur to most people quite often." In light of its societal prevalence, deception in research is a cause for concern. When lying occurs in focus groups, the integrity of the research enterprise may be compromised because group discussions may rest on a false premise, resulting in truth and lies being inextricably commingled. Accordingly, any "insights" emanating from such focus group discussions are suspect.

Surprisingly, there is little discussion of lying in the large body of literature on traditional focus groups. One reason for this curious omission may be that the moderator is expected to detect and filter out lies by the management of sensitive topics and the probing of participants to uncover the truth (Mariampolski, 1989). There is likewise no empirical work on lying in the newly emerging literature on computer-mediated focus groups. There is, however, a growing body of research comparing deception in face-to-face communication (FTF) and various types of computer-mediated communication (CMC), including GSS-supported communication (e.g., see

Carlson & George, 2004; Carlson, George, Burgoon, Adkins, & White, 2004; George & Marett, 2004a; Hayne, Pollard, & Rice, 2003; Zhou, Burgoon, Twitchell, Qin, & Nunamaker, 2004).

As it is anticipated that focus groups with GSS support will grow in popularity, future researchers need to consider the impact of GSS technology on the lying behavior of focus group participants. A potentially fruitful approach is suggested by the recent innovative work of Hancock, Thom-Santelli, and Ritchie (2004) comparing the incidence of lying in face-to-face conversation, telephone, e-mail, and instant messaging. According to the feature-based model of Hancock et al. (p. 130), lying behavior is a function of three design factors:[17]

> [T]he *synchronicity* [italics in original] of the interaction (i.e., the degree to which messages are exchanged instantaneously and in real-time)
>
> [T]he *recordability* [italics in original] of the medium (i.e., the degree to which the interaction is automatically documented)
>
> [W]hether or not the speaker and listener are *distributed* [italics in original] (i.e., they do not share the same physical space)

This model posits that "the more synchronous and [geographically] distributed, but less recordable a medium is, the more frequently lying should occur" (p. 130).

According to Hancock et al., lying is positively related to synchronicity because most lies tend to be unplanned, occurring spontaneously in conversation; hence, synchronous media (face-to-face conversation, telephone, instant messaging) afford greater opportunities to lie than do

[17] Note that the model of Hancock et al. (2004) posits that the design features of communication technologies influence lying behavior. This approach is markedly different from media richness theory and social presence theory, the two dominant perspectives explaining cross-media differences (see George & Carlson, 1999). According to Hancock et al. (2004, p. 130):

> Although these two approaches make very different predictions, they both assume that communication technology vary along only a single underlying dimension (i.e., richness, distance) that will influence deception, and ignore other important differences in their design that may have important implications for deception …

asynchronous media (e-mail). However, lying is negatively related to the recordability of the medium because recordability allows for the subsequent review and scrutiny of one's statement, thereby having an inhibitory effect on lying. Thus, recordable media such as e-mail and instant messaging should be less conducive to lying than face-to-face conversation and telephone. Finally, as far as the geographic distributedness of the speaker and listener, "media in which participants are not distributed (i.e., copresent) should constrain deception to some degree because they limit deception involving topics or issues that are contradicted by the physical setting" (p. 130). For example, e-mail would encourage lying.

As applied to focus groups, the model of Hancock et al. (2004) would posit that a GSS-supported synchronous — whether same or different location — focus group is more conducive to participant deception because of its real-time, spontaneous, free-flowing nature. GSS-supported focus groups, which have a transcript generated, would not, according to the model of Hancock et al., be conducive to lying as the participants would be reluctant to put their lies in print and thus available for subsequent scrutiny.

According to Hancock et al. (2004, p. 130), the distributedness feature of a medium is negatively related to lying because "media in which participants are not distributed (i.e., copresent) should constrain deception to some degree because they limit deception involving topics or issues that are contradicted by the physical setting (e.g., 'I'm working on the case report' when in fact the speaker is surfing news on the web)." We adapt this hypothesis to focus groups and suggest that in traditional focus groups, where the participants are not distributed (i.e., where the participants are in one location), and in those anonymity-featured GSS-supported focus groups where the physical design of the space enables identification of participants by the moderator (although the participants will be anonymous to each other), lying is constrained

because of the concern of participants that their nonverbal cues (e.g., facial expression, body language) may indicate that they are lying (see Dimitrius & Mazzarella, 1998; see also Burgoon et al., 2003; George & Carlson, 1999; George & Marett, 2004a; George, Marett, & Tilley, 2004) and may even reveal the truth to the moderator. Accordingly, we would expect that there will be more lying in those anonymity-featured GSS-supported focus groups where the focus group participants are not identified to the moderator — same time/ same place as well as same time/ different place — than in traditional focus groups and moderator-identifiable GSS-supported focus groups, where the moderator can observe nonverbal cues in real time.[18]

4. Conclusion

As anonymity-featured GSS-supported focus groups receive increasing scholarly attention, the resultant literature will enrich our understanding of how to best take advantage of the convergence of GSS technology and the focus group method of inquiry. Future researchers should also address the specific circumstances under which GSS-supported focus groups are not appropriate, bearing in mind the observation of Franklin and Lowry (2001, p. 181):

> [A]s with any qualitative research method, the decision to use [a focus group with] an electronic format must be based on the research question(s) of the study, the sophistication of participants, the technology expertise of the [moderator], and the level of exploration needed for the topic.

[18] Note that same time/ same place anonymity-featured GSS-supported focus groups where the focus group participants are not identified to the moderator are functionally equivalent to same time/ different place (geographically distributed) anonymity-featured GSS-supported focus groups.

It is only through empirical investigations concerning the benefits and limitations of anonymity-featured GSS–supported focus groups under a variety of conditions that our knowledge of research methods in this computer-mediated age be put on a firm basis.

References

Ackermann, F., & Eden, C. (1994). Issues in computer and non-computer supported GDSSs. *Decision Support Systems, 12*, 381-390.

Adkins, M., Shearer, R., Nunamaker, J. F., Jr., Romero, J., & Simcox, F. (1998). Experiences using group support systems to improve strategic planning in the Air Force. *Proceedings of the Thirty-First Hawaii International Conference on Systems Sciences, 1*, 515-524.

Ahalt, A. M. M. (2000). Remaking the courts and law firms of the nation: Industrial age to the information age. *Texas Tech Law Review, 31*, 1151-1165.

Albrecht, T. L., Johnson, G. M., & Walther, J. B. (1993). Understanding communication processes in focus groups. In D. L. Morgan (Ed.), *Successful focus groups: Advancing the state of the art* (pp. 51-64). Newbury Park, CA: Sage.

Aoki, K. (1999, May 16-20). Virtual focus groups: Opportunities and limitations. Paper presented at the 1999 International Field Directors and Technologies Conference. Retrieved March 8, 2004, from http://www.bu.edu/people/kaoki.FDTC.htm

Bainbridge, S. M. (2002). Why a board? Group decisionmaking in corporate governance. *Vanderbilt Law Review, 55*, 1-55.

Barker, J. (1996). International mediation – A better alternative for the resolution of commercial disputes: Guidelines for a U.S. negotiator involved in an international commercial mediation with Mexicans. *Loyola of Los Angeles International & Comparative Law Journal, 19*, 1-53.

Bastress, R. M., & Harbaugh, J. D. (2003). Taking the lawyer's craft into virtual space: Computer-mediated interviewing, counseling, and negotiating. *Clinical Law Review, 10*, 225-156.

Bates, D. (1999, March 1). Moderator's gender can influence a focus group. *Marketing News, 33*(5), p. 17.

Bazerman, M. H. (2002). *Judgment in managerial decision making* (5th ed.). New York: Wiley.

Benbaset, I. & Lim, L. H. (1993). The effects of group, task, context, and technology variables on the usefulness of group support systems: A meta-analysis of experimental studies. *Small Group Research, 24*, 430-462.

Blankenburg, E. (1998). Patterns of legal culture: The Netherlands compared to neighboring Germany. *American Journal of Comparative Law, 46,* 1-42.

Bok, S. (1989). *Lying: Moral choice in public and private life.* New York: Vintage Books.

Bowers, D. K. (1999). FAQ on online research. *Marketing Research, 10*(4), 45-49.

Briggs, R., Nunamaker, J., & Sprague, R. (1997/1998). 1001 unanswered research questions in GSS. *Journal of Management Information Systems, 14* (3), 3-21.

Bruseberg, A., & McDonagh-Philp, D. (2001). New product development by eliciting user experience and aspirations. *International Journal of Human-Computer Studies, 55,* 435-452.

Bruseberg, A., & McDonagh-Philp, D. (2002). Focus group to support the industrial/ product designer: A review based on current literature and designers' feedback. *Applied Ergonomics, 33*(1), 27-38.

Buckley, N. (2002, August 26). The e-route to a whiter smile. *Financial Times* (U.S. edition), p. 5.

Buckman, R. (2000, October 23). Market research: A matter of opinion. [Special supplement on e-commerce]. *The Wall Street Journal*, p. R46.

Burgoon, J. K., Stoner, G. M., Bonito, J. A., & Dunbar, N. E. (2003). Trust and deception in mediated communication. *Proceedings of the Thirty-Sixth Hawaii International Conference on System Sciences*. Retrieved March 7, 2004, from http://csdl.computer.org/comp/proceedings/hicss/2003/1874/01/187410044a.pdf

Burton, L. J., & Bruening, J. E. (2003). Technology and method intersect in the online focus group. *Quest, 55*, 315-327.

Calder, B. (1977). Focus groups and the nature of qualitative marketing research. *Journal of Marketing Research, 14*, 353-64.

Carlson, J. R., & George, J. F. (2004). Media appropriateness in the conduct and discovery of deceptive communication: The relative influence of richness and synchronicity. *Group Decision and Negotiation, 13* (2), 191-210.

Carlson, J. R., George, J. F., Burgoon, J. K., Adkins, M., & White, C. (2004). Deception in computer-mediated communication. *Group Decision and Negotiation, 13* (1), 5-28.

Catterall, M., & Maclaran, P. (1998). Focus group data and qualitative analysis programs: Coding the moving picture as well as the snapshots. *Sociological Research Online, 2* (1). Retrieved February 21, 2004, from http://www.socresonline.org.uk/socresonline/2/1/6.html

Chase, O. G. (1997). Legal processes and national culture. *Cardozo Journal of International and Comparative Law, 5*, 1-24.

Citigroup Inc. v. City Holding Co., No. 99 Civ. 10115 (RWS), 2003 U.S. Dist. LEXIS 1845, at *21 (S.D.N.Y. Feb. 7, 2003).

Clapper, D. L, & Massey, A. P. (1996). Electronic focus groups: A framework for exploration. *Information & Management, 30*, 43-50.

Collins, C. (2000, July 6). Focus groups go online to measure the appeal of Web. *The New York Times*, p. G8.

Condon, B. (1997). NAFTA at three-and-one-half years: Where do we stand and where should we be headed? A cross-cultural analysis of North American legal integration. *Canada-United States Law Journal, 23*, 347-367.

Cowan, M. J. (2004). Leaving money on the table(s): An examination of federal income tax policy towards Indian tribes. *Florida Tax Review, 6*, 345-399.

Daly, J. L. (2001). International commercial negotiation and arbitration. *Hamline Journal of Public Law and Policy, 22*, 217-251.

Davis, J., Zaner, M., Farnham, S., Marcjan, C., & McCarthy, B. P. (2003). Wireless brainstorming: Overcoming status effects in small group decisions. *Proceedings of the Thirty-Sixth Hawaii International Conference on System Sciences*. Retrieved March 7, 2004, from http://csdl.computer.org/comp/proceedings/hicss/2003/1874/01/187410046c.pdf

Dawes, R. M. (1988). *Rational choice in an uncertain* world. San Diego: Harcourt Brace Jovanovich.

Debreceny, R., Putterill, M., Tung, L.-L., & Gilbert, A. L. (2002). New tools for the determination of e-commerce inhibitors. *Decision Support Systems, 34*, 177-195.

Dennis, A. R., & Garfield, M. J. (2003). The adoption and use of GSS in project teams: Toward more participative processes and outcomes. *MIS Quarterly, 27*, 289-323.

Devine, P. G., & Ostrom, T. M. (1988). Dimensional versus information-processing approaches to social knowledge: The case of inconsistency management. In D. Bar-Tal & A. W. Kruglanski (Eds.), *The social psychology of knowledge* (pp. 231-261). Cambridge, England:

Cambridge University Press.

Diamond, S. S., Vidmar, N., Rose, M., Ellis, L., & Murphy, B. (2003). Juror discussions during civil trials: Studying an Arizona Innovation. *Arizona Law Review, 45*, 1-81.

Dillon, W. R., Madden, T. J., & Firtle, N. H. (1987). *Marketing research in a marketing environment*. St. Louis, MO: Times Mirror/Mosby College Publishing.

Dimitrius, J.-E., & Mazzarella, M. (1998). *Reading people: How to understand people and predict their behavior — anytime, anyplace*. New York: Random House.

Downes-Le Guin, T., Kendall, T., & Gupta, R. (2002). At my own pace in my own place. *Quirk's Market Research Review*. Retrieved February 22, 2004, from http://www.doxus.com/attachments/At_my_own_pace.pdf

Dreachslin, J. L. (1998). Conducting effective focus groups in the context of diversity: Theoretical underpinnings and practical implications. *Qualitative Health Research, 8* (6), 813-820.

Durgee, J. (1987). New product ideas from focus groups. *Journal of Consumer Marketing, 4* (4), 57-65.

Easton, G., Easton, A., & Belch, M. (2003). An experimental investigation of electronic focus groups. *Information & Management, 40* (8), 717-727.

Einhorn, H. J., & Hogarth, R. M. (1987). Decision making under ambiguity. In R. M. Hogarth & M. W. Reder (Eds.), *Rational choice: The contrast between economics and psychology* (pp. 41-66). Chicago: University of Chicago Press.

Felten, E. (2000, November 10). Focus hocus-pocus. *The Wall Street Journal*, p. W17.

Fern, E. F. (1982, February). The use of focus groups for idea generation: The effects of group size, acquaintanceship, and moderator on response quantity and quality. *Journal of Marketing*

Research, *19*, 1-13.

Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). New York: McGraw-Hill.

Foer, A. A. (2003). The third leg of the antitrust stool: What the business schools have to offer to antitrust. *New York Law School Law Review, 47*, 21-49.

Franklin, K. K., & Lowry, C. (2001). Computer-mediated focus group sessions: Naturalistic inquiry in a networked environment. *Qualitative Research, 1* (2), 169-184.

Frey, J. H., & Fontana, A. (1993). The group interview in social research. In D. L. Morgan (Ed.), *Successful focus groups: Advancing the state of the art* (pp. 20-34). Newbury Park, CA: Sage.

George, J. F., & Carlson, J. R. (1999). Group support systems and deceptive communication. *Proceedings of the Thirty-Second Hawaii International Conference on System Sciences*. Retrieved March 17, 2004, from http://www.computer.org/proceedings/hicss/0001/00011/00011038.PDF

George, J. F., & Marett, K. (2004a). Inhibiting deception and its detection. *Proceedings of the Thirty-Seventh Hawaii International Conference on System Sciences*. Retrieved December 1, 2004, from http://csdl.computer.org/comp/proceedings/hicss/2004/2056/01/205610022c.pdf

George, J. F., & Marett, K. (2004b). The truth about lies: Reminding interviewers that applicants lie may help screen out fabrications and exaggerations. *HR Magazine, 49* (5). Retrieved December 6, 2004, from http://www.shrm.org/hrmagazine/articles/0504/0504george.asp

George, J. F., Marett, K., & Tilley, (2004). Deception detection under varying electronic media and warning conditions. *Proceedings of the Thirty-Seventh Hawaii International*

Conference on System Sciences. Retrieved December 6, 2004, from http://csdl.computer.org/comp/proceedings/hicss/2004/2056/01/205610022b.pdf

Giannelli, P. C. (2004). Ake v. Oklahoma: The right to expert assistance in a post-Daubert, post-DNA world. *Cornell Law Review, 89*, 1305-1419.

Green, S. P. (2004). Moral ambiguity in white collar criminal law. *Notre Dame Journal of Law, Ethics & Public Policy, 18*, 501-519.

Gross, D. (2003, October 10). Lies, damn lies, and focus groups: Why don't consumers tell the truth about what they want? *Slate*. Retrieved November 25, 2004, from http://slate.msn.com/id/2089677/

Guthrie, C., Rachlinski, J. J., & Wistrich, A. J. (2001). Inside the judicial mind. *Cornell Law Review, 86*, 777-830.

Hackman, J. R., & Kaplan, R. E. (1974). Interventions into group process: An approach to improving the effectiveness of groups. *Decision Sciences, 5*, 459-480.

Hall, E. T. (1976). *Beyond culture*. Garden City, NY: Anchor/Doubleday.

Hall, E. T., & Hall, M. R. (1987). *Hidden differences: Doing business with the Japanese*. Garden City, NY: Anchor/Doubleday.

Hall, E. T., & Hall, M. R. (1990). *Understanding cultural differences*. Yarmouth, ME: Intercultural Press.

Hancock, J. T., Thom-Santelli, J., & Ritchie, T. (2004). Deception and design: The impact of communication technology on lying behavior. *Proceedings of the 2004 Conference on Human Factors in Computing Systems*, 129-134.

Hanson, J. D., & Kysar, D. A. (1999). Taking behavioralism seriously: Some evidence from market manipulation. *Harvard Law Review, 112*, 1420-1572.

Hayne, S. C., Pollard, C. E., & Rice, R. E. (2003). Identification of comment authorship in anonymous group support systems. *Journal of Management Information Systems, 20* (1), 301-329.

Hays, C. L., & Eaton, L. (2004, January 20). Martha Stewart, near trial, arranges her image. *The New York Times*, pp. A1, C2.

Hendershott, A., & Wright, S. (1993). Student focus groups and curriculum review. *Teaching Sociology, 21*(2), 154-159.

Henderson, N. R., & Langer, J. (2003, March 3). Why ask why?: One question posed by moderators elicits opposing views. *Marketing News, 37* (5), p. 52.

Hensler, D. R. (1999). Do we need an empirical research agenda on judicial independence? *Southern California Law Review, 72*, 707-721.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage.

Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. London: McGraw-Hill.

Hogarth, R. (1987). *Judgement and choice: The psychology of decision* (2nd ed.). Chichester, England: Wiley.

Hopkins, K. (1998). Law firms, technology, and the double-billing dilemma. *Georgetown Journal of Legal Ethics, 12*, 95-106.

Jackson, N. B. (2003, July 3). Opinions to spare? Click here. *The New York Times*, p. G1.

Jones, A. B., & Miller, D. E. (1997). Using technology for stakeholder consultation: The World Bank's use of GroupSystems V in developing countries. *Proceedings of the Thirtieth Hawaii International Conference on System Sciences*, 464-468.

Jones, N. B., & Kochtanek, T. R. (2004). Success factors in the implementation of a collaborative technology and resulting productivity improvements in a small business: An exploratory study. *Journal of Organizational and End User Computing, 16* (1), 1-20.

Kaplan, B., & Maxwell, J. A. (1994). Qualitative research methods for evaluating computer information systems. In J. G. Anderson, C. E. Aydin, & S. J. Jay (Eds.), *Evaluating health care information systems: Methods and applications* (pp. 45-68). Thousand Oaks, CA: Sage.

Kiely, T. (1998). Wired focus groups. *Harvard Business Review, 76* (1), 12-16.

Klein, E. E. (2000). The impact of information technology on leadership opportunities for women: The leveling of the playing field. *Journal of Leadership Studies, 7* (3), 88-98.

Klein, E. E. (2002). Group support systems as handmaidens of innovation: The removal of barriers to creative idea generation within small groups. *Proceedings of the 2002 Information Resources Management Association (IRMA) International Conference*, 327-329.

Klein, E. E. (2003). Group support systems and the removal of barriers to creative idea generation within small groups: The inhibition of normative influence. In F. Albalooshi (Ed.), *Virtual education: Cases in learning and teaching technologies* (pp. 91-112). Hershey, PA: IRM Press.

Klein, E. E., Clark, C. C., & Herskovitz, P. J. (2003). Philosophical dimensions of anonymity in group support systems: Ethical implications of social psychological consequences. *Computers in Human Behavior, 19,* 355-382

Klein, E. E., & Dologite, D. G. (2000). The role of computer support tools and gender composition in innovative information system idea generation by small groups. *Computers in Human Behavior, 16*, 111-139.

Kline, T. J. B., & McGrath, J.-L. (1999). A review of the groupware literature: Theories, methodologies, and a research agenda. *Canadian Psychology, 40* (3), 265-271.

Koehler, J. J. (2001). The psychology of numbers in the courtroom: How to make DNA-match statistics seem impressive or insufficient. *Southern California Law Review, 74*, 1275-1305.

Kontio, J., Lehtola, L., & Bragge, J. (2004). Using the focus group method in software engineering: Obtaining practitioner and user experiences. *Proceedings of the International Symposium on Empirical Software Engineering (ISESE)*. Retrieved November 7, 2004, from http://www.soberit.hut.fi/%7Ejkontio/Papers/FocusGroup_ISESE_web.pdf

Köszegi, S., Vetschera, R., & Kersten, G. E. (2003). *National cultural differences in the use and perception of Internet-based NSS — Does high or low context matter?* (InterNeg Research Paper No. INR09/03). Montreal & Ottawa, Canada: Concordia University (Montreal), the University of Ottawa, & Carleton University (Ottawa).

Koudriachov, S. A. (2002). New evaluation criteria for country attractiveness in terms of market entry. *Currents International Trade Law Journal, 11*, 23-30.

Kritzer, H. M. (1999). The professions are dead, long live the professions: Legal practice in a postprofessional world. *Law and Society Review, 33*, 713-759.

Krueger, R. A. (1988). *Focus Groups: A practical guide for applied research*. Newbury Park, CA: Sage.

Krueger, R. A. & Casey, M. A. (2000). *Focus Groups*. Thousand Oaks, CA: Sage.

Kruglanski, A. W., & Freund, T. (1983). The freezing and unfreezing of lay-inferences: Effects on impressional primacy, ethnic stereotyping, and numerical anchoring. *Journal of Experimental Social Psychology, 19*, 448-468.

Lichtenstein, S., & Swatman, P. M. C. (2003). The potentialities of focus groups in e-business research: Theory validation. In K. V. Andersen, S. Elliot, P. Swatman, E. Trauth, & N. Bjørn-Andersen (Eds.), *Seeking success in e-business: A multidisciplinary approach* (pp. 207-226). Boston: Kluwer.

Lim, C.P., & Tan, S.C. (2001). Online discussion boards for focus group interviews: An exploratory study. *Journal of Educational Enquiry, 2* (1), 50-60.

Madriz, E. I. (1998). Using focus groups with lower socioeconomic status Latina women. *Qualitative Inquiry, 4* (1), 114-128.

Mariampolski, H. (1989, October 24). Probing correctly uncovers truth behind answers in focus group. *Marketing News, 22*, pp. 22, 26.

McArthur, L. S. (1982). Judging a book by its cover: A cognitive analysis of the relationship between physical appearance and stereotyping. In A. H. Hastrof & A. M. Isen (Eds.), *Cognitive social psychology* (pp. 149-211). New York: Elsevier/North-Holland.

McDonagh-Philp, D., & Bruseberg, A. (2000). The use of focus groups in design research: A literature review. *CoDesigning 2000 Adjunct Proceedings*, 47-52.

McDonagh-Philp, D., Denton, H., & Bruseberg, A. (2000). Use and evaluation of focus group technique: The undergraduate industrial designer experience. *Journal of the National Association for Design Education, 8* (Nov./ Dec.), 17-26.

McGrath, J. E., & Berdahl, J.L. (1998). Groups, technology, and time: Use of computers for collaborative work. In R. S. Tindale, L. Heath, J. Edwards, E. J. Posavac, F. B. Bryant, Y.

Suarez-Balcazar, et al. (Eds.), Theory and research on small groups (pp. 205-228). New York: Plenum Press.

Menkel-Meadow, C. (2001). Aha? Is creativity possible in legal problem solving and teachable in legal education? *Harvard Negotiation Law Review, 6,* 97-144.

Merkes, M. (2003). *A longer working life for Australian women of the baby boom generation? – Women's voices and social policy implications of an ageing female workforce*. Unpublished Doctoral Dissertation, La Trobe University, Bundoora, Victoria, Australia.

Mitchell, G. (2002). Taking behavioralism too seriously? The unwarranted pessimism of the new behavioral analysis of law. *William & Mary Law Review, 43*, 1907-2021.

Mitchell, J. B. (2000). Why should the prosecutor get the last word? *American Journal of Criminal Law, 27*, 139-216.

Mixon, J., & Otto, G. (1994). Continuous quality improvement, law, and legal education. *Emory Law Journal, 43*, 393-505.

Montell, F. (1999). Focus group interviews: A new feminist method. *NWSA Journal, 11*(1), 44-71.

Montoya, M. E. (2000). Silence and silencing: Their centripetal and centrifugal forces in legal communication, pedagogy and discourse. *University of Michigan Journal of Law Reform, 33*, 263-327.

Montoya-Weiss, T. M., Massey, A. P., & Clapper, D. L. (1998). On-line focus groups: Conceptual issues and a research tool. *European Journal of Marketing, 32* (7/8), 713-723.

Morgan, D. L. (1997). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Morison, J. (2004). E-Democracy: On-line civic space and the renewal of democracy? *Canadian Journal of Law and Jurisprudence, 17*, 129-142.

Morrison, M. A., Haley, E., Sheehan, K. B., & Taylor, R. E. (2002). *Using qualitative research in advertising: Strategies, techniques, and applications.* Thousand Oaks, CA: Sage.

Myers, M. D. (1997). *Qualitative research in information systems*. Retrieved February 18, 2004, from MISQ Discovery Web site: http://www.qual.auckland.ac.nz

Neiger, B. L., Barnes, M. D., Thackeray, R., & Lindman, N. (2001). Use of the Delphi methos and nominal group technique in front-end market segmentation. *American Journal of Health Studies, 17* (3), 111-119.

Ngwenya, J., & Keim, R. (2001). Group support systems: The effects of mixing support systems on information pooling, decision time, and decision quality. *Proceedings of the Twenty-Second International Conference on Information Systems,* 169-179.

Nisbett, R., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice Hall.

Northcraft, G. B., & Neale, M. A. (1987). Experts, amateurs, and real estate: An anchoring-and-adjustment perspective on property pricing decisions. *Organizational Behavior and Human Decision Processes, 39,* 84-97.

Nunamaker, J. F. Jr., Briggs, R. O., Mittleman, D. D., & Vogel, D. R. (1996/1997). Lesson from a dozen years of group support systems research: A discussion of lab and field findings. *Journal of Management Information Systems, 13* (3), 163-207.

Nylander, E. M. (2003, Fall). *Intercultural communication: High-context/low-context*. Retrieved March 7, 2004, from http://home.tiscali.se/mueller/ING03context.htm

O'Connell, V. (2002, November 27). Speaking up: One focus group revealed. *The Wall Street Journal*, p. B21.

Parent, M., Gallupe, R. B., Salisbury, W. D., & Handelman, J. M. (2000). Knowledge creation in focus groups: Can group technologies help? *Information & Management, 38* (1), 47-58.

Parks, A. (1997, May 12). On-line focus groups reshape market research industry. *Marketing News, 31*(10), p. 28.

Parmar, A. (2003, March 3). Net research is not quite global. *Marketing News, 37* (5), pp. 51-52.

Prentice, R. A. (2000). The case of the irrational auditor: A behavioral insight into securities fraud litigation. *Northwestern University Law Review, 95*, 133-219.

Prentice, R. A. (2002). Whither securities regulation? Some behavioral observations regarding proposals for its future. *Duke Law Journal, 51*, 1397-1511.

Prentice, R. A. (2003). Contract-based defenses in securities fraud litigation: A behavioral analysis. *University of Illinois Law Review, 2003*, 337-420.

Prentice, R. A., & Koehler, J. J. (2003). A normality bias in legal decision making. *Cornell Law Review, 88*, 583-650.

Rachlinski, J. J. (2003). The uncertain psychological case for paternalism. *Northwestern University Law Review, 97*, 1165-1225.

Randazza, M. J. (2002). Getting to yes with terrorists. *Law Review of Michigan State University – Detroit College of Law, 2002*, 823-834.

Ratcliff, D. G. (2002). Using trial consultants: What practitioners need to know. *Journal of Legal Advocacy and Practice, 4*, 32-52.

Reinig, B. A., & Mejias, R. J. (2003). An investigation of the influence of culture and group support systems on processes and outcomes. *Proceedings of the Thirty-Sixth Hawaii*

International Conference on System Sciences. Retrieved February 22, 2004, from http://www.hicss.hawaii.edu/HICSS36/HICSSpapers/CLUSR10.pdf

Rezabek, R. (2000, January). Online focus groups: Electronic discussions for research. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research [On-line Journal], 1*(1). Retrieved February 21, 2004, from http://www.qualitative-research.net/fqs-texte/1-00/1-00rezabek-e.htm

Richards, B. J. (2000). The times they are a-changin': A legal perspective on how the Internet is changing the way we buy, sell, and steal music. *Journal of Intellectual Property Law, 7*, 421-454.

Riva, S. (2001). The mind over the Web: The quest for the definition of a method for Internet research, *CyberPsychology & Behavior, 4* (1), 7-16.

Rodgers, T. L., Dean, D. L., & Nunamaker, J. F., Jr. (2004). Increasing inspection efficiency through group support systems. *Proceedings of the Thirty-Seventh Hawaii International Conference on Systems Sciences*. Retrieved December 7, 2004, from http://csdl.computer.org/comp/proceedings/hicss/2004/2056/01/205610018b.pdf

Rook, D. W. (2003). Out-of-focus groups. *Marketing Research, 15* (2), 11.

Rosnow, R. L., & Rosental, R. (1999). *Beginning behavioral research: A conceptual primer* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Rubin, H. J., & Rubin, I. S. (1995). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage.

Russo, J. E., & Schoemaker, P. J. H. (with Hittleman, M.). (2002). *Winning decisions: Getting it right the first time*. New York: Currency/Doubleday.

Schindler, R. M. (1992). The real lesson of new Coke: The value of focus groups for predicting the effects of social influence. *Marketing Research, 4* (4), 22-27.

Seidler, S. (2003, March 3). Spend smarter, less for best study results. *Marketing News, 37* (5), p. 54.

Seielstad, A. M. (2002). Community building as a means of teaching creative, cooperative, and complex problem solving in clinical legal education. *Clinical Law Review, 8*, 445-514.

Slovic, P., Fischhoff, B., & Lichtenstein, S. (1982). Facts versus fears: Understanding perceived risk. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 463-489). Cambridge, England: Cambridge University Press.

Soutar, G. N., Whiteley, A. M., & Callan, J. L. (1996). Group support systems: An alternative to focus groups. *Australasian Journal of Market Research, 4* (1), 35-46.

Supphellen, M. (2000). Understanding core brand equity: Guidelines for in-depth elicitation of brand associations. *International Journal of Market Research*, *42*, 319-364.

Sweeney, J. C., Soutar, G. N., Hausknecht, D. R., Dallin, R. F., & Johnson, L. W. (1997). Collecting information from groups: A comparison of two methods. *Journal of the Market Research Society, 39*(2), 397-411.

Szybillo, G., & Berger, R. (1979). What advertising agencies think of focus groups. *Journal of Advertising Research, 19*(3), 29-33.

Tan, B. C. Y., Watson, R. T., & Wei, K-K. (1995). National culture and group support systems: Filtering communication to dampen power differentials. *European Journal of Information Systems, 4*, 82-92.

Tan, B. C. Y., Wei, K-K., Watson, R. T., & Walczuch, R. M. (1998). Reducing status effects with computer-mediated communication: Evidence from two distinct national cultures. *Journal of Management Information Systems, 15* (1), 119-141.

Tannen, D. (1995). The power of talk: Who gets heard and why. *Harvard Business Review, 73* (5), 138-149.

Ten-Pow, J. (2003, November). *Fundamentals for those considering online focus groups.* Retrieved February 22, 2004, from http://www.onsurvey.ca/pdf/conducting_ofg.pdf

Ting-Toomey, S. (1989). Intergroup communication and simulation in low- and high-context cultures. In D. Crookall & D. Saunders (Eds.), *Communication and simulation: From two fields to one theme* (pp. 167-176). Clevedon, England: Multilingual Matters.

Townsend, A. M., DeMarie, S. M., & Hendrickson, A. R. (1998). Virtual teams: Technology and the workplace of the future. *Academy of Management Executive, 12* (3), 17-29.

Tse, A. C. B. (1999). Conducting electronic focus group discussions among Chinese respondents. *Journal of the Market Research Society, 41*, 407-415.

Tuckel, P., Leppo, E., & Kaplan, B. (1992). Focus groups under scrutiny: Why people go and how it affects their attitudes toward participation. *Marketing Research, 4*(2), 12-18.

Tversky, A., & Kahneman, D. (1982). Judgment under uncertainty: Heuristics and biases. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases* (pp. 3-20). Cambridge, England: Cambridge University Press.

Underhill, C., & Olmsted, M. G. (2003). An experimental comparison of computer-mediated and face-to-face focus groups. *Social Science Computer Review, 21*, 506-512.

Ullrick, B. A. (2000). The alternative billing diner: Serving up a new billing scheme for the technological age. *Journal of Technology Law & Policy, 5*, 1-50.

Ulwick, A. W. (2002). Turn customer input into innovation. *Harvard Business Review, 80* (1), 91-97.

Van Ryzin, G. G., & Lado, M. E. (1999). Evaluating systems for delivering legal services to the poor: Conceptual and methodological considerations. *Fordham Law Review, 67,* 2553-2571.

Veverka, M. (2004, January 5). Software: The likely winner of '04 [Plugged in]. *Barron's,* p. T2.

Visser, D. (2003). Cultural forces in the making of mixed legal systems. *Tulane Law Review, 78,* 41-78.

Vreede, G. J. de, & Bruijn, H. de (1999). Exploring the boundaries of successful GSS application: Supporting inter-organizational policy networks. *Data Base for Advances in Information Systems, 30* (3/4), 111-130.

Vreede, G. J. de, Davison, R. M., & Briggs, R. O. (2003). How a silver bullet may lose its shine. *Communications of the ACM, 46* (8), 96-101.

Vreede, G. J. de, Jones, N., & Mgaya, R. J. (1998/1999). Exploring the application and acceptance of group support systems in Africa. *Journal of Management Information Systems, 15* (3), 197-234.

Walston, J. T., & Lissitz, R. W. (2000). Computer-mediated focus groups. *Evaluation Review, 24*(5), 457-483.

Wansink, B., Kent, R. J., & Hoch, S. J. (1998). An anchoring and adjustment model of purchase quantity decisions. *Journal of Marketing Research, 35,* 71-81.

Weissman, R. X. (1998). Online or off target? *American Demographics, 20* (November), 20-21.

Wellner, A. S. (2003). The new science of focus groups. *American Demographics, 25* (March), 29-33.

White, E. (2000, March 2). Market research on the internet has its drawbacks. *The Wall Street Journal*, p. B4.

Wilson, J., & Jessup, L. M. (1995). A field experiment on GSS anonymity and group member status. *Proceedings of the Twenty-Eighth Annual Hawaii International Conference on System Sciences*, 212-221.

Wooten, D. B., & Reed, A., II. (2000). A conceptual overview of the self-presentational concerns and response tendencies of focus group participants. *Journal of Consumer Psychology, 9*(3), 141-153.

Wright, W. A. (1996). Mediation of private United States-Mexico commercial disputes: Will it work? *New Mexico Law Review, 26,* 57-74.

Young, S. J., Pittman, A. T., & Spengler, J. O. (2004). Best case scenario: The development of a teaching tool for sport law. *Journal of Legal Aspects of Sport, 14*, 1-21.

Zaltman, G. (2003). *How customers think: Essential insights into the mind of the market*. Boston: Harvard Business School Press.

Zhou, L., Burgoon, J. K., Twitchell, D. P., Qin, T., & Nunamaker, J. F., Jr. (2004). A comparison of classification methods for predicting deception in computer-mediated communication. *Journal of Management Information Systems, 20* (4), 139-165.

Zigurs, I., & Buckland, B. K. (1998). A theory of task/technology fit and group support systems effectiveness. *Management Information Systems Quarterly, 22,* 313-334.

Zigurs, I., Buckland, B. K., Connolly, B. K., & Wilson, E. V. (1999). A test of task-technology fit theory for group support systems. *Data Base for Advances in Information Systems, 30* (3/4), 34-50.