Ethics in leadership: The Internet Perspective

Jo Dipnall, CogNETive Pty Ltd

and

Denise Jepsen, The Encouragement Company Pty Ltd

Abstract

A comparative study of Internet and paper respondents to a questionnaire on the topic of ethics in leadership was conducted. The research investigated if there were any significant response differences due to the medium used, and concluded there was no response-bias. The research then used the Leader-member exchange (LMX) dyadic respondent/supervisor relationship as the level of analysis. The Ethical Attitudes Scale (EAS) was used to measure attitudes towards a range of ethical dilemmas. Responses from Internet (n = 209) and paper (n = 152) sources differed slightly on investigations into the effects of age, education, and social desirability on attitudes towards ethics. The Internet and paper studies both gave the same result that attitudes towards organisational ethical dilemmas differ significantly from attitudes towards non-organisational ethical dilemmas. A major repercussion of the Internet study was a better ingroup relationship with a Supervisor occurred when ethical attitudes were more similar. Finally, the study investigated the effect of the length of time the respondent and their supervisor had worked together had on the relationship. [1]

[1] Due to the comparative nature of this study, we acknowledge that this paper contains information from Denise Jepsen's original Psychology Honours thesis on *"Ethics in leadership: A leader-member exchange perspective"* for the University of New England.

Ethics in leadership: The Internet Perspective

What makes a good leader? What makes us **want** to follow a leader? It seems logical that we all want to be guided by those we respect and offer us clear directives. Warren Bennis, Ph.D. once stated that "Managers are people who do things right, while leaders are people who do the right thing". It is often said good leaders develop through a never-ending process of training, education, self-study and experience. Leadership is a complex process by which a person influences others to accomplish a mission, task or objective and directs the organization in a way that makes it more cohesive and coherent (Clark, 1997).

In October 2000, Denise Jepsen submitted a Psychology Honours thesis on *"Ethics in leadership: A leader-member exchange perspective"* for the University of New England which examined part of the leadership process. The paper looked at the difference in ethical attitudes between respondents and their supervisors, and compared this with Leader-Member Exchange (LMX) ratings. Younger respondents were found to be less strict in their ethical judgement than older respondents; and less educated respondents were ethically stricter than more educated respondents.

The Internet generation is sometimes accused of being critical, demanding and sophisticated (Modalis, 2001), with many people categorising Internet users into groups, such as the *e-fluential* "online movers and shakers" (Burson-Marsteller, 2000). Media coverage tends to focus on the out-of-the-ordinary, the illegal, or the immoral capacity of the new technologies. But how much do we really know about Internet users? We are informed regularly about their buying behaviour, their ages, their education, and their eCommerce habits, but do we *really* know them? Do we know, for example, their ethics?

Given the demographic profile of the Internet audience, it would seem plausible that this *educated* group would be less ethically strict. But is this the case? Are Internet users different in terms of leadership and ethics in the workplace? If there is a difference, is it just because they respond differently online? This replication study was designed to compare the results of the original paper-based responses with current Internet user responses to the same ethical dilemmas, in an attempt to identify how the two groups differ.

The study also looked at the differences in ethical attitudes towards organizational and non-organizational ethical dilemmas in the paper study and the Internet users. Finally, the study investigated how intimacy of the workgroup relationship was related to ethical differences, if at all. It was decided to perform a comparative study using a Panel of Internet Users. This paper is based on the original unpublished manuscript.

With more and more employee and business questionnaires conducted using the Internet, we also felt it pertinent to establish if there are any differences between the results of the studies based on what medium was used to collect the data.

Background

There are many leadership theories: trait approaches; contingency (situational) models; transformational or charismatic models; and power and influence approaches (Yukl and Van Fleet, 1992). The theories and associated research attempt to explain either leader or follower behaviour, characteristics, or personality. Some theories refer to the characteristics of the leader – for example, charismatic leaders tend to gain respect and trust – while personality theories tend to refer to the leader's traits such as honesty and integrity (Robbins, Marsh, Cacioppe, and Millett, 1998).

The Leader-Member Exchange (LMX) Theory proposed by Graen and colleagues (Robbins et al., 1998) looks at the dyadic (paired) relationship between a leader and a follower (called "member"). This theory of social exchange uniquely focuses on the relationship between the leader and member as its level of analysis (Gerstner and Day, 1997). The quality of the relationship is considered to be representative of the group and organisational levels. Over time a leader treats some individuals in the team differently to others, creating an ingroup and an outgroup. This is achieved through ongoing unequal relationships with individual team members. More attractive tasks, increased opportunities, or tangible benefits are exchanged for member's attitudes and behaviour toward the leader (Yukl and Van Fleet, 1992).

A stronger LMX relationship has been found to be positively associated with: better performance, higher overall satisfaction, greater satisfaction with supervisor, stronger organisational commitment, more positive role perceptions

and more positive ratings of member performance (Dunegan, Duchon and Uhl-Bien, 1992, Scandura and Graen, 1984).

Ingroup Members

Ingroup members have leaders who do not resort to formal authority, where members contribute more and are more responsible (Liden and Graen, 1980). They receive increased attention, trust, benefits, privileges, support, and sensitivity from their supervisors (Liden and Graen, 1980, Robbins, et al., 1998). They are evaluated, described and attributed more positively, and found to be more persuasive communicators than outgroup members (Taylor, Peplau and Sears, 1970). It appears that ingroup membership **favours** both member and leader.

Figure 1 - Ingroup dynamics

Outgroup Members

Outgroup members experience a more formal and limited, job-description exchange with the supervisor, performing more routine, mundane tasks of the unit (Liden and Graen, 1980). They are evaluated, described, and attributed less positively, and found to be less persuasive communicators than ingroup members (Taylor, Peplau and Sears, 1970). It appears that outgroup membership members are often **disadvantaged.**

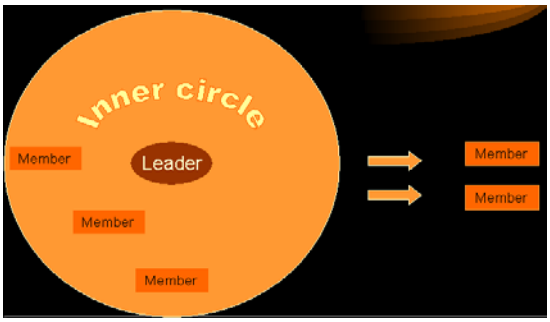

Figure 2 - Outgroup dynamics

Formation of the Ingroup

One of the factors contributing to the formation of a leader's ingroup is considered to be how similar the member and the leader are, sometimes called the similarity effect. Social psychology research on group membership refers frequently to the similarity of ingroup members, both the members and leaders. (eg, Hogg and Abrams, 1988, Schneider, 1988, Turban and Jones, 1988, and Taylor, Peplau and Sears, 1970). This relational demography has been found to increase leader's liking (Bauer and Graen, 1996) and trust and confidence (Bauer and Graen, 1996, and Turban and Jones, 1988). It is suggested to lead to the ingroup favouritism effect (Taylor, Peplau and Sears, 1970). Bauer and Graen (1996) say much of the similarity-attraction paradigm may operate on a subconscious level (p1562). It has been suggested that this may be one of the cumulative qualities to predict the quality of LMX (Bauer and Graen, 1996).

There is wide agreement that trust is an important aspect of the LMX relationship (Bauer and Green, 1996). Larzelere and Huston (1980) define trust as a person's belief in the integrity of another individual. They suggest "dyadic trust would seem to be a prerequisite for commitment, with higher levels of trust necessary for higher levels of commitment" (p597).

Confrontation

Douglas (1995) speculates that acceptance into a group includes conformity with "secret rules" governing acceptable behaviour. He suggests the search for similarity is not confined to age, gender, occupation and other apparent social indicators but may also require confrontation in order to assess the common ground between group members, and hence the value of the member to the group.

Confrontation frequently occurs when decisions are being made, with the decision-making in organizations is almost always the role of the leader - at team, group, departmental or organisational level. The balance between economic objectives and social responsibility in a business or corporate decision making context is the realm of ethics (Sciarelli, 1999). Froelich and Kottke (1991) refer to the personal nature of competing demands and role conflict being at the source of ethical dilemmas.

Ethics

Ethics is not about codes, but about people who make decisions. One study found ethics officers and committees were not perceived by managers to be as effective in institutionalising ethics, while culture, leadership, and communication channels were (Jose and Thibodeaux, 1999). Leadership behaviour is one component of culture, and O'Brien (1998), for example, specifies an employee's commitment is directly related to their leader's moral formation. Morgan (1993) demonstrated a strong positive correlation between self perceptions of ethics and self perceptions of leadership. He concluded "ethical behaviour appears to contribute to credibility as a leader" (p210). Leaders are clearly seen as role models for members' behaviour (Morgan, 1993).

A person's ethics reflect the sum total of that individual's experiences, education, and upbringing (Dessler, 1995). The process of making good ethical decisions is complex, influenced by individual, organisational, situational and external factors (Jose and Thibodeaux, 1999), and interpersonal and organisational influences (Knouse and Giacalone, 1992). Furthermore, ethical decision making is regularly hampered by psychological factors such as ignoring low-probability events, limiting the search for stakeholders and ignoring the possibility of being "found out" (see, for example, Dessler, 1995). A person tends to have certain theories about the world, other people, or themselves, that affect their ethical decision making (Messick and Bazerman, 1996).

Both leaders and followers have attitudes towards ethical dilemmas. It appears that a leader's attitude and final decisions towards more difficult ethical dilemmas will influence the member's perception of that leader. Could attitudes towards ethical decision making be behind one person being accepted into the ingroup and another being rejected to the outgroup?

A study of ethics has wider repercussions in the workplace, other than group membership and leadership. Attitudes towards ethics impacts on problem solving, motivation, managing conflict and team building, for example (Yukl and Van Fleet, 1992).

The original research questions

Jepsen's original paper-based research addressed some key questions relating to leadership and ethical attitudes. These hypotheses were tested in our Internet respondent's comparative analysis.

Original hypothesis 1: Personal characteristics

1a: That younger respondents will be "less ethical" than older respondents.

1b: That more educated respondents will differ in their attitudes towards ethical dilemmas than less educated respondents.

1c: That high social desirability respondents rate themselves more ethically than low social desirability respondents rate themselves.

In a study on generational attitudes to ethical situations, Longenecker, McKinney, and Moore (1989) found younger managers to be more permissive in what they accept as ethical behaviour. Sample respondents of 2156 managerial and professional business personnel were split into younger (aged 21 to 40) and older (aged 51 to 70) groups. In attempting to explain the attitudinal age difference, Messick and Bazerman (1996) suggest that improved decision making results from education, specifically, attention to quality, breadth, and honesty in problem assessment.

Longenecker et al. (1988) did not address any aspects of education being a contributing factor to an understanding – or acceptance of – ethical dilemmas. It is possible that education, rather than age, changes attitudes towards ethical

decision making. While individuals tend to rate themselves higher than they rate others, called the same source bias (Gerstner and Day, 1997), there is likely to be another self-report bias characteristic influencing much of the attitudinal research on ethics.

Weierter, Ashkanasy, and Callan (1997) and Knouse and Giacalone (1992) suggest those high in social desirability are similarly influenced in their ethical choices by how others are likely to respond. The high scorers on these scales are likely to give more responses that make them appear more favourable – more strict – to the ethical issues raised.

In the first part of this study, it is predicted that the personal characteristics of age, education and level of social desirability will influence a respondent's stated attitudes towards ethical dilemmas.

Original hypothesis 2: That respondents will show themselves as having less strict ethical attitudes towards organisational than non-organisational ethical dilemmas.

Longenecker et al. used 16 vignettes representing business ethical situations. Respondents were asked their views on ethical dilemmas within an organisational context. Similarly, Froelich and Kottke (1991) created a 16-item scale to assess individual beliefs about organisational ethics. They used generic statements, like "profits should be given a higher priority than the safety of a product". Craig and Gustafson (1998) recognised trust and integrity in distinguishing leader from non-leader, and developed the Perceived Leader Integrity Scale (PLIS) of unethical situations across seven organisational domains (training and development, resource/workload allocation, truth-telling, unlawful discrimination, compliance with policies and procedures, maliciousness, and self-protection) to measure perceived leadership integrity. The workplace, however, consists not simply of adults working in isolation, but of humans working together, holding some personal values irrespective of their employer. As can be seen, much of the organisational research focuses on business ethics, and has excluded personal attitudes towards non-organisational ethical situations. This research gap was addressed in the original study and in this comparative study.

It is predicted that an individual's attitude is likely to be consistent towards many organisational ethical situations, but that attitude may be stricter with non-organisational ethical dilemmas.

Original hypothesis 3: That a smaller difference between Self and perceived Supervisor attitudes towards ethical dilemmas will predict a more positive LMX relationship, and a higher likelihood of ingroup membership.

Given our earlier contention that ethical similarity is a strong part of what makes people similar, it is predicted that the more convergent a member and their leader's ethical attitudes are, the more positive will be their LMX relationship. That is, the closer we think we are on ethical issues, the better our ingroup relationship. Addressing this issue was the main purpose of the original research.

Original hypothesis 4: That employees who have worked with their supervisor longer will have more similar ethical attitudes to their supervisor.

The relationship between leaders and members may be affected by time spent together. Non-behavioural elements are argued to affect the early stages of the leader-member relationship, with interpersonal trust being a key component (Bauer and Green, 1996). But what happens to the relationship once a member has witnessed their leader making decisions for a longer period of time? It is predicted that the longer the leader and member have worked together, the more convergent will be their ethical attitudes.

Research questions for this study

This study investigated a number of perspectives. On the one hand, we looked at how the Internet respondents differed, both demographically and in their questionnaire response from the paper-based respondents. In order to establish if any differences were due to the methodology, the distribution, variability and reliability of both forms of collection was examined. Second, we investigated the Internet responses to the original research questions on the relationship between ethical attitudes and the dyadic leadership relationship. Third, we compared the analysis of results of the original research question for the original paper responses with the Internet responses. The final question we addressed was whether there was any difference in the role that ethical differentials play in determining the extent of the dyadic leader-member ingroup/outgroup relationship between Internet and paper respondents.

Method

The comparative study was conducted in two parts. First, the original research was investigated, data was checked, and clarifications received on minor methodology details. Second, that research questionnaire was replicated in electronic form for Internet application. Agreement was reached on how the original research could be altered without changing meaning, and two open ended questions, (relating to the respondent's perception of how they were similar or dissimilar to their supervisor), were added to the Internet questionnaire.

Participants

No deliberate attempt was made to match the respondent demographics in the two studies. The original questionnaire was distributed by hand to a general population of adults working in a diverse range of industries and occupations in Sydney and Melbourne, Australia. Subjects completed the questionnaire individually, and without supervision. A total of 152 responses were received. The Internet sample responded to an email invitation to the members of the international permission-based CogNETive Research Panel to perform a 30 minute online questionnaire. The respondents chose to *opt-in* to the questionnaire by going to the website to complete the questionnaire. They were invited to nominate their preferred charity for CogNETive's donation upon completion of the questionnaire. Subjects completed the questionnaire online individually, and without supervision. A total of 209 completed responses were received out of the 258 who started the questionnaire.

Questionnaire

The original paper questionnaire (July 2000) totalled eight A4 pages and contained an information and consent page clearly indicating the voluntary and anonymous nature of the research, the researcher's contact details, and how to obtain copies of the results. A one-page answer sheet was the only item to be returned, and this was variously received by fax, mail, and occasionally email. One of the questionnaire pages gave clear instructions, and two pages each listed 20 vignettes to be answered. The final two pages each had 20 and 31 questions respectively.

The original questionnaire was redesigned for Internet respondents. The major difference was that Internet respondents were presented with a limited number of questions on the screen to be answered at one time. All questions on the Internet version were forced response. The questionnaire Internet site was open for 14 days (June 2001) with one reminder issued after one week. Questionnaire content was identical to the original study plus the two new open-ended verbatim questions. The questionnaire was in five parts:

Parts 1 & 2 – Ethical Attitude Scale (EAS) – Self versus Supervisor

Vignettes are frequently used in research on ethics, as they create specific, life-like situations for decision-making evaluation (Bass, Barnett and Brown, 1999). A 20-item instrument of vignettes was designed, tested and constructed for the original research to measure attitudes to a range of ethical dilemmas. It was used to measure the respondent's own ethical attitudes (Part 1), then the same 20 vignettes were used to measure the respondent's beliefs in their Supervisor's ethical attitudes (Part 2). For example, one vignette was "In order to increase profits, a general manager used a productions process that exceeded legal limits for environmental pollution".

In both studies, vignettes were categorised as either organisational or non-organisational, depending on which ethical dimension they referred to. Organisational vignettes were business (3 vignettes) and marketing (3 vignettes); non-organisational vignettes were discrimination (4 vignettes), environmental (3 vignettes), and sexuality (3 vignettes). An additional category, personal finances (4 vignettes) was used for the full ethical scale.

In *Part One (Self)*, questions referred to the respondents' **own ethical views**. The question put to respondents was: "How much would it bother you to learn that someone you knew (perhaps even a family member) behaved in the manner described in the situation?" The four-item Likert-type forced choice response selection was "It would not bother me at all; It would bother me a little; It would bother me quite a bit; or It would bother me very much."

In *Part Two (Supervisor)*, respondents were asked to estimate **their supervisor's views**. They were given instructions on deciding who is their supervisor ("the person who you feel has the most control over your daily work activities") and asked to rate the same vignettes by "how much you think – or estimate, or guess if necessary – it would bother your workplace supervisor to learn that someone they knew behaved in the situation". The same forced choice options were available, adjusted slightly for the workplace supervisor perspective.

Scores were totalled separately for each of the Self and Supervisor scales, and averaged for each of the subscales. These scores were known as EAS (Self) and EAS (Supervisor). Higher scores indicate stricter ethical standards.

Cronbach's alpha statistic was used to check the reliability (internal consistency) of the final scale. In this paper, values of Cronbach's alpha statistic higher than 0.80 are regarded to be very satisfactory, and values between 0.70 and 0.80 are satisfactory. The interpretation of results based on scales with reliability values less than 0.70 should be treated more cautiously. Based on these guidelines, the Internet for both *Self* and *Supervisor* were found to be very satisfactory, with the paper based research as satisfactory for *Self* and very satisfactory for *Supervisor.*

Study = Internet – EAS (Self) Test scale = mean (standardized items)		**Study = Paper– EAS (Self)** Test scale = mean (standardized items)	
Average interitem correlation:	0.21	Average interitem correlation	0.14
Number of items in the scale:	20	Number of items in the scale:	20
Scale reliability coefficient:	0.84	Scale reliability coefficient:	0.76
Study = Internet – EAS (Supervisor) Test scale = mean (standardized items)		**Study = Paper– EAS (Supervisor)** Test scale = mean (standardized items)	
Average interitem correlation:	0.35	Average interitem correlation	0.30
Number of items in the scale:	20	Number of items in the scale:	20
Scale reliability coefficient:	0.91	Scale reliability coefficient:	0.89

Part 3: Leader-member exchange (LMX)

Part three of the questionnaire consisted of all the seven questions from the LMX 7 Scale developed by Graen and Scandura (1987), concerning the respondent's relationship with their supervisor. For example "How well do you feel that your immediate supervisor understands your problems and needs?" Questions were presented with a four-point, varying Likert scale response selection. An example response selection is: completely; well enough; some but not enough; and not at all. The seven items are summed for each participant, resulting in a possible range of scores from 7 to 28. Consistent with the original scale, higher scores indicate poorer relationships with the supervisor.

The scale is reported with coefficient alphas of .89 (Schriesheim, Scandura, Eisenbach and Neider, 1992) and as having the soundest psychometric properties of all available LMX measures (Gerstner and Day, 1997).

Cronbach's alpha statistic was used to check the reliability (internal consistency) of the final LMX scale. Using the same guidelines used for the EAS, the Internet and paper studies were both found to be very satisfactory.

Study = Internet – LMX Scale Test scale = mean (standardized items)		**Study = Paper– LMX Scale** Test scale = mean (standardized items)	
Average interitem correlation:	0.55	Average interitem correlation	0.51
Number of items in the scale:	7	Number of items in the scale:	7
Scale reliability coefficient:	0.90	Scale reliability coefficient:	0.88

Part 4: Social desirability

Questionnaire part four was the Marlowe-Crowne SDS Short Form, comprising thirteen questions to determine social desirability and the tendency to deliberately respond to the questions in a positive light (Crowne and Marlowe, 1960). Subjects reported on a true/false scale, and relevant items were reverse-scored. Responses ranged from 0 to 13. Higher scores indicate a higher level of social desirability.

Cronbach's alpha statistic was used to check the reliability (internal consistency) of the final SDS scale. Using the same guidelines used for the EAS, the Internet and paper studies were both found to be treated more cautiously.

Study = Internet – SDS Scale Test scale = mean (standardized items)		**Study = Paper– SDS Scale** Test scale = mean (standardized items)	
Average interitem correlation:	0.13	Average interitem correlation	0.12
Number of items in the scale:	13	Number of items in the scale:	13
Scale reliability coefficient:	0.66	Scale reliability coefficient:	0.63

Part 5: Perceived Leadership Integrity Scale

Part Five of the questionnaire was the 31-item Perceived Leadership Integrity Scale (PLIS) developed by Craig and Gustafson (1998). This scale was developed to measure "destructive" leadership from the follower's perspective (Craig and Gustafson).

Cronbach's alpha statistic was used to check the reliability (internal consistency) of the final PLIS scale. Using the same guidelines used for the EAS, the Internet and paper studies were both found to be very satisfactory.

Study = Internet – PLIS Scale Test scale = mean (standardized items)		**Study = Paper– PLIS Scale** Test scale = mean (standardized items)	
Average interitem correlation:	0.32	Average interitem correlation	0.50
Number of items in the scale:	31	Number of items in the scale:	31
Scale reliability coefficient:	0.94	Scale reliability coefficient:	0.97

However, even though the scales were highly reliable, there were some problems with the comparative measurement between the Internet and paper studies, so it was decided not to analyse this scale in this paper.

Control variables

A small number of control variables were included in the questionnaire. To control for the age of the respondents, an age range was requested (Under 21, 21 to 30, 31 to 40, 41 to 50, 51 to 60, and 61+). This scale was chosen to enable direct comparison with the Longenecker et al. study. Respondents were asked to indicate their sex. Another relevant variable is the length of time the respondent had worked with the target supervisor. Respondents chose from four selections (less than six months, six to 12 months, one to three years, and more than three years). To control for education, respondents chose from five selections (less than four years secondary, four years secondary, six years secondary, TAFE or equivalent, university degree or equivalent).

Results

Unless otherwise indicated, the 95% significance level was used for all statistical analyses ($p \leq 0.05$).

The following table details the respondent demographic characteristics of both studies, which was surprisingly close in all demographics except education, where there were more highly educated respondents in the Internet sample.

	Internet	Paper	Total
Gender	**%**	**%**	**%**
Male	47.4	47.6	47.5
Female	52.6	52.4	52.5
Age	**%**	**%**	**%**
Missing	0.0	3.3	1.4
Under 21	3.4	0.7	2.2
21-30	19.6	20.4	19.9
31-40	28.7	32.9	30.5
41-50	27.8	32.2	29.6
51-60	15.8	9.2	13.0
61+	4.8	1.3	3.3
Ave Age	40.3	38.9	39.7
Education	**%**	**%**	**%**
Missing	0.0	4.0	1.7
Less than 4 years secondary	4.3	2.0	3.3
4 years secondary	13.4	5.3	10.0
6 years secondary	13.9	5.3	10.3
TAFE or equivalent	15.3	25.7	19.7
University or equivalent	53.1	57.9	55.1
Time with current Supervisor	**%**	**%**	**%**
Missing	0.0	2.7	1.1
Less than 6 months	24.4	24.8	24.6
6 months to 1 year	19.1	20.8	19.8
1 to 3 years	26.3	26.9	26.5
More than 3 years	30.1	24.8	27.9

General Questionnaire results

Means, standard deviations, and correlations among the measured variables of the five parts of the questionnaire for Internet respondents are presented in Table 2 for Internet respondents, and Table 3 for paper respondents. The scales' Cronbach's coefficient alpha (test of internal consistency) is included.

Table 2
Descriptive Statistics, Correlations and Cronbach's Alpha Coefficients –Internet

	Descriptive Statistics				Correlations			
	n	Means	SD	Alpha	EAS Self	EAS Supervisor	LMX	M-C SDS
EAS Self	209	53.9	9.8	0.84				
EAS Supervisor	209	49.0	13.2	0.91	0.36**			
LMX	209	15.7	4.8	0.90	0.07	-0.29**		
M-C SDS	209	7.4	2.8	0.66	0.17	-0.33	-0.10	
PLIS	209	56.5	6.8	0.94	-0.05	0.33**	-0.68**	0.04

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed).

Table 3
Descriptive Statistics, Correlations and Cronbach's Alpha Coefficients – Paper

	Descriptive Statistics				Correlations			
	n	Means	SD	Alpha	EAS Self	EAS Supervisor	LMX	M-C SDS
EAS Self	152	52.4	8.4	0.76				
EAS Supervisor	148	48.2	12.3	0.89	0.49**			
LMX	149	15.3	4.8	0.88	-0.05	-0.37**		
M-C SDS	151	7.2	2.7	0.63	-0.19	0.15	-0.11	
PLIS	149	41.9	15.9	0.97	-0.02	-0.37**	0.68**	-0.18*

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed).

Parts 1 & 2: The Ethical Attitude Scale (EAS) – Self versus Supervisor

Reviewing the nature of response for each study group, the following histograms (Figures 3 & 4) display the distribution of the single continuous variables EAS total scores for both study types for both self and supervisor ethical attitudes. It indicates that there is some variation in how the paper and Internet respondents scored this measure. All distributions are close to *normal*, but the paper distribution for the Total EAS (*Supervisor)* scores appears to be skewed more to the lower end of the scale.

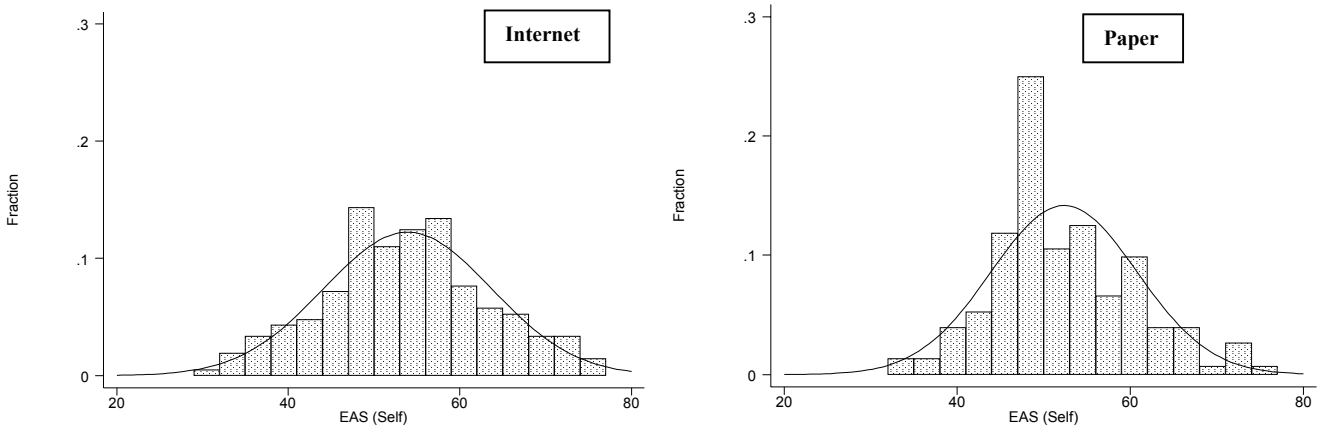

Figure 3 - Histogram – Total EAS (*Self)* Scores Internet Versus Paper (Bin=20)

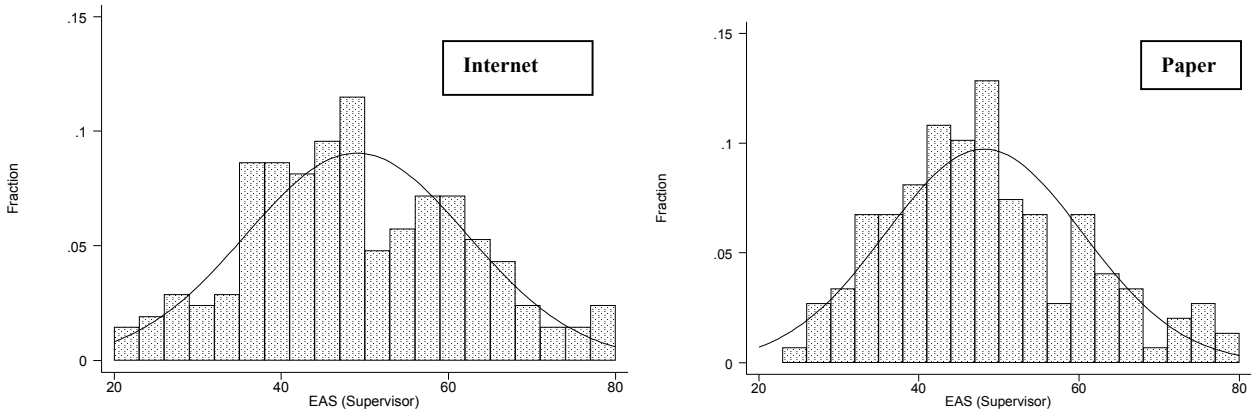

Figure 4 – Histogram – Total EAS *(Supervisor)* Scores Internet Versus Paper (Bin=20)

The probability(skewness) for the EAS *(Self)* and EAS *(Supervisor)* for the Internet study was 0.81 and 0.36 respectively (ie not significantly skewed at the 95% level). However, the probability(skewness) for the EAS *(Self)* and EAS *(Supervisor)* for the original paper study was 0.05 and 0.03 respectively (i.e. significantly skewed at the

95% level). This slight skewing of the paper study could have affected the parametric statistical techniques (e.g. t-tests, analysis of variance) used. However, with reasonably large samples skewness will not "make a substantive difference in analysis" (Tabachnick & Fidell, 1996, p.73), and we believe the sample size in the original study was acceptable.

Figure 5 shows a boxplot of the distribution of scores for *Self* and *Supervisor* for Internet versus paper. The rectangle represents 50% of the cases, with the whiskers going out to the 5% smallest and largest values. The line inside the rectangle refers to the median value. The Internet has a slightly broader distribution for both scores, and a higher median value for both *Self* and *Supervisor*. There were no outliers for both studies.

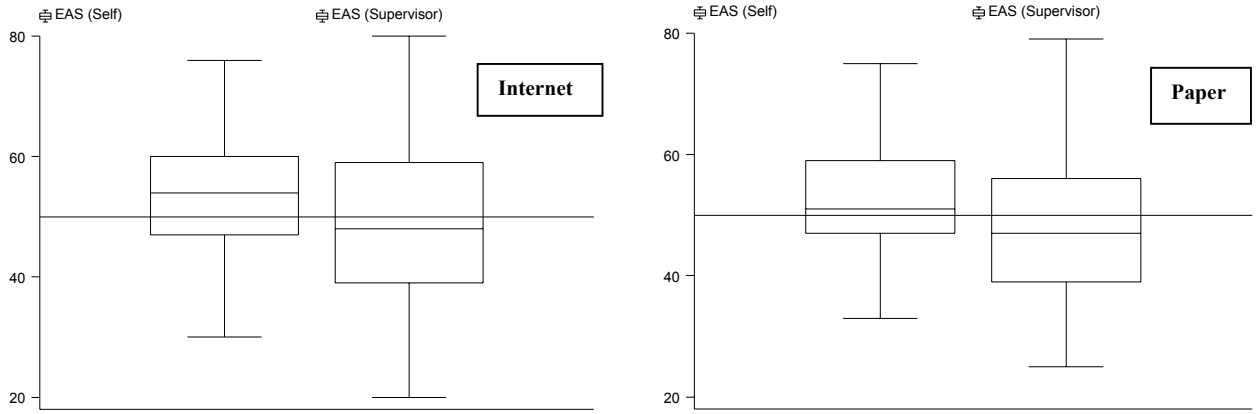

Figure 5 - Boxplot EAS *(Self vs Supervisor)* - Internet Versus Paper (y-line = 50)

With this in mind, we reviewed the average score for each of the 20 vignettes for *Self* and *Supervisor* (Figure 6), and found both the Internet and paper to be close. An independent samples t-test was performed on the equality of means, of EAS *(Self)* data. The Internet group (Mean = 53.90, SD = 0.68) had higher scores than the paper group (Mean = 52.94, SD = 0.69), but this result was not statistically significant, t = 1.574, df = 359 p>0.05, two tailed. An independent samples t-test was also performed on the equality of means, of EAS *(Supervisor)* data. The Internet group (Mean = 49.00, SD = 0.92) had higher scores that the paper group (Mean = 48.15, SD = 1.01), but this result was also not statistically significant, t = 0.6201, df = 355, p>0.05, two tailed.

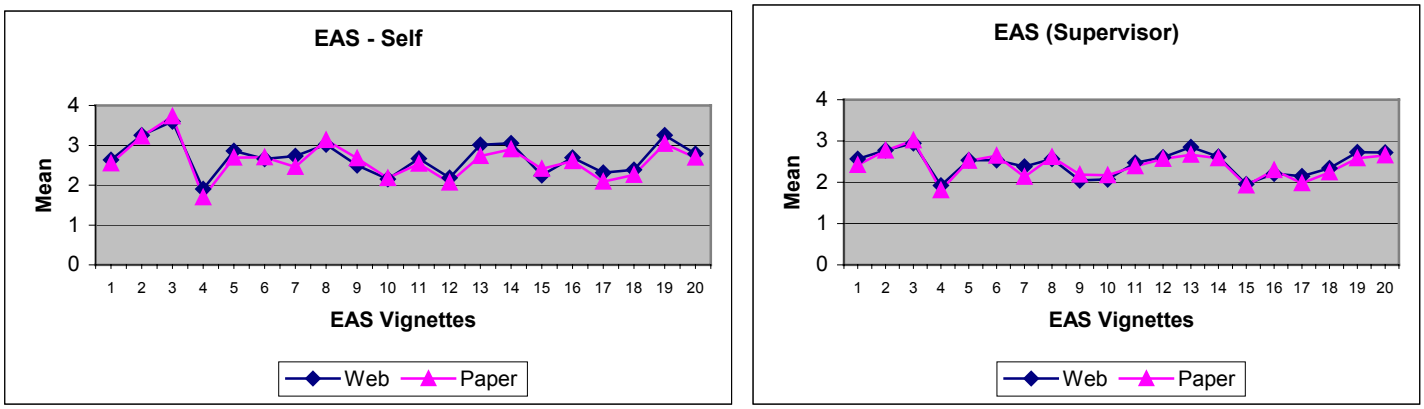

Figure 6 - Average EAS Item Scores Internet Versus Paper - *Self* and *Supervisor*

Again, the variability in the individual EAS scores for *Self* and *Supervisor* (Figure 7) follow closely.

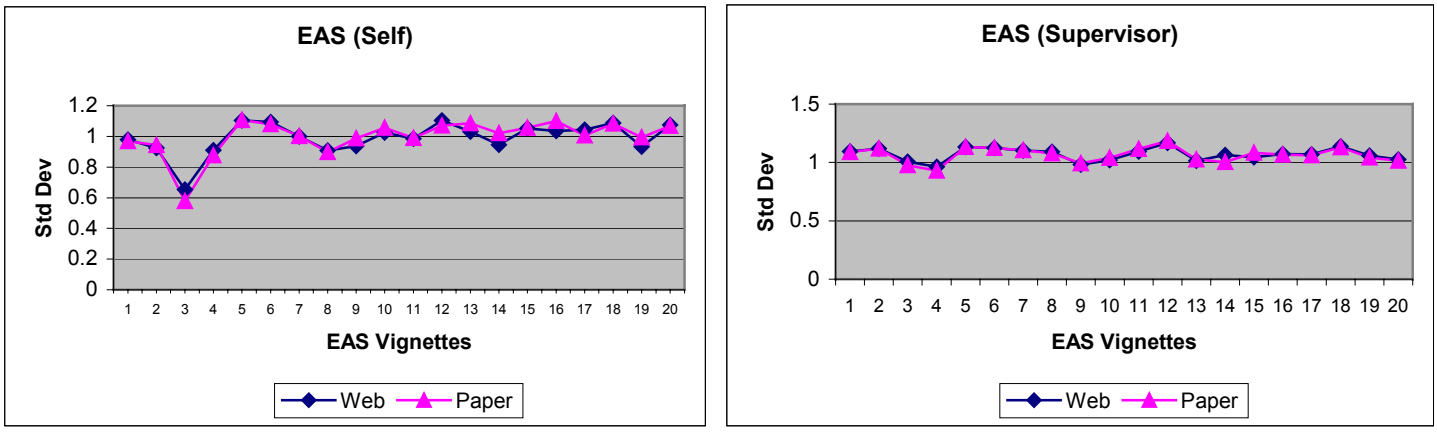

Figure 7 - Standard Deviations EAS Item Scores Internet Versus Paper - *Self* and *Supervisor*

We observe that Internet respondents responded in a similar fashion to those in the original paper study for the 20 EAS vignettes.

Part 3: Leader-member Exchange (LMX) results

Displaying the distribution the single continuous variable LMX total scores for both study types in the following histograms (Figure 8) indicate that there is some variation in how the paper and Internet respondents scored this measure. We see that both distributions are skewed, but exhibit the same direction.

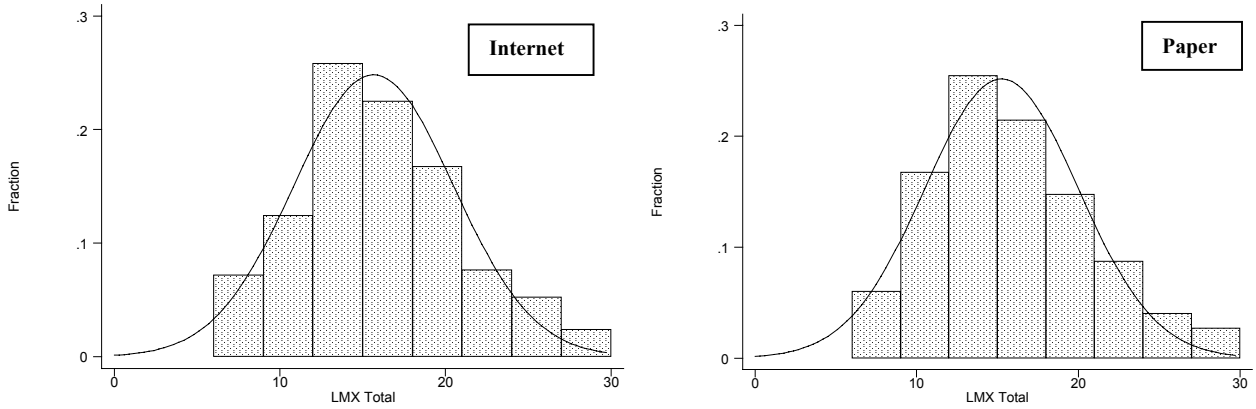

Figure 8 - Histograms LMX Total Score - Internet Versus Paper (Bin=10)

The probability(skewness) for the LMX Total score for the Internet and paper studies were the same at 0.01 (ie significantly skewed at the 95% level). This result of this slight skewing of the both is that it could affect the parametric statistical techniques (e.g. t-tests, analysis of variance) we used. However, we believe the sample sizes in both studies were acceptable to perform these tests.

The boxplots of the distribution of scores for Total LMX scores for Internet versus Paper (Figure 9) exhibit virtually identical distributions, but again the Internet exhibited broader whiskers or high and low points. There was only one outlier (marked on the graph as a small circle) on the paper study.

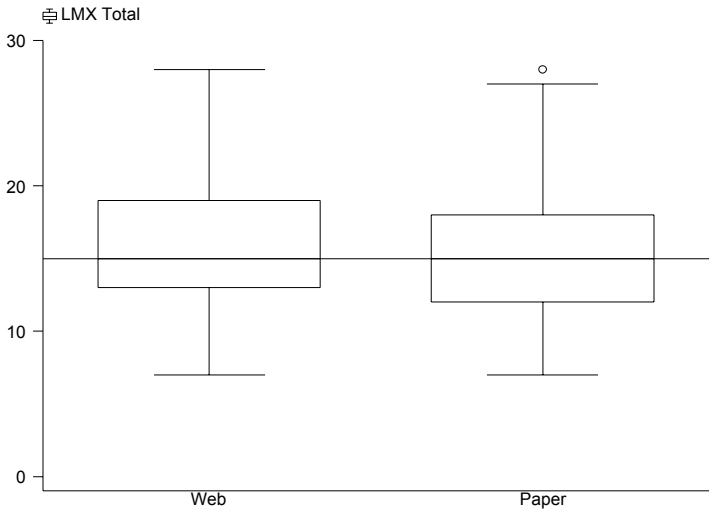

Figure 9 -Boxplot Total LMX Score- Internet Versus Paper (y-line =15)

Reviewing the average score for each of the 7 items for LMX (Figure 10), we can see that both the Internet and paper are close. An independent samples t-test was conducted on the two sets of LMX data. The Internet group (M = 15.66, SD = 4.82) had a higher average LMX score than the paper group (M = 15.25, SD=4.75), but this result was not statistically significant, t = 0.802, df = 356, p>0.05, two tailed.

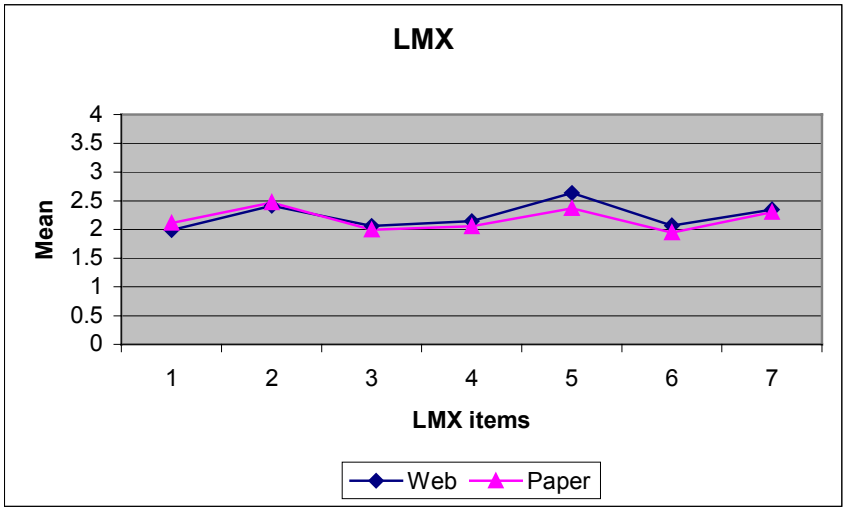

Figure 10 - Average Scores for LMX Items - Internet Versus Paper

The variability in the individual LMX scores (Figure 11) is virtually identical for Internet and paper.

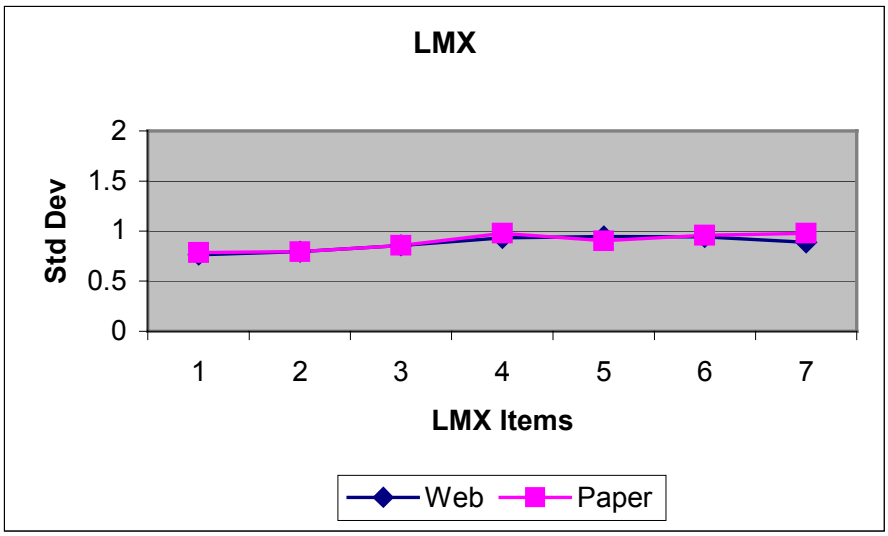

Figure 11 - Standard deviations for LMX Item Scores - Internet Versus Paper

As with the EAS samples, we observe in this analysis that respondents on the Internet study responded in a similar fashion to those in the original paper-based study for the LMX items.

Part 4: Social Desirability

Displaying the histograms for the single continuous variable SDS total scores for both study types (Figure 12) there is variation in how the paper and Internet respondents scored this measure.

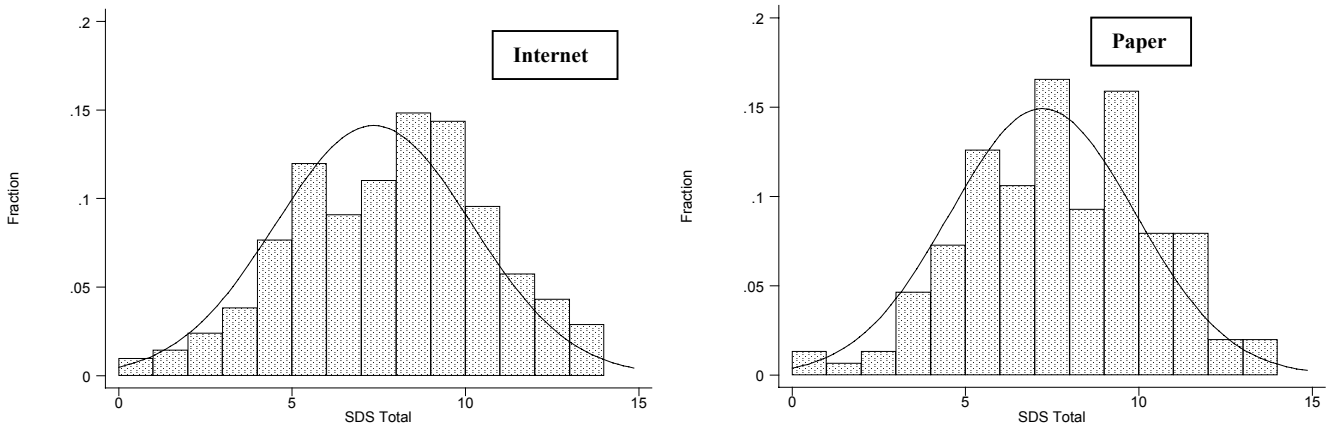

Figure 12 - Histogram of SDS Total Scores - Internet Versus Paper (Bin=15)

The probability(skewness) for the SDS Total scores for the Internet study was 0.25 and paper study was 0.39 (ie not significantly skewed at the 95% level).

Figure 13 shows a boxplot of the distribution of scores for Total SDS scores for Internet versus Paper. The Internet distribution has a higher median point than the original paper study, but the spread of the distribution is very similar. There were no outliers for both studies.

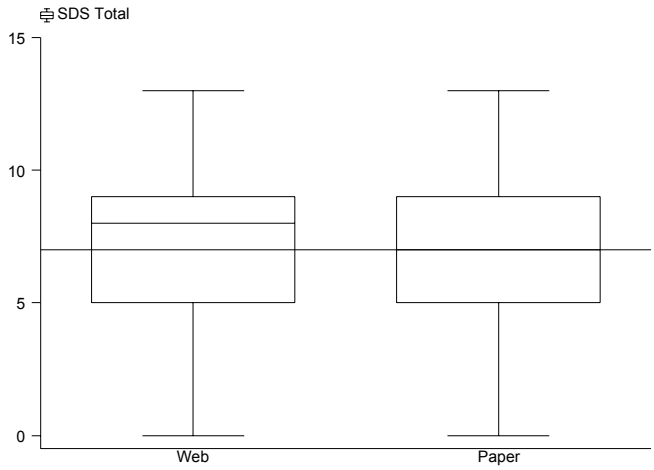

Figure 13 - Boxplot of SDS Total Score – Internet Versus Paper (y-line=7)

Reviewing the average score for each of the 13 items for SDS (Figure 14), we can see that both the Internet and paper are close. An independent samples t-test was conducted on the two sets of SDS data. The Internet group (M = 7.35, SD = 0.195) had a higher average SDS score than the paper group (M = 7.23, SD=0.218), but this result was not statistically significant, t = 0.4369, df = 358, p>0.05, two tailed.

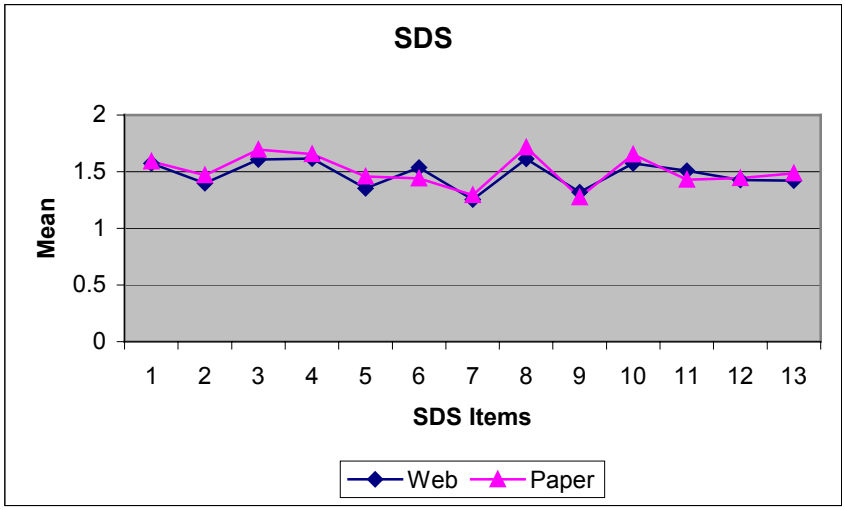

Figure 14 - Average Scores for SDS Items - Internet Versus Paper

The variability in the individual SDS scores (Figure 15) varies only slightly across the 13 items.

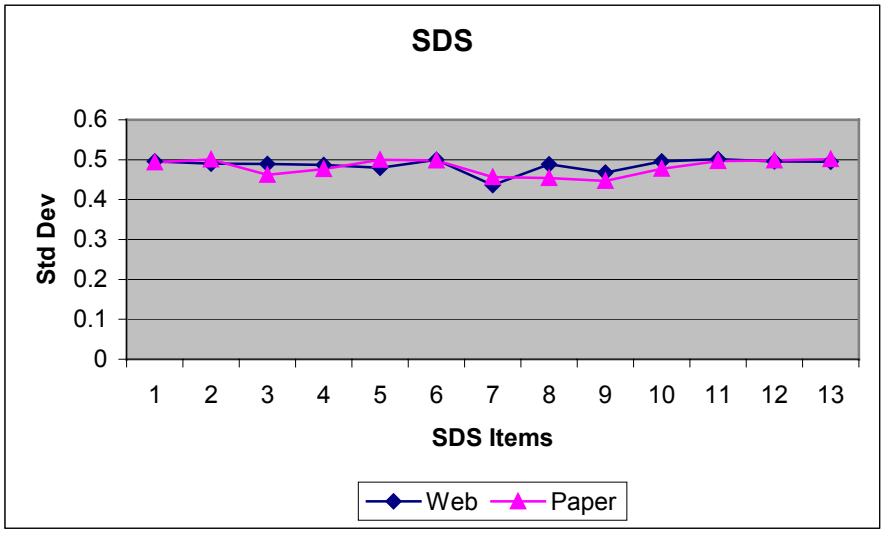

Figure 15 - Standard Deviations for SDS Items - Internet Versus Paper

We conclude from this analysis that our respondents on the Internet study responded in generally in a similar fashion to those in the original paper-based study for the SDS items, but with less variability amongst their scores.

Results of Hypothesis Tests - The Internet Perspective

Hypothesis 1a, the first of the personal characteristics hypotheses, predicted that younger respondents would have less strict ethical attitudes ("ethicality") than older respondents. Replicating the technique of Longenecker, McKinney and Moore (1989) to define younger and older, respondents aged 21 to 40 were grouped and compared with those aged 51 to 70. Respondents' ethicality was determined to be the sum of their *Self* scores across all twenty questions. The possible range of score totals was from 20 to 80, while the actual ranged from 33 to 72, where the higher scores indicate a stricter ethical attitude. The hypothesis tested was:

H_0: μ (younger) = μ (older)
H_1: μ (younger) < μ (older)

The results of an independent sample t-test demonstrated that younger respondents had less strict ethical attitudes (n = 108, M = 52.09, SD = 9.34) than older respondents (n = 43, M = 57.86, SD = 10.12). This difference was significant, t = -3.344, df = 149, p <0.001, two-tailed. The null hypothesis was rejected in favour of the alternative hypothesis.

The hypothesis that younger Internet respondents would be less ethical than older Internet respondents, was supported and consistent with the paper study. This finding was consistent with Longenecker, McKinney and Moore's (1989) study. While this result may reflect differing social and religious values of the age groups in question, it may also reflect the differing levels of workplace responsibility placed on older respondents, a point made by Longenecker, et al., not investigated in this research.

Hypothesis 1b: That more educated respondents will have different levels of strictness in their attitudes towards ethical dilemmas than less educated respondents. The level of education was determined to be whether the respondent had university education or not. Respondents with less than university education were grouped together and compared with respondents with university education or equivalent. The ethicality of the respondents was again determined to be the total of their *Self* scores, with a possible range from 20 to 80 and actual range of 30 to 76. The hypothesis to be tested was:

H_0: μ (university educated) = μ (less than university educated)
H1: μ (university educated) ≠ μ (less than university educated).

Differently to the original research, more educated group respondents had stricter ethical attitudes (n = 111, *M* = *54.55*, *SD* = 9.26) than less educated group respondents (*n* = 98, *M* = 53.29, *SD* = 10.36). An independent samples t-test was conducted, however, and found the difference was not significant, t = -.852, df = 207, p < 0.395, two tailed. The null hypothesis was not rejected.

Our evidence suggests that more educated Internet respondents were slightly more ethically strict than less educated Internet respondents. The difference was not statistically significant but was different to paper respondents, where more educated respondents were significantly less strict than less educated respondents.

The hypothesis that more educated respondents would different in their ethicality than less educated respondents was supported. The paper based research result of more educated respondents being less ethical than less educated respondents was counter to Messick and Bazerman's (1996) suggestion. The ethicality difference between more and less ethical groups was not high, despite its significance. It may be that more highly educated respondents are likely to have more senior positions (by virtue of their education) and consequently be more familiar with the ethical issues posed in the vignettes. Less educated respondents may not have been exposed to the situations and therefore to many of the ethical dilemmas. Faced with more decision making situations as part of their work, more educated respondents may make more realistic assessments, and so respond with "less ideal", or less strict, responses. Alternatively, the organisational environment in which a person is working may override educational influence on ethicality, a possibility that the current study did not investigate. A future study of different types of organisational samples to determine whether environment, rather than education, impacts on ethicality may reveal the organization as a stronger predictor of ethical attitudes than education.

***Hypothesis 1c*:** Was that high social desirability respondents rate themselves more ethically strict than low social desirability respondents rate themselves. Social desirability was calculated by adding the scores of the Marlowe-Crowne Social Desirability Scale (M-C SDS), reverse scored as appropriate. Actual social desirability scores ranged the full scores possible, from 0 to 13. The higher score indicates a higher level of social desirability. The ethicality of the respondents was again determined to be the total of their *Self* scores, with a possible range from 20 to 80 and actual range of 30 to 76. The hypothesis to be tested was:

H_0: ρ (M-C SDS, ethicality) = 0
H1: ρ (M-C SDS, ethicality) $\neq$ 0

A correlation for the data found the level of social desirability and their own reported level of ethicality were significantly related, r = 0.173, n = 209, p <0.05, two tailed. The null hypothesis was rejected in favour of the alternative, that higher social desirability respondents rate themselves more ethically strict than low social desirability respondents rate themselves.

This finding was consistent with the paper based study. This is consistent with the other research in this field (for example, Weierter, Ashkanasy, and Callan, 1997 and Knouse and Giacalone, 1992). While not a strong correlation, this result serves to remind us of the potential research complication of the difference between a respondent reporting their attitudes towards ethical dilemmas and the actual behaviour of that respondent.

***Hypothesis 2**:* That respondents show themselves as less strict in their ethical attitudes towards organisational than non-organisational ethical dilemmas. To calculate a score for organisational ethicality, the business and marketing subscales of the EAS *Self* scale were used, a total of six vignettes. The three subscales used to determine non-organisational ethicality were discrimination, environmental, and sexuality, a total of ten vignettes. On both scales, final scores for organisational and non-organisational ethical attitudes were calculated by averaging to give a possible score between 1 and 4, with the higher score indicating more strict ethical attitudes. The range of actual scores was 1.17 to 4.00 for the organisational scale, and 1.60 to 4.00 for the non-organisational scale. The personal finances subscale was not used in this analysis. The hypothesis to be tested was:

H_0: μ (organisational) = μ (non-organisational)
H1: μ (organisational) < μ (non-organisational)

Respondents' attitude towards non-organisational ethical dilemmas was more ethical (n = 209 M = 2.82, SD = .53) than towards organisational ethical dilemmas (n = 209 M = 2.52, SD = .56). A paired samples t-test was conducted, and found the difference was significant, t =8.254, df = 208, p <0.001, two tailed. The null hypothesis was rejected in favour of the alternate hypothesis that respondents show themselves as having different degrees of ethical attitudes towards organisational and non-organisational ethical dilemmas.

This finding is consistent with the paper based research which also found respondents' attitudes were more strict to non-organisational dilemmas that organisational dilemmas. Both studies support the intuitive sense that we do not tend to have one broad approach to ethics across the full spectrum of ethical dimensions, but that we can be more or less strict in our approach to ethical dilemmas, depending on the nature of the dilemma. The finding adds to the

existing research as it allows us to see distinctions we make between the different types of ethical decision making situations faced in a workplace. This could reflect a de-personalising effect in the workplace, where personal values are put aside – temporarily – and workplace values are accepted.

Hypothesis 3: That a smaller difference between *Self* and perceived *Supervisor* attitudes towards ethical dilemmas will predict a more positive LMX relationship (that is, a higher likelihood of ingroup membership). To establish the difference between the respondent's ethical attitude and their understanding of their supervisor's ethical attitude, a score was absolute figure after subtracting the sum of the EAS *Supervisor* score from the sum of the EAS *Self* score, each of which could range from 20 to 80. This was called the ethical differential. Actual scores ranged from -36 to 46 (M = 4.89, SD = 13.36, n = 209). A higher score (positive or negative) indicates greater dissimilarity in ethicality. LMX relationships were calculated by summing the seven LMX scores. Actual scores spanned the full range possible from 7 to 28. A smaller LMX score determined a more positive LMX relationship. The hypothesis to be tested was:

H_0: ρ (Self/supervisor differential, LMX score) = 0
H_1: ρ (Self/supervisor differential, LMX score) $\neq$ 0

A correlation for the data revealed that the ethical differential was significantly related to the LMX relationship, r = 0.426, n = 209, p < 0.001, two tailed. The null hypothesis was rejected in favour of the alternative hypothesis. This relationship is shown in Figure 16 alongside the paper based results, and further indicates how similar the scatter plots are for both studies. The R^2 value of 0.18 indicates that the ethical differential scores can account for 18% of variance in LMX.

Internet respondents with a smaller difference between self and supervisor ethical attitudes had significantly more positive relationship with their supervisor, and this was the same for the paper respondents. 18% of Internet LMX relationship variance can be accounted for by the ethical differential. This compares with 13.4% for paper respondents.

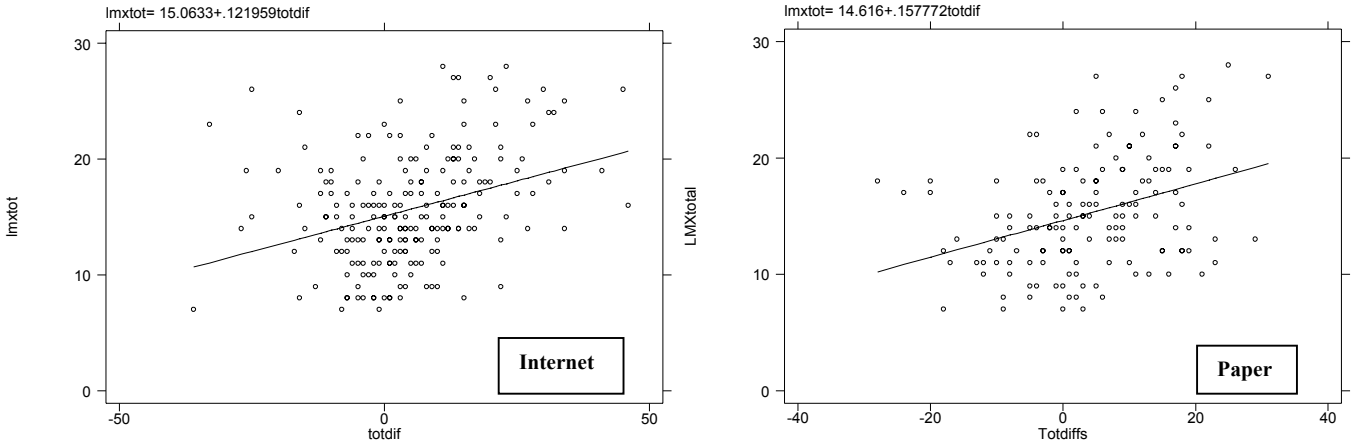

Figure 16 - Correlation - LMX and Ethical Differential – Internet Versus Paper

The hypothesis that respondents who have closer degrees of strictness on ethical issues to their supervisors are more likely to be part of their supervisor's ingroup was supported. In recalling the origins of the study, it appears that respondents who have closer ethical attitudes to their supervisors are more likely to be part of their supervisor's ingroup. Ethicality similarity does appear to play a part in relationships with leaders. In the workforce we are required to work alongside people who we may or may not like or care for, and this research provides additional insight as to the cues that respondents and supervisors may use to make judgements about each other. While the results are again intuitive, this research has not previously been conducted and so provides a base for future investigation. The positive ramifications of ingroup membership, both to the leader and the member, imply that further investigation into the relationship between LMX and ethical differential should be pursued. These results support the similarity effect theories by demonstrating that where a respondent is similar in ethical attitudes towards their supervisor, a stronger working relationship exists.

Hypothesis 4: That respondents who have worked with their supervisor longer will have more similar ethical attitudes to their supervisor, compared with respondents who have worked with their supervisor for less time. The

amount of time spent working with their supervisor was converted from original data and determined to be either greater than or less than one year. The ethical differential was calculated as above, and again a higher score indicated greater dissimilarity in ethicality. The hypothesis to be tested was:

H_0: μ (less than one year with supervisor) = μ (more than one year)
H_1: μ (less than one year with supervisor) < μ (more than one year)

An independent samples t-test was conducted and resulted in a non-significant difference. Respondents who had worked with their supervisor less than a year (M = 9.98, SD = 8.62, n = 91) were only slightly less dissimilar in ethicality to their supervisors than those who had worked with their supervisor for more than a year (M = 11.29, SD = 9.85, n = 118), t = -1.013, df = 207, p = < 0.312, one tailed.

Internet respondents who worked with their supervisor for more than a year were slightly, but not significantly, less similar in ethical attitudes to their supervisor. Paper respondents found the opposite - the longer the relationship, the closer the ethicality, and that difference were statistically significant.

We suggest the difference in the Internet response is unlikely to mean much. Perhaps it could be rebellion –"*I know I think differently to my boss, so I'll spend more time on the Internet"*. With less than 3% variance in the ethical similarity explainable by the amount of time together, it would be inappropriate to read too much into this result.

The slight significance of the paper based result could be accounted for by self-selection, where respondents who have strongly dissimilar ethicality to their supervisors choose to leave the supervisor or the organization. The convergence in attitudes towards ethical issues over time could also be accounted for by the worker having the opportunity to observe the supervisor's decision making processes.

Conclusions: What we learned and further discussion

If the dyadic LMX theorists such as Bauer and Green are correct in their suggestion that the individual relationship is reflected at group and organisational levels, then the results found in this study can add some meaning at the organisational level. The organization that is found to have a higher percentage of close LMX relationships will be more likely to have more similar attitudes towards ethical dilemmas. Again, this is consistent with the similarity-attraction theorists such as Hogg and Abrams, (1988) and Schneider (1988).

The Internet and paper respondents in the study have given us a number of additional insights into the nature of the working relationship as it pertains to a person's ethical attitudes. Younger respondents, irrespective of education, and low social desirability respondents claim to have less strict ethical attitudes than their opposites. Respondents viewed non-organisational ethical dilemmas with significantly greater strictness than organisational dilemmas. The more convergent a respondent's ethical strictness was to their supervisor, the better their relationship, which was to some extent associated with the amount of time they had worked together.

What remains is for the business and research communities who claim to be committed to providing ethical business solutions to harness the available information on ethical decision-making and incorporate it into total employment solutions. As Morgan (1993) points out, attitudes towards ethics in the workplace affect or are affected by recruitment and selection processes, goal setting, performance management and reward systems. Current younger respondents are the leaders of the future. If we want these people to have the best opportunities for healthy working relationships, and their staff to have the benefits of ingroup membership, then it would be wise to recognise that ethical attitudes play a significant, albeit small, role, and work towards maximising the ethical fit at individual, group and organisational levels.

Our findings did not seem to be influenced by the methodology we used. Using the Internet to collect this sensitive psychological type of information seems to conform to the traditional paper-based method. To summarise, there were no statistically significant differences between Internet and paper based respondents on their demographics, their own ethical attitudes and their perception of their supervisor's ethical attitudes. The mean and variability of responses to the 20 ethical dilemma vignettes, their ingroup relationship with their supervisor, and their social desirability did not differ between the two study groups. Any skewness found was considered unimportant relative to the sample sizes collected. It was an unexpected result to find so few differences in the responses.

There was a great deal that was not included in the study (such as gender similarity), and studies such as a longitudinal study may uncover causality and add a valuable dimension to this research. We could investigate the role of confrontation in the LMX relationship, or even any aspect that helps improve the LMX relationship. However, what was found in this study was that the young Internet user is more ethical towards non-organisational than organisational ethical dilemmas and guided by their workplace supervisor. They are no different in terms of leadership and ethics in the workplace from anyone else. They congregate with those of similar ethics and they view their leader accordingly.

So, in conclusion it can be said that "Managers are people who do things right, while leaders are people who do the right thing", especially when viewed from the ingroup member's perspective.

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