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Personality and work style characteristics of the telecommuter

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Personality and work style characteristics of the telecommuter

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San Jose State University, 1990

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**PERSONALITY AND WORK STYLE CHARACTERISTICS
OF THE TELECOMMUTER**

**A Thesis
Presented to
the Faculty of the Department of Psychology
San Jose State University**

**In Partial Fulfillment
of the Requirements for the Degree
Master of Science**

**by
Kathy Ross
August, 1990**

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ABSTRACT
PERSONALITY AND WORKSTYLE
CHARACTERISTICS OF THE TELECOMMUTER

by Kathy A. Ross

Three factors proposed to be related to telecommuting were investigated: need for social interaction, need for guidance and feedback, and self-perceived organizational skills. Employees working for a large computer company completed questionnaires on these three factors. Twenty-eight of the subjects were individuals who telecommute on a consistent basis. The remaining 44 subjects made up a comparison group of non-telecommuters in similar jobs, at a similar level, and with the same managers as the telecommuters. In addition to self-report variables, a performance rating was obtained for all subjects to determine if the telecommuters and non-telecommuters differ in their performance. The Element B inclusion and control dimensions were used to assess need for social interaction and for guidance and feedback, and organizational skills were measured with a Time Management and Organization questionnaire devised for this research. It was found that performance was the only significant predictor of telecommuting status, with telecommuters obtaining significantly higher performance scores than non-telecommuters. The three self-report variables did not significantly differentiate telecommuters from non-telecommuters, nor did they predict high and low performing telecommuters.

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TABLE OF CONTENTS

SECTION	PAGE
INTRODUCTION	2
METHOD	6
Research Participants	6
Measures	7
Design	7
RESULTS.....	8
DISCUSSION	16
REFERENCES	24
APPENDICES	26
Appendix A. Organization and Time Management Quest.	26
Appendix B Signed approval forms	27

TABLE	PAGE
1. Factor Matrix and Eigenvalues for the Organization and Time Management Questionnaire	10
2. Correlations for the Four Variables	11
3. T-tests and Beta Weights	13
4. Multiple Regression of Sociability, Feedback, and Organizational Skills on Performance Rating for Telecommuters and Non-Telecommuters.	15
5. Multiple Regression Entering Covariates of Sociability, Feedback, and Organization Skills, with Performance Rating Entered Last	17
6. Element B Dissatisfaction Scores.	21

Personality and Work Style Characteristics of the Telecommuter

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Running Head: TELECOMMUTING

Footnotes

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Personality and Work Style

Characteristics of the Telecommuter

Telecommuting refers to any work completed remotely from the worker's main work group and manager. This includes work at home or at a satellite office. In 1981, Alvin Toffler referred to "electronic cottages" in his book, The Third Wave, which predicted a future of remote work supported by computers and telecommunications. Today, an estimated 3.4 million corporate workers have formal work-at-home arrangements with their employers (Kelley, 1986). These jobs are concentrated in information-based work, such as programming, data entry , and accounting (Kelley, 1988). Emerging technology in transmission and communications equipment has supported more rapid and inexpensive movement of data, enabling telecommuting to become a viable work arrangement.

Telecommuting is an adaptation that accords with many of the trends facing human resource managers (Ong, 1988). A decrease of entrants into the labor market and an increase in information workers, older workers, and women in the work force all support the future of telecommuting. With entrants into the labor force declining, management will need to accommodate valuable employees and to compete for new recruits. To do this companies are offering work alternatives including flextime, flexplace, permanent part-time, and job sharing. Information workers make up approximately one-half of all employees, and this is predicted to increase dramatically by the year 2000. With the baby boom generation growing older, valuable employees ready to retire may be retained if they could work at home. Finally, two-thirds of the people entering the workforce between now and the year 2000 will be women. This

puts pressure on the family, and telecommuting could reduce the stress of balancing home-life and work.

Skeptics have identified potential problems with telecommuting. Some experts (e.g., Foegen, 1984; Olson, 1985) have proposed that while working at home, individuals develop a temptation to work all the time which could eventually be counterproductive due to job burnout. Union officials are concerned that remote work will lead to a piecework pay structure and exploitation of the telecommuter (Best, 1986). Moreover, telecommuting may isolate workers from the social network at their company, which may lead to problems with job security, promotion, and professional growth (Hamilton, 1987; Moody, 1987).

To be a telecommuter may require certain personality and work style characteristics. Although only anecdotal evidence has been offered, three factors necessary for effective telecommuting have been proposed: (a) organizational skills, (b) the need for social interaction, and (c) the need for guidance and feedback.

Organizational skills are essential to the remote worker because of the move to a less-structured environment. Telecommuters should have good planning abilities, be well organized, and be efficient in managing time (Gordon & Kelley, 1986; Hamilton, 1987). Gordon and Kelley (1986) suggest that routines and rituals help the telecommuter to structure their time away from the office. Managers and employees should break the work into specific tasks and set time tables for progress. The employee should set aside an area at home which is used only for work and set up a consistent schedule with routine habits such as making a list of things to be done each day.

Because the shift to working at home may reduce the amount of social contact associated with work, the telecommuter should have a low need for social interaction (Shamir & Salomon, 1985). Experts suggest that the candidate for telecommuting must be skilled in his or her job without requiring frequent interaction with co-workers (Gordon & Kelley, 1986; Moody, 1987). However, interaction with the work group is necessary for productivity and self-esteem (Shamir & Salomon, 1985). "Employees who are used to having co-workers around for advice, support and camaraderie may find the relative isolation of working at home lonely and depressing" (Martin, 1986, p. 51). Moreover, a survey of telecommuters cited a lack of interaction with co-workers as the number one disadvantage to working at home (Olson, 1985).

Observers further suggest that telecommuting employees should have a low need for guidance and feedback. The employee must be emotionally self-supportive, and not need peer feedback to assess performance (Hamilton, 1987). Also the remote worker should require minimal supervision (Martin, 1986). The telecommuting employee will have to rely on his or her own knowledge and experience to deal with problems and decisions that need to be made in a timely manner. Although telecommuters can communicate with their co-workers through the telephone and electronic mail, these channels do not effectively convey tonal or non-verbal components of communication. Thus, individuals who work remotely are likely to receive less feedback and feedback of a lower quality than traditional workers (Shamir & Salomon, 1985). On the other hand, it has been suggested that a decrease in physical contact between workers and their managers can result in improved supervision because the managers' attention is

focused on results and not on social cues such as whether the employee is sitting at her or his desk (Antonoff, 1985). Although telecommuters should not rely on daily feedback from their managers and co-workers, guidance and feedback are necessary components of the work environment (Hamilton, 1987).

If the characteristics that are expected generally to differentiate telecommuters from non-telecommuters are successful at doing so, they also ought to help discriminate between more effective and less effective telecommuters. That is, more effective telecommuters should display less need for social interaction, guidance and feedback than less effective telecommuters. Moreover, telecommuters should, in general, be more effective employees than non-telecommuters. Otherwise, they would not be selected for such an unconventional and somewhat risky work arrangement. In addition, being able to work at home or at a location that is more convenient than the primary worksite may make telecommuters more effective employees than non-telecommuters.

Finally, if telecommuters have better organizational skills, a lower need for feedback, and a lower need for social interaction, these characteristics may contribute to their increased performance. In fact, Hughson and Goodman (1986) found that 96% of companies surveyed report that telecommuting had increased the productivity of workers. It remains unclear, then, what factors are directly related to performance - personality and workstyles, the telecommuting situation, or both.

While anecdotal evidence and expert commentary has suggested the personality and work style characteristics necessary for a successful telecommuter, there is no

empirical research to support these claims. Three hypotheses will be investigated in this study:

1. Compared to non-telecommuters, telecommuters will report better organizational skills, a lower need for guidance and feedback, and a lower need for social interaction.
2. Telecommuters with higher performance ratings will report better organizational skills, a lower need for guidance and feedback, and a lower need for social interaction compared to telecommuters with lower performance ratings.
3. After accounting for organizational skills, need for guidance and feedback, and need for social interaction, performance ratings of telecommuters will be higher than non-telecommuters.

Method

Subjects

Data for this study were obtained from 72 employees of a computer company in Silicon Valley. Twenty-eight of the subjects were employees who telecommute. To qualify as a telecommuter, subjects must have worked remotely (i.e., at home or at a satellite office) on a consistent basis. The remaining 44 subjects made up the comparison group of employees who worked on-site full time, in the same departments, and had the same managers. Twenty-five of the respondents were female, while 47 were male. The telecommuters had worked at the company for an average of 7.06 years, and the comparison group had worked there for an average of 5.13 years. Jobs represented in the study included the following: technical writers, software developers, education/course developers, and consulting analysts.

Materials

Two instruments were used to measure the three personality and work style characteristics hypothetically related to telecommuting. The Element B (Schutz, 1984) inclusion dimension was utilized to measure sociability, and the Element B control dimension was used to assess the need for guidance and feedback.

Reproducibility scales for the Element B average .92 to .94 (Schutz, 1987). The third variable, organizational skills, was measured using the Organization and Time Management Questionnaire with 13 items rated on a five point Likert-type scale.

Because these items consisted of self-report measures, the variable was labeled self-perceived organizational skills. A reliability analysis was performed on the organization and time management questions (findings are reported in the results section).

Procedure

All of the telecommuters and their managers were contacted by phone to request their participation in the study. Phone numbers and addresses were obtained from the employee data base. Requests were made by phone for the telecommuter's participation in the study, assuring them that it was voluntary, and that they could choose not to participate or to withdraw their participation at any time without prejudice. The comparison group of non-telecommuters was also selected from the employee database. Their participation was requested in the consent form attached to the questionnaires. This group was chosen for their similarity in job type and job level to those of the telecommuter, and they must have reported to the same manager as the telecommuter. Managers were notified which employees were being asked to participate in the study,

and were given the opportunity to decline their participation. Participants were mailed the instruments with instructions attached, and asked to return them with the signed consent letter within two days. In addition, current performance ratings were taken from the personnel data base at the company. The rating comprised a simple one-item rating of the employee's overall performance on a five point scale (one = unsatisfactory; five = greatly exceeds standards).

Results

Because it was hypothesized that three critical factors differentiate telecommuters from non-telecommuters, a two-tailed t-test was employed to compare differences in means between the two groups on these variables. Also, a multiple regression analysis was performed to determine how much variance the three predictor variables accounted for in telecommuting status.

Next, a multiple regression analysis was used to determine how these factors best predict telecommuters with high performance ratings and telecommuters with low performance ratings.

Finally, an a priori multiple regression analysis was performed, entering the three personality and work style variables as covariates. That is, assuming that self-perceived organization skills, need for guidance and feedback, and need for social interaction account for variance in telecommuting, does performance rating account for additional variance?

Because self-perceived organizational skills were measured with a questionnaire developed specifically for this project, a reliability and a factor analysis were performed to evaluate the quality of the instrument. A Cronbach's Alpha of .77

indicates that the test is moderately reliable. The factor analysis reported five factors with Eigenvalues greater than 1.0 accounting for 71.1% of the variance (see Table 1). The first three factors accounted for most of this variance (54%). The first factor, named time element, accounted for 30.8% of the variance, and items loading heavily on this factor included items such as: To what extent do you find yourself doing things at the last minute? The second factor, named planning abilities, accounted for 13.4% of the variance and included items such as: To what extent do you like to arrange plans ahead of time? The third factor, named scheduling, accounted for 10.5% of the variance and included items such as: To what extent does following a schedule appeal to you? While the overall test was reliable, the individual items were only moderately intercorrelated; the highest correlation being .67.

A Pearson correlation coefficient matrix (see Table 2) of the four variables (self-perceived organizational skills, need for social interaction, need for guidance and feedback, and performance rating) showed one significant correlation for the total sample. This was an inverse relationship of performance rating with social interaction.

For the telecommuting group there were no significant correlations. However, performance rating and social interaction showed the strongest relationship. The inverse direction of this correlation is consistent with hypothesis two that higher performing telecommuters have a lower need for interpersonal contact.

For the non-telecommuting group, again social interaction and performance rating were the only significantly related variables. It appears that for both groups, better performance ratings are related to a lower need for social interaction. Just looking at

Table 1

Factor Matrix for the Organization and Time Management Questionnaire

<u>Item</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>	<u>Factor 5</u>
1	.07	.08	.86	.13	.15
2	.75	.31	.11	.27	.17
3	.51	.03	.11	.58	.02
4	.15	.76	.38	.04	.09
5	.79	.01	.20	.02	.25
6	.18	.27	.75	.10	.06
7	.31	.05	.14	.16	.64
8	.61	.51	.21	.11	.21
9	.18	.82	.15	.03	.06
10	.17	.11	.16	.82	.06
11	.06	.32	.26	.67	.06
12	.88	.12	.00	.15	.13
13	.19	.20	.02	.27	.77

Eigenvalues for Five Factors from the Organization and Time Management Questionnaire

<u>Factor</u>	<u>Eigenvalue</u>	<u>% Var.</u>	<u>Cum Pct.</u>
1	4.0	30.8	30.8
2	1.74	13.4	44.2
3	1.36	10.5	54.7
4	1.13	8.7	63.4
5	1.01	7.8	71.1

Table 2

Pearson's correlation coefficients for self-perceived organizational skills,
social interaction, guidance and feedback, and performance rating

Total Sample (N=72)

	org	soc	g / f	p / r
org	-	.129	.071	.016
soc		-	.191	-.231*
g / f			-	-.132
p / r				-

Telecommuters (n =28)

	org	soc	g / f	p / r
org	-	.155	.036	.165
soc		-	.045	-.252
g / f			-	-.077
p / r				-

Non-Telecommuters (n=44)

	org	soc	g / f	p / r
org	-	.087	.075	-.143
soc		-	.247	-.275*
g / f			-	-.194
p / r				-

* $p < .05$

the three self-report variables for this group, the largest correlation occurred between the need for guidance and feedback and the need for social interaction ($r=.25$, $p<.06$).

The largest difference between the two groups was the correlation of performance rating with self-perceived organizational skills. Non-telecommuters had a correlation of $-.14$ ($p<.17$) while telecommuters had a correlation of $.16$ ($p<.20$). Although the difference in correlations was determined not to be significant by a Fisher's z test, it does suggest that increased performance ratings may be contingent on increased organizational skills for telecommuters.

Hypothesis One

Hypothesis one asserts that telecommuters have a lower need for social interaction, a lower need for guidance and feedback, and higher self-perceived organizational skills. Results of three unpaired, two-tailed t -tests show that telecommuters and non-telecommuters did not significantly differ on these three variables. The high variability in the measures of need for social interaction and need for guidance and feedback within each group helps to explain any failure to observe significant differences. The results for the need for guidance and feedback, and the need for social interaction variables indicate higher means for telecommuters (see Table 3) which is contrary to expectations, suggesting, if anything, that telecommuters have a slightly higher need for social interaction and a higher need for guidance and feedback, which is in contrast to what was predicted.

Table 3

T-tests for Telecommuters and Non-telecommuters on Social Interaction
Guidance and Feedback, Self-perceived Organizational Skills, and Performance Rating

	<u>Telecommuters</u>	<u>Non-Telecommuters</u>	<u>T value</u>	<u>DE</u>
Social Interaction	mean = 5.81 s.d. = 1.79	mean = 5.33 s.d. = 1.79	-1.07	65
Guidance/Feedback	mean = 3.85 s.d. = 1.43	mean = 3.48 s.d. = 2.14	-.91	66
Organization Skills	mean = 3.41 s.d. = .56	mean = 3.27 s.d. = .48	-1.19	70
Performance Rating	mean = 3.82 s.d. = .62	mean = 3.52 s.d. = .63	-1.96*	70

Beta Weights

	<u>Beta</u>	<u>Sig.T</u>
Social Interaction	.086	.500
Organization Skills	.110	.383
Guidance/feedback	.075	.723

* $p < .05$

A difference in performance ratings was the only significant finding from the t-tests, with telecommuters showing a mean performance rating of 3.82 and non-telecommuters showing a mean of 3.52 ($p < .05$).

A multiple regression analysis indicates that the three factors taken together account for only 3% of the variance in telecommuting status with a multiple correlation of .18, $F(3,63) = .57$, n.s. Again, self-perceived organizational skills had the highest relative weight, with a standardized Beta of .11 (see Table 3).

Hypothesis Two

Hypothesis two asserts that telecommuters with higher performance ratings would have greater self-perceived organizational skills, a lower need for guidance and feedback, and a lower need for social interaction. A standard regression analysis was employed regressing the three variables on performance rating for the telecommuters only. The overall variance accounted for was 11%, $F(3,23) = .93$ n.s., and the multiple R was .33 (see Table 4). The Beta weights indicated that need for social interaction carried the highest relative weight (Beta = -.28), self-perceived organizational skills followed (Beta = .20), and need for guidance and feedback carried the least weight (Beta = -.07).

The same multiple regression analysis for the non-telecommuters showed identical results: multiple R = .33; R squared = .11, $F(3,36) = .57$, n.s. However, the predictors are interacting differently with the dependent variable which can be seen by the Beta weights (see Table 4). Self-perceived organizational skills are negatively

Table 4

Multiple Regression Analysis		
Regressing Social Interaction, Guidance and Feedback, and Self-perceived		
Organizational Skills on Performance Rating for Telecommuters and		
Non-Telecommuters		
Telecommuters		
<u>Mult_R</u>	<u>RSq</u>	<u>F</u> (3,23)
.324	.109	.933 (n.s.)
Standardized Beta Weights		
Social Interaction		-.28
Organization Skills		.20
Guidance/Feedback		-.07
Non-telecommuters		
<u>Mult_R</u>	<u>RSq</u>	<u>F</u> (3,36)
.328	.107	1.442 (n.s.)
Standardized Beta Weights		
Social Interaction		-.23
Organization Skills		-.12
Guidance/Feedback		-.13

interacting with performance rating for non-telecommuters and positively for the telecommuters.

Hypothesis Three

Hypothesis three asserts that performance ratings will significantly distinguish telecommuters from non-telecommuters, taking into account the three self-report variables. A stepwise regression analysis was employed. The three self-perceived variables were entered into the equation first, performance rating was then entered to obtain the variance accounted for after the other three variables had been entered. The R squared significantly changed from .03 to .10, $F(4,62) = 1.75$, $p < .05$, and the multiple R increased from .18 to .32 (see Table 5). This indicates that performance does significantly distinguish telecommuters from non-telecommuters.

Discussion

Telecommuting is a new phenomenon which has only been practiced formally in the past three to five years. Consequently, very little scientific research has been conducted and thus the present research is inherently exploratory. Because of this, and the general retention of the null hypothesis, it is difficult to draw strong conclusions about telecommuting. The results of this study did not support hypotheses one and two; telecommuters did not have lower needs for social interaction, nor for guidance and feedback, and they did not report significantly better organizational skills than non-telecommuters. The same pattern of results appeared for higher performing telecommuters when comparing them to lower performing telecommuters. However, the third hypothesis was supported; performance ratings did significantly distinguish

Table 5

A Priori Multiple Regression Analysis Entering Social Interaction, Guidance and Feedback, Self-perceived Organizational Skills as Co-variables, and Performance Rating Entered Last, Regressing on Telecommuting Status.

	<u>Multi R</u>	<u>RSq</u>	<u>RSq</u> <u>Change</u>	<u>F</u>
1. Social Interaction Organization Guidance and Feedback	.179	.032	.032	.671
2. Performance Rating	.317	.100	.070	1.75*

* $p < .05$ (df = 4,62)

telecommuters from non-telecommuters after accounting for variance from the other three predictor variables.

Several interpretations are possible regarding the difference in performance scores between telecommuters and non-telecommuters. It may be that telecommuters do perform better than non-telecommuters because they telecommute. Perhaps working remotely reduces role conflicts or provides uninterrupted time for work in a way that enables superior performance. On the other hand, it may be that only superior performers are able to work out telecommuting arrangements with their managers. Lower performing employees who wish to telecommute may not be considered acceptable risks. Finally, managers may be biased in their ratings of telecommuters, perhaps attributing to them greater effectiveness, merely because they have an unusual work arrangement, not because their performance is superior.

The multiple regression analysis for telecommuters only (hypothesis two) indicated that social interaction carried the most weight in predicting performance rating followed by self-perceived organizational skills and the need for guidance and feedback. Both social interaction and guidance and feedback indicated an inverse relationship to performance rating, while organizational skills showed a positive relationship. A similar multiple regression analysis on non-telecommuters showed the same relative order of weights, with social interaction carrying the most weight and guidance and feedback carrying the least. However, for the non-telecommuters, all three predictor variables showed an inverse relationship. Consequently, organizational skills stands out as the main discrepancy between analyses of the two

groups. Self-perceived organizational skills correlated positively with performance ratings for the telecommuting group and negatively for the non-telecommuting group. Although the correlations were not significantly different, if accurate this difference in sign would indicate that an increase in organizational skills is related to a decrease in performance for the non-telecommuters. This seems counter to what would be expected for a person with good organizational skills. Perhaps self-perceived organizational skills are most critical to the telecommuter whose performance would depend on how well they could structure tasks and time, while other factors may be more directly related to performance for the non-telecommuters.

The fact that telecommuters and non-telecommuters apparently did not differ on the three self-report variables (hypothesis one) may be important. The two groups may have differed on sociability, feedback, and organizational skills prior to the telecommuting arrangement, and working remotely may have made them more similar in their self-reports in these areas. It would have been advantageous to conduct pre- and post-telecommuting measurements for many reasons.

Furthermore, measurement and design issues should be addressed in further research. Stable personality tests could be used to measure need for sociability and guidance and feedback. The Element B is generally situation-specific, and this may help account for the variability in the characteristics that it measured (see Table 3). Perhaps telecommuters require consistent personality and work styles that are not easily altered, and the Element B is not able or intended to assess these. There may be important ways in which the situations of the workforce differ which determine scores on the Element B and which have not been accounted for in this research.

Other factors relating to the measurement of the variables may have affected results as well. The scales taken from the Element B for social interaction and need for guidance and feedback were, I want to include people (social interaction), and I want people to control me (guidance and feedback). This does not indicate whether subjects actually seek these circumstances as part of their stable personality and work style characteristics, or whether they desire these interactions because they currently do not receive them in adequate amounts. The Element B provides another scale which reports what respondents actually receive, allowing further exploration of this want/receive differential. Taking the difference of what one wants and what one receives which comprises a dissatisfaction score (see Table 6). The major difference in dissatisfaction scores between the two groups falls in the inclusion dimension. Telecommuters want to include people more than they currently do, while non-telecommuters did not report this as often. This is what might be expected for employees who are relatively isolated.

The means of the dissatisfaction scores indicates that both groups are very close to zero, suggesting general satisfaction (scale ranges from 0 to 9). Because neither group appears to be very dissatisfied on these two dimensions, it may be that telecommuters had a higher need for social interaction and need for guidance and feedback because these are part of their stable personality and work styles. However, because the Element B is inherently situation-specific, this interpretation is questionable without further exploration of these personality and work styles using alternative measurements.

Table 6

Element B Dissatisfaction Scores
by Number of Subjects in Each Category

	<u>Telecommuters</u>	<u>Non-telecommuters</u>
	(n=26)	(n=41)
<u>Inclusion</u>		
I include people more than I want	1	11
No dissatisfaction (include)	7	9
I want to include people more than I do	18	21
<u>Control</u>		
People control me more than I want	13	23
No dissatisfaction (control)	9	6
I want people to control me more than they do	4	12

Although the Organization and Time Management Questionnaire was very reliable, it was limited to self-reports. Because subjects knew the subject matter of the study, a bias may have occurred in their responses to the items on the instrument. Objective measures of organizational skills could include a time management score from the performance appraisal, or interactive organizational tests.

Issues related to criteria may explain why the three self report variables did not help to distinguish successful telecommuters from less successful telecommuters. The criteria of performance rating had a small range. For the whole group, these scores ranged from three to five. Only five of the total sample were rated a five, and the others were evenly distributed between threes and fours. This restriction in range prohibits defining a clear cut-off between low and high performers. In addition to performance ratings, using objective measures of performance such as productivity levels may resolve this problem if the jobs were similar and had clearly defined outcomes.

Finally, the factors investigated may be related to the type of telecommuting arrangement. For example, the current study combined home and satellite workers. Criteria may be different for these two settings. Satellite offices provide structure and the opportunity for informal interaction, whereas the home worker may be affected more by the isolation factor. Future studies might treat these two types of telecommuters as separate samples.

In conclusion, the telecommuter is someone who is rated as a high performer. He or she is also a person who wants to include others more than they do. Although it is slightly higher than for non-telecommuters, telecommuters have a lower need for

guidance and feedback. Furthermore, the typical telecommuter, as suggested by this research, perceives himself or herself as having moderate to good organizational skills, which is mildly higher than the non-telecommuter's perception of themselves. This typical telecommuter is also someone whose performance rating increases as the perception of his or her organizational skills increase.

Because performance rating is positively correlated with telecommuting, it would be advantageous for companies to consider the relationship among performance and remote work arrangements. The three self-report variables were inconclusive in distinguishing the groups, and should be studied further before using them as a predictor in success at telecommuting. Future research should employ stable personality tests to measure the need for sociability and feedback. In addition, the different aspects of home and satellite office workers should be explored.

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Appendix A

Organization and Time Management Questionnaire

QUESTIONNAIRE II

Please write the number that corresponds to your answer for each question in the space provided at the left.

Not at all/
Never
1

2

3

4

Completely/
Always
5

- _____ 1. To what extent does following a schedule appeal to you?
- _____ 2. To what extent do you find yourself doing things at the last minute?
- _____ 3. Are the things you plan to undertake frequently things that prove too difficult to carry through in the amount of time available?
- _____ 4. To what extent do you like to arrange plans ahead of time?
- _____ 5. To what extent do you postpone decisions that need to be made as long as you can?
- _____ 6. To what extent is having a daily routine comfortable for you?
- _____ 7. Do you write out a weekly time plan that includes activities, priorities, and the estimated time to complete them?
- _____ 8. In your daily work, do you usually plan your tasks/projects so that you won't need to work against deadlines?
- _____ 9. To what extent do you like to organize a job before you start as opposed to finding out what is necessary as you go along?
- _____ 10. In managing your life, do you tend to undertake too much and get into a tight spot?
- _____ 11. Do you meet all deadlines and finish all your work on schedule?
- _____ 12. Do you procrastinate or put projects off until the last minute?
- _____ 13. Are your desk and work area well organized and free of clutter?

Appendix B

Signed Approval Form

APPROVED BY THE MASTER'S THESIS COMMITTEE

David Weckler, Ph.D.
Chairperson

Paul Witt, Ph.D.
Chairperson

Howard Tokunaga, Ph.D. Candidate
Committee Member

APPROVED BY THE DESIGN AND ANALYSIS COMMITTEE