Measurement of Worker Control

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Personal control is increasingly regarded as an important determinant of health and well-being. While some theorists such as White (1959) have suggested that there may be an intrinsic need to control the environment, others (Rodin, Rennert, & Solomon, 1980) have argued that the evidence suggests that the motivation for control stems from the belief that it ensures positive outcomes. In either case, there is rather compelling evidence that, in general, beliefs in personal control are associated with a myriad of positive health outcomes and lack of control with various forms of ill-health (Miller, 1979; Thompson, 1981). That control processes should also prove important in determining the stressfulness of occupational experiences, then, should not be surprising. This paper reports the development and psychometric assessment of a new self-report measure of employee control.

Control can be broadly defined as the ability to exert some influence over one's environment so that the environment becomes more rewarding or less threatening. One can further distinguish between the objective presence of such control and the individual's perception or belief in that control. In this paper the emphasis will be on the perception of control since this construct appears to be the more likely direct causal factor in explaining mental and physical health outcomes.

Much of the evidence attesting to the importance of control in determining reactions to stressful events derives from experimental work done in laboratory settings. Moreover, the stressful events of concern in these studies generally consist of acute exposures to physical stimuli such as electric shocks. While emphasis is increasingly shifting to more naturalistic settings and to stressors that are of both a psychological nature and of longer duration than those examined in the traditional experimental literature (Rodin, 1986), it is still very much open to question whether certain hypotheses that are rather well established in the lab can be simply generalized to the occupational realm. For example, having an instrumental control response has been found to generally lessen the impact of physical stressors (in terms of anticipatory arousal and intensity of pain ratings, Miller, 1979). One extension of this hypothesis to the work setting would be to hypothesize that employees who perceive that they have control at work would better tolerate exposure to certain chronic stressors (such as workload) or even future stressful events (such as job loss). However, many factors complicate this generalization. For one, chronic high workload differs in many respects from receiving mild electric shock or taking a series of IQ tests. Second, while instrumental control is clearly defined by its operationalization in the laboratory, what is meant by "perceived control at work" is much harder to specify.

Employee control at work is the focus of two research traditions in the fields of Industrial/Organizational Psychology and Organizational Behavior -- employee participation in decision

making and job enrichment (Locke and Schweiger, 1979; Spector, 1986). The participation tradition addresses the question of "joint decision making" as well as the larger issue of worker empowerment in the organizational structure and hierarchy. As argued by Locke and Schweiger (1979) there has been a strong ideological and political emphasis in this tradition as well as a practical emphasis. In the former case, worker participation in decision making is viewed as a moral imperative, as a prerequisite to a high quality of working life. In the latter case, advocates of participation cite evidence that it increases employee morale and productivity. The research on participation is voluminous, though the interest has been mostly on its impact on job satisfaction and job performance. Little of this research directly addresses the impact of participation on employee mental and physical health.

The control construct itself has been the focus of several recent reviews (e.g., Ganster, 1988; Ganster & Fusilier, in press; Sauter, Hurrell, & Cooper, in press). One theme consistently noted in these reviews is the lack of a generally accepted psychometric measure of the control construct.

Development of a Control Scale

Research in the organizational sciences has treated control either in a very general sense (as overall employee influence) or as a specific task characteristic (job autonomy). And even the job autonomy approach, in practice, fails to treat this characteristic with any level of depth, with the most widely used measure consisting of only three items (Hackman and Oldham, 1975). The participation literature essentially examines one of the likely

antecedents of employee control rather than the construct itself. As a result of this general focus on control the existing literature may be underestimating its impact as a moderator of job stressors. In the basic experimental literature (e.g., Averill, 1973) subjects are given control (or predictability) over the salient stressors in the situation. In organizational research there is little assurance that the control employees report represents control over the factors that are most important to them.

It seems that there are two approaches that might be taken to achieve a better match between the control variables that are assessed in any given study and the stressors that are most relevant to that situation. One can either develop a measure (or manipulation) that is specifically suited to a research setting, or one can employ a general measure of control that is multi-dimensional and from which factors can be derived that can be matched to specific stressors. The former approach is especially suitable for experimental studies that assess the impact of interventions in the workplace, or for studies attempting an in-depth examination of a particular occupation. In intervention studies, especially, it is important to demonstrate that the treatment really did alter relevant control beliefs. Much of the participation literature is ambiguous in this respect because only rarely are any data reported concerning the impact of participation on experienced control (Spector, 1986). Jackson's (1983) experiment is exceptional in that she developed several approaches for the assessment of this intervening construct, some relating to perceived influence over 13 specific topics that were to be the

focus of the staff meetings, and some relating to control in general.

The multi-dimensional measurement approach is necessary for studies that sample from multiple occupations. Ideally, a multi-dimensional measure would be broad enough to tap the important aspects of control in almost any occupation. The challenge inherent in this approach, of course, is to achieve a relatively exhaustive enumeration of these control dimensions. The notion of "domains of control" was discussed by Paulhus and Christie (1981). In their model these domains consisted of the domains of personal efficacy, interpersonal control, and socio-political control. However, these categories are probably too broad to be useful for occupational use. Perhaps more in line with an emphasis on the different areas from which stress at work may arise would be a categorization such as the following:

1. Work Tasks: Can the individual determine the order in which tasks are completed as well as choosing among available methods for accomplishing them? Can the individual choose among a variety of tasks or projects? Can the individual influence the quality or quantity of his or her output?

2. Work Pacing: Can the individual determine the pace of work, or is it controlled by machine? Can the individual determine the scheduling and duration of rest breaks?

3. Work Scheduling: Can the individual determine his or her working hours (flextime) so that non-work demands can be better coordinated with work demands? Can vacations and days off be taken when the individual desires? Does the worker have a choice of shift schedules?

4. Physical environment: Is the individual able to modify, decorate, or otherwise personalize the work station? Does the individual have some control over lighting, temperature, noise, or privacy?

5. Decision making: Does the individual have influence concerning organizational policies, goals, or procedures?

6. Interaction: Can the individual control the amount and timing of contact with other people, such as coworkers or customers/clients?

7. Mobility: Does the individual perceive that he or she can leave the occupation or employer, or does the individual feel locked-in to a particular job?

This multi-dimensional perspective of control in the workplace might be further complicated by adding yet another set of dimensions to those listed above. Abramson, Seligman, and Teasdale (1978), for instance, proposed an attribution reformulation of learned helplessness theory which posits that the effects of perceived controllability are determined largely by why people think they lack control. Such control attributions are made on three dimensions: (1) internal vs external, (2) stable vs unstable, and (3) global vs specific. There is some evidence that individuals who make internal, stable, and global attributions regarding their lack of control are more likely to demonstrate generalized helplessness effects, depression, and lowered self-esteem. Conversely, workers whose attributions of control in the workplace are external (my autonomy is at the discretion of my current boss), unstable (this is likely to change if my boss leaves), and specific (I can control the pace of work but not its quality) may be essentially equivalent to workers (in terms of well-being)

who perceive very little control at all. Moreover, the control dimensions listed previously might be classified according to how well they fit the internal, stable, and global criteria of this attributional approach.

One other issue that needs to be addressed in any conceptualization of control is that of predictability. In the basic control literature, researchers have addressed the question of whether the beneficial effects of control might be accounted for by the added predictability that it affords (Averill, 1973; Miller, 1981). While some of the effects of behavioral control might be explained by predictability, the evidence suggests that the two constructs need to be treated separately. Miller's (1987) research on monitoring and blunting coping styles, moreover, demonstrates that predictability of an impending threat does not necessarily lower one's anxiety. The fact that individual differences with regard to information seeking in part determine the impact of predictability may have implications for behavioral control in the work setting. While having the ability to alter aspects of the work environment might lessen the impact of some job demands, if this control brings with it added predictability, the latter may increase the stress of those individuals so predisposed (e.g., low monitors). In addition, predictability can prove more stressful than unpredictability when one is exposed for long periods of time (days) to stressors of relatively low severity (Abbott, Schoen, and Badia, 1984). These appear to be very much analogous to conditions of work stress, where exposures are typically chronic and the stressors are not traumatic (e.g., role conflict, work overload). In any event,

predictability, as a specific aspect of control, has not really been examined in the organizational literature.

The development of the measure reported in this paper attempted to attend to some of the issues noted above. Specifically, we attempted to produce items that would cover a broad range of control dimensions so that it would be likely to capture the most important areas of control for a worker in any occupation. However, we did not attempt to write complete subscales to represent each of these domains. It was decided that this would require too many items if one hoped to have internally consistent subscales that covered a large variety of domains. Rather, our purpose was to create a single, internally reliable scale whose items covered what we thought to be the most important control domains. In addition, we also wrote items to reflect the construct of predictability. Our intention was for these predictability items to form a reliable scale that could be treated separately from the other control items.

METHOD

Sample. Data were obtained from 191 employees of a midwestern accident and life insurance company. All respondents were employed in the company's division in Lincoln, Nebraska. At this site the entire employee population was approximately 272, thus the sample obtained represents a return of 70%. The average age of the sample was 35, the average educational level was "some college," and their average tenure in their current job was 6.6 years. Females constituted 64% of the sample. The occupations represented ranged from clerical workers to vice presidents of the company. Table 1 provides a complete listing of all the job titles and the number of cases in each title that were in the sample. As can be seen, when arrayed by job title, there are many instances where only one or two respondents hold the same job title. The sample was also classified by a more general "jobtype" variable which consisted of four categories. On this variable, 80 respondents (42%) were classified as "clerical," 23 (12%) as "supervisory," 39 (20%) as "managerial," and 49 (26%) as "technical."

Physiological Subsample. From the total sample of 191 for which complete questionnaire data were obtained, physiological data were also obtained from a subsample of 80 respondents. These 80 respondents were not chosen in a strictly random fashion from the entire sample of 191. Rather, they were ones who were able to meet the procedures for physiological data collection (as described below). However, while this group was not chosen randomly, they appear to constitute a very representative subsample of the total

respondent sample. Table 2 lists the mean responses on several demographic variables for the physiological subsample and the total sample. As displayed in this table, there seems to be a close match between the total sample and the physiological subsample.

Procedure. Questionnaires were distributed to all employees with a cover letter endorsing the project from the company's Wellness Committee. All questionnaires were accompanied with a return envelope addressed to the study director (DG) at the University of Nebraska. The respondents completed the questionnaires and returned them, sealed in the envelopes provided, to a central collection box located in the company's Wellness Committee's office. The box of completed questionnaires was then delivered to the study director. Some respondents chose to mail their completed questionnaires directly to the study director.

All questionnaires were completed anonymously. In order to collect physiological data and be able to collate them with the questionnaires, a system was devised whereby company medical staff took the physiological readings. At designated hours during two workdays subjects who had completed their questionnaire could go to an office and have physiological data recorded by the medical staff. On obtaining these measures, they were immediately recorded on the respondent's questionnaire before it was sealed and delivered. This system obviated the use of personal identifiers. However, since the medical staff were stationed for data collection only at certain times, many of the respondents did not find it convenient to coordinate the physiological measurement with their schedules. Apparently, one's ability to meet the schedule for data collection

was determined by a more or less haphazard set of circumstances, rather than by any systematic subject characteristic. The data in Table 2 suggest that the 80 members of the physiological subsample are fairly representative of the employee population at this site.

If a subject reported for physiological measurement, he or she was seated in a private office and allowed to relax for about five minutes. Some subjects used this time to complete parts of their questionnaire. After the five minute acclimation period the medical staff member took the subject's pulse and blood pressure while the subject was seated. These numbers were read to the subject who then recorded them on his or questionnaire.

Measures.

All data except the physiological data were collected in one questionnaire. This questionnaire contained a variety of multi-item scales, as described below.

Control Scale. A total of 25 items were written to capture instrumental control and predictability. Of these items, 21 covered instrumental control domains, and one item (#22) was written as an overall control perception. Three items were written specifically to assess employee predictability, and it was hoped that these items would consititute an independent scale separate from the instrumental control scale. For the analyses that follow, item 22 was not used since its purpose was solely as a general item.

Almost all of the items were written by the author for this scale. Items #3 and #4 are based on items from a control scale by Greenberger (1981), but they were significantly rewritten for the present scale. Item #22 was taken almost verbatim from the

Greenberger (1981) scale except that "control" was substituted for "influence." Finally, item #18 was adapted from two items from a scale reported by Ganster and Mayes (1988). Each item employs a 5-point Likert-type response scale with the following anchors:

1: Very Little
2. Little
3. A Moderate Amount
4. Much
5. Very Much

The three predictability items were written by the author for this scale. They each employ a 4-point Likert response scale with the following anchors:

1. Strongly Disagree
2. Disagree
3. Agree
4. Strongly Agree

The items are reproduced in Appendix A.

Somatic health complaints were assessed with a 17 item scale with items such as "your muscles felt tight and tense," "you were bothered by a headache," and "you had spells of dizziness." All 17 items were averaged into one scale. **Depression** was measured with the 6-item scale used in the Caplan et al. (1975) survey of 23 occupations.

Respondents also reported their own weight and height, as well as the number of times they were absent in the last year and in the last month. Finally, heart rate was recorded as beats per minute, and systolic and diastolic blood pressure as mm. of mercury.

RESULTS

Factor Analysis of Control and Predictability Items

The 21 control items and the three predictability items were subjected to a principal axis factor analysis with varimax rotation. The analysis indicated a very strong control factor (eigenvalue=6.24, 26% of the variance) on which loaded 19 of the instrumental control items. The second factor (eigenvalue=2.31, 9.6% of the variance) contained all three predictability items as well as control items #4 and #5. The control items concern control over amount of work completed and control over pacing. An inspection of a Scree plot indicated that there were no other significant factors (Figure 1), thus the analysis was constrained to two factors and these loadings were rotated with the varimax criterion.

As expected, the first factor captures a general heterogeneous construct of instrumental control over matters at the workplace. While the measure covers a variety of control domains, no subclusters of items yield comprehensible scales for particular domains. The predictability factor also appeared generally as expected, except for the loading of two of the control items on this factor. The rotated factor loadings are listed in Table 3.

Reliability Analyses

Three scales were subjected to reliability and item analyses. First, the 19 items that loaded on the general control scale were assessed as a scale labelled "control." In addition, two different predictability scales were examined. The first one, labelled

"predict1," contained the three predictability items. At this point we decided to omit the two control items that loaded on this factor because they simply did not yield an interpretable factor score. We felt that using just the predictability items would at least give an interpretable scale. The second scale, labelled "Predict2," contains just two of the predictability items, #2 and #3. Two considerations suggested this alternative. First, the #1 predictability item refers to a very specific predictability domain, "how much work to do on any given day." The other two items refer to much more general predictability domains, "results of decisions I make" and "things at work generally." Second, the first predictability item had a rather low correlation with the other items in this scale.

Results for the item analysis for the control scale are displayed in Table 4. The scale shows a quite acceptable reliability with a coefficient alpha of .87. The item-total correlations range from .29 to .63, indicating that the scale could probably be shortened some without a significant loss in reliability. However, at this point we would not recommend deleting items because some control domains would necessarily be cut out of the measure.

The predict1 scale item analysis is listed in Table 5. The reliability was .61, indicating that the scale does not meet generally accepted minimum levels of internal consistency. Also as expected, the first predictability item had the lowest item-total correlation. The Predict2 scale, however, showed a reliability of .71. At this point the Predict2 scale using only two of the predictability items seems to be the preferred choice. Below we use this second scale in computing correlations involving the control measure.

Correlates of Control and Predictability

In an effort to begin to describe the nomological network of control and predictability, we calculated the correlations of each of the scales to demographic variables and to several stress outcome variables. These correlations are reported in Table 6. Overall, the control scale correlated positively with sex (males higher), education, and age. In addition, those employees reporting high control showed lower levels of depression, somatic complaints, and absenteeism. The control scale did not correlate significantly with the predictability scale. The predictability scale generally showed smaller correlations than did the control scale.

Conclusions and Recommendations

As a result of the psychometric analyses of this control scale, several conclusions can be tentatively reached. First, the overall control scale appears to be psychometrically sound, even though it covers a rather wide range of control domains. These domains range from pacing control to control over company policies and procedures. We would recommend that this scale be used in further research efforts. Second, the predictability scale based on just two items meets minimal reliability standards. We would recommend that future work concentrate on expanding the number of items for this scale. An interesting result is that the control and predictability scales demonstrate virtually no correlation with each other. To us this indicates that they may indeed be tapping fundamentally different constructs. It might be possible, for example, to make organziational design changes that could increase employees' predictability when changes to increase instrumental control could

not be instituted. It remains for future research to determine whether such predictability enhancements would have comparable effects to the enhancement of control itself. Finally, the correlations involving the control scale in particular suggest that it might be tapping an important determinant of employee health and well being. We would recommend that this scale be used in epidemiological investigations of the role of employee control in interaction with mental and physical demands.

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Table 1
Frequency Distribution of Occupations Represented in Total Sample

VALUE LABEL	VALUE	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
	0	2	1.0	1.0	1.0
CORRESPONDENT	1	3	1.6	1.6	2.6
ASST DIRECTOR	2	1	.5	.5	3.1
ACCOUNTANT	3	2	1.0	1.0	4.2
DIRECTOR	4	1	.5	.5	4.7
CLERICAL	5	58	30.4	30.4	35.1
CLAIMS EXAMINER	6	6	3.1	3.1	38.2
ACTUARIAL ASST	7	2	1.0	1.0	39.3
SUPERVISOR	9	30	15.7	15.7	55.0
EDITOR	10	1	.5	.5	55.5
STATISTICIAN	11	1	.5	.5	56.0
SECRETARY	12	9	4.7	4.7	60.7
PROGRAMMER	13	9	4.7	4.7	65.4
CLAIMS AUDITOR	14	10	5.2	5.2	70.7
AUDITOR	16	4	2.1	2.1	72.8
ADMINISTRATOR/MGR	17	28	14.7	14.7	87.4
EXAMINER TRAINEE	18	2	1.0	1.0	88.5
SECURITIES ANALYST	19	1	.5	.5	89.0
COMPUTER OPERATOR	20	3	1.6	1.6	90.6
UNDERWRITER	21	6	3.1	3.1	93.7
KEYBOARD PUNCHER	[illegible]	1	.5	.5	94.2
LAWYER	[illegible]	2	1.0	1.0	95.3
MAINTENANCE WORKER	24	1	.5	.5	95.8
PRINTER	[illegible]	3	1.6	1.6	97.4
MKTG CONSULTANT	[illegible]	1	.5	.5	97.9
ACTUARY	[illegible]	3	1.6	1.6	99.5
LIBRARIAN	[illegible]	1	.5	.5	100.0
	TOTAL	191	100.0	100.0	

VALID CASES 191 MISSING CASES 0

Table 2

Demographic Comparisons of Physiological Subsample with Total Sample

	Physiological Subsample	Total Sample
Age	34.56	35.47
Education	6.20	6.10
Sex	1.57	1.64
Tenure	5.84	6.64

Sex is scored (1=male) (2=female)

Table 3

Rotated Factor Loadings for Control and Predictability

Item	Factor 1	Factor 2
Cont15	.72	-.05
Cont16	.68	-.05
Cont13	.64	-.20
Cont1	.63	.14
Cont2	.62	-.03
Cont17	.57	.00
Cont10	.56	-.01
Cont11	.55	.36
Cont18	.53	.16
Cont20	.51	-.11
Cont14	.48	.13
Cont12	.45	.31
Cont7	.45	.07
Cont6	.40	.27
Cont19	.37	.19
Cont8	.35	.18
Cont9	.35	.19
Cont3	.34	.30
Cont21	.30	.09
Cont5	.31	.65
Cont4	.34	.60
Pred3	.03	.48
Pred2	.07	.41
Pred1	.02	.40

RELIABILITY ANALYSIS - SCALE (CONTROL)

Table 4: Control Item Analysis

1. CONT1
2. CONT2
3. CONT3
4. CONT6
5. CONT7
6. CONT8
7. CONT9
8. CONT10
9. CONT11
10. CONT12
11. CONT13
12. CONT14
13. CONT15
14. CONT16
15. CONT17
16. CONT18
17. CONT19
18. CONT20
19. CONT21

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	ALPHA IF ITEM DELETED
CONT1	50.6492	101.4710	.5936	.8561
CONT2	51.3089	102.9620	.5509	.8580
CONT3	49.5707	109.6884	.3563	.8652
CONT6	50.6073	102.5766	.4231	.8651
CONT7	50.4346	102.9944	.4526	.8628
CONT8	49.9319	108.4322	.3899	.8641
CONT9	50.3141	106.3113	.3757	.8655
CONT10	51.9424	104.5598	.5180	.8595
CONT11	50.0314	103.9253	.5651	.8577
CONT12	50.4136	106.3701	.4553	.8619
CONT13	51.7330	104.1125	.5192	.8594
CONT14	50.6911	107.2778	.4517	.8621
CONT15	51.4503	100.9120	.6336	.8544
CONT16	50.8482	103.6979	.5974	.8569
CONT17	51.1518	106.5295	.4997	.8605
CONT18	50.8272	105.5016	.5073	.8600
CONT19	52.0000	109.4105	.3567	.8652
CONT20	52.2670	108.8915	.4763	.8620
CONT21	51.9634	110.4250	.2907	.8674

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L I A B I L I T Y A N A L Y S I S - S C A L E (P R E D 2)

Table 5: Predictability Item Analysis

1. PRED1
2. PRED2
3. PRED3

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	ALPHA IF ITEM DELETED
PRED1	5.4869	1.1038	.3375	.7140
PRED2	5.0052	1.5000	.4436	.4956
PRED3	4.9948	1.3737	.5463	.3652

ELIABILITY COEFFICIENTS

OF CASES = 191.0 N OF ITEMS = 3

LPHA = 0.6107

Table 6: Correlations of Control and Predictability

- - - - P E A R S O N C O R R E L A T I O N C O E F F I C I E N T S - - -

VARIABLE PAIR		VARIABLE PAIR		VARIABLE PAIR		VARIABLE PAIR	
CONTROL	-.0135	CONTROL	-.2644	CONTROL	.2635	CONTROL	.2343
WITH	N(191)	WITH	N(191)	WITH	N(189)	WITH	N(191)
PREDICT	SIG .853	SEX	SIG .000	EDUC	SIG .000	AGE	SIG .001
CONTROL	-.3788	CONTROL	-.2138	CONTROL	-.1338	CONTROL	-.1516
WITH	N(191)	WITH	N(191)	WITH	N(191)	WITH	N(191)
DEPRESS	SIG .000	SC	SIG .003	ABSENTY	SIG .065	ABSENTM	SIG .036
CONTROL	.1651	CONTROL	.1640	CONTROL	.1586	PREDICT	.1264
WITH	N(80)	WITH	N(80)	WITH	N(80)	WITH	N(191)
HR	SIG .143	SYSBP	SIG .146	DIASBP	SIG .160	SEX	SIG .082
PREDICT	-.1267	PREDICT	.0176	PREDICT	-.1098	PREDICT	-.0418
WITH	N(189)	WITH	N(191)	WITH	N(191)	WITH	N(191)
EDUC	SIG .082	AGE	SIG .809	DEPRESS	SIG .130	SC	SIG .566
PREDICT	.0088	PREDICT	.0680	PREDICT	-.0791	PREDICT	-.4483
WITH	N(191)	WITH	N(191)	WITH	N(80)	WITH	N(80)
ABSENTY	SIG .904	ABSENTM	SIG .350	HR	SIG .486	SYSBP	SIG .000
PREDICT	-.2072	SEX	-.5174	SEX	-.2062	SEX	.0725
WITH	N(80)	WITH	N(139)	WITH	N(191)	WITH	N(191)
DIASBP	SIG .065	EDUC	SIG .000	AGE	SIG .004	DEPRESS	SIG .319
SEX	.1366	SEX	.2254	SEX	.1587	SEX	.0417
WITH	N(191)	WITH	N(191)	WITH	N(191)	WITH	N(80)
SC	SIG .060	ABSENTY	SIG .002	ABSENTM	SIG .028	HR	SIG .714
SEX	-.4179	SEX	-.2868	EDUC	.0995	EDUC	-.0217
WITH	N(80)	WITH	N(80)	WITH	N(189)	WITH	N(189)
SYSBP	SIG .000	DIASBP	SIG .010	AGE	SIG .173	DEPRESS	SIG .767
EDUC	-.0359	EDUC	-.0771	EDUC	-.0909	EDUC	.1674
WITH	N(189)	WITH	N(189)	WITH	N(189)	WITH	N(80)
SC	SIG .624	ABSENTY	SIG .292	ABSENTM	SIG .214	HR	SIG .096

SIG IS 2-TAILED, "." IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED.

30-Jan-89 WOODMEN SURVEY JUNE 1987
11:00:37 The University of Nebraska IBM 4381-13 VM-SP CMS

- - - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - - -

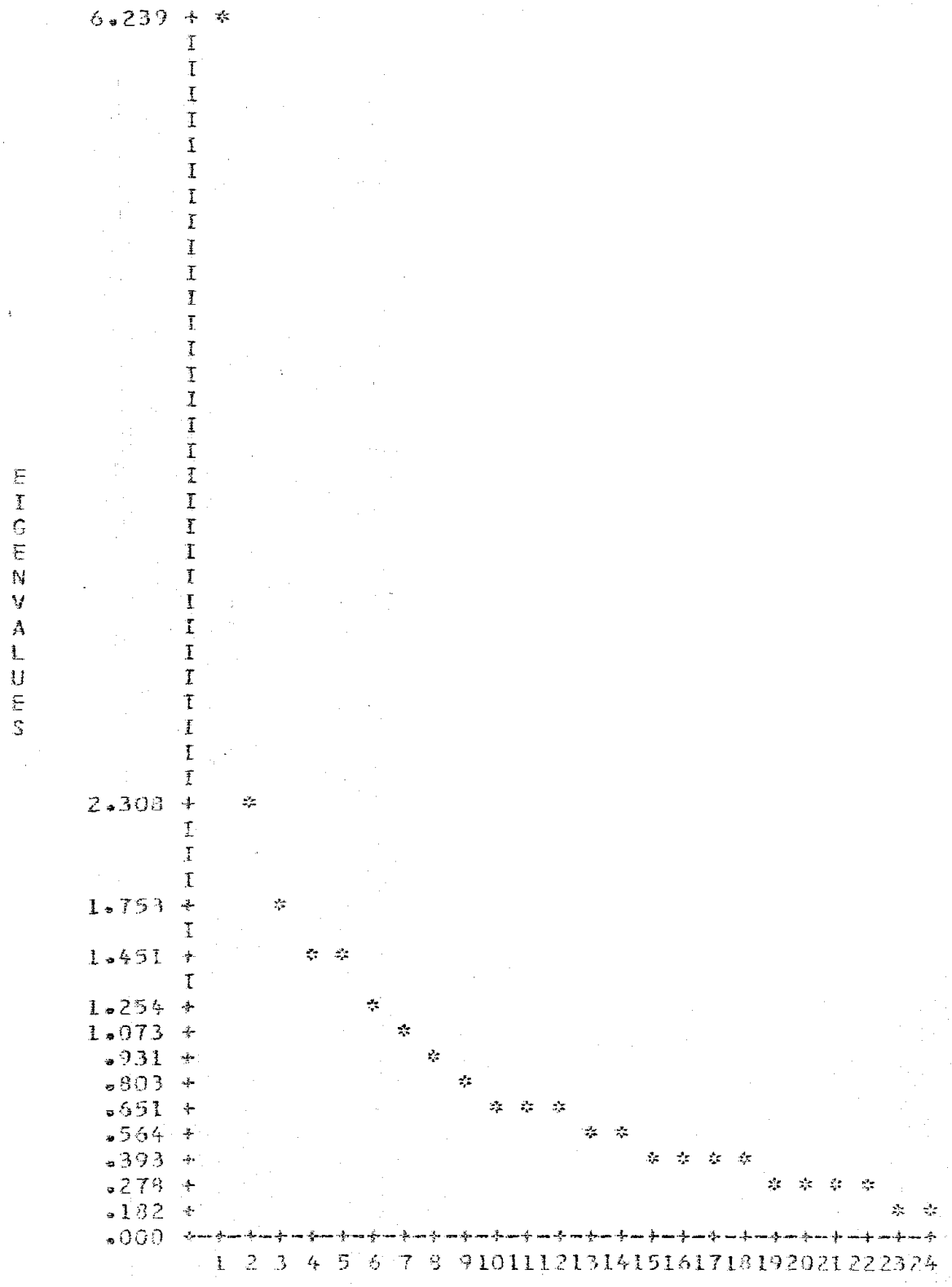

Figure 1

Appendix A

Control and Predictability Scale Items

1	2	3	4	5
Very Little	Little	A Moderate Amount	Much	Very Much

___ 1. How much control do you have over the variety of methods you use in completing your work?

___ 2. How much can you choose among a variety of tasks or projects to do?

___ 3. How much control do you have personally over the quality of your work?

___ 4. How much control do you have personally over how much work you get done?

___ 5. How much control do you have over how fast or slowly you have to work?

___ 6. How much control do you have over the scheduling and duration of your rest breaks?

___ 7. How much control do you have over when you come to work and leave?

___ 8. How much control do you have over when you take vacations or days off?

___ 9. How much are you able to decorate, rearrange, or personalize your work area?

___ 10. How much do you have control over the physical conditions of your work station (lighting, temperature, etc)?

___ 11. How much control do you have over how you do your work?

___ 12. How much control do you have over your performance goals and objectives?

___ 13. How much control do you have over the activities of other people at work?

___ 14. How much can you control the amount and timing of your interaction with other people at work?

___ 15. How much influence do you have over the policies and procedures in your work unit?

___ 16. How much control do you have over the sources of information you need to do your job?

___ 17. How much can you determine the amount and timing of information you get?

___ 18. How much control do you have over the amount of resources (tools, material, etc.) you get to do your work?

___ 19. How much can you control the number of times you are interrupted while you work?

___ 20. How much control do you have over the amount that you earn at your job?

___ 21. How much control do you have over how your work is evaluated?

___ 22. In general, how much control do you have over work and work-related matters?

___ I can generally predict how much work I will have to do on any given day. (Pred1)[1]

___ I can usually predict what the results of the decisions I make on the job will be. (Pred2)

___ Things that affect me at work are generally pretty predictable, even if I cannot directly control them. (Pred3)

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[1] These 3 predictability items were originally in another part of the questionnaire packet and use a 4-point response scale (see accompanying text).