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DO WORKERS WANT CONTROL AT WORK OR DON'T THEY: SOME
RESULTS ON DENIAL AND ADJUSTMENT

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Running title: control rejection

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Abstract

The familiar phenomenon to practitioners of job redesign that some people do not like to have control over their work (control rejection) is empirically analyzed in a sample of 206 male blue-collar workers in Germany. The question is asked whether this is because workers who do not want control have a reduced aspiration level for control (adjustment). The alternative hypothesis is that control rejection is a defense (sour grape reaction). According to the adjustment hypothesis control rejection should reduce the potential negative impact of lack of control at the work place (thus, control rejection should function as a moderator variable in a regression analysis). The newly developed scale of control rejection does not function as a moderator. Non-control seems to make people vulnerable to the negative effects of stress, regardless of their level of control rejection. This speaks for the sour grape hypothesis. Additionally control rejection is not related to a blue-collar worker culture but is related to the resources at the work place (higher control rejection when there is less control and complexity of work and when the subject has fewer skills).

Do Workers Want Control at Work or Don't They: Some Results on Denial and Adjustment

Various studies in the realm of stress at work have shown that lack of control at work is related to psychological impairment (e.g., Gardell, 1971; Karasek, 1979). Some writers have discussed control as a moderating variable, that is, that stress has a detrimental influence on, for example, mental and physical health when control is low, but not when control is high (e.g., Frese, 1978; Karasek, 1979; Semmer, 1982). This latter view comes closer to the laboratory concept, in which lack of control and aversive stimuli have been combined to produce helplessness (Glass & Singer, 1972; Seligman, 1975). These and similar studies form one basis for programs of job enrichment: high levels of influence at work are assumed to be beneficial for mental health as well as for productivity.

This idea, however, has not gone unchallenged. There are at least two important arguments that advocates of job enrichment have to deal with. One is on the practical level: practitioners often report that some people simply do not want more influence in their work (Walker & Marriott, 1951). A second one is more theoretical, posing that some workers have little aspiration for control and thus are not vulnerable to the psychological problems that can be produced by lack of control.

Every practitioner of job design can tell of people who refuse to participate in control enhancing programs, and every manager knows people who seem to be happiest with the most boring jobs. Added control at work usually leads to added responsibility, so that one is responsible for errors and is subject to reprimand for them. Some blue-collar workers, therefore, do not like to have their control increased. This argument is often taken as reason for not trying programs of job enrichment and semi-autonomous work groups.

On a theoretical level, it has been argued, as well, that only some workers want job enrichment. For example, Hulin and Blood (1968) have argued that the impact of job enrichment with its higher control over pace of work and over choice of work methods depends on the culture of the workers. Only workers with middle class values who come from small cities and who adhere to the protestant work ethic want to have control. Hulin and Blood's reasoning is based on indirect evidence that the rural/urban distinction is an effective moderator for the relation between job conditions and job satisfaction. One implication is that the urban blue-collar workers are used to the high division of labor in industry and have adjusted their aspiration level accordingly. Hulin and Blood point out that their reanalyses were done with index variables of the site of the factories. Thus, their analyses did not use individual data on the workers' upbringing (small or large town), cultural background, or most importantly, aspirations for control.

Fein (1976) similarly argues that blue-collar workers are more interested in pay increases (Goldthorpe, Lockwood, Bechhofer & Platt, 1968) than in job enrichment. Wilensky (1981) goes one step further by suggesting that the rhetoric for control at work leads to problems because it unrealistically increases the aspiration level for control only to have those hopes and aspirations shattered. One of the implications of these views is that reducing one's aspiration level for control has positive consequences for the individual.

Against the background of experimental findings in the area of control, these views are surprising because "adjustment" to the situation of noncontrol may imply a state of passivity and depression (Seligman, 1975). Furthermore, White (1959) has argued that an effectance motive -- the desire to have an effect on the environment -- is phylogenetically useful and probably hardwired. In addition, psychoanalytic theory suggests that a reduction of aspiration level is not necessarily successful. Such a reduction could result from a neurotic defense mechanism that reduces the

aspiration level without sufficient reality orientation (Vaillant, 1977).

It follows from these theoretical arguments that a worker's statement, "I am not interested in control at work," can be interpreted in two ways: The first interpretation is concerned with the aspiration level for control, for example, "I have adjusted my aspirations for control; therefore, I do not care about lack of control." This adjustment may take place before one actually starts working or as a result of lack of control at the work place. In both cases the adjustment position implies that lack of control does not lead to negative consequences when one has adjusted accordingly.

The second view implies a defense, in which the worker uses the argument of the fox in the fable who turned away from the grapes that were out of reach, saying they were too sour anyway ("sour grape reaction"). In this sense, s/he is saying: "I am struggling to keep down my aspirations. I try to convince myself that I really am not interested in control." This interpretation does not necessarily imply the concept of an unconscious process of repression -- it could very well be an effort that is principally, but not always, available to consciousness (Erdelyi, 1979). The result of repression, however, is that the nagging thought of not having enough control is out of consciousness. This sour grape view implies that the potential negative effects of non-control persist even when one defends against them.

The central issue of this paper is to determine whether or not it helps the worker to reduce the negative consequences of noncontrol when a worker says that s/he does not want to have any more control (called "control rejection"). If the aspiration level for control has been adjusted and thus leads to control rejection, one would hypothesize a reduction of otherwise negative consequences, for example in the area of psychosomatic health. However, if the statement of disinterest just reflects a facade (defense) that the person is keeping up for him or herself and

others to "save face", one would hypothesize that noncontrol leads to negative consequences regardless of this defense. Thus, the effect of control rejection is dependent on the (negative) effect of lack of control. Therefore, more technically one has to consider the moderator effect of control rejection. This will be done in a first step. The dependent variable is psychosomatic complaints. In a second step the direct correlates of control rejection will be considered.

Moderator Effects of Control Rejection

There are two models of how a low level of control at work may be dysfunctional for the individual. According to Model 1, a low level of control itself is aversive and therefore leads to psychological impairment. According to Model 2, a low level of control does not lead to negative health consequences in and of itself, but only in combination with stress. This means that the combination of high stress and lack of control lead to psychosomatic complaints because stressors have their full impact upon the person under these conditions. Obviously, any moderator effect of control rejection has to be judged against the background of the effect of control alone. Since empirical results support both of these ideas (cf. Karasek, 1979; Semmer, 1982), the possible moderator effect of control rejection will be discussed for both models.

If a low level of control itself is aversive (Model 1), a rational adjustment of one's control aspirations helps to reduce the negative impact of a low level of control. If the worker has low aspirations, s/he does not need control; a low level of control is not aversive and therefore does not lead to negative consequences in the area of psychosomatic health. Thus, the relationship between subjective control and psychological impairment should be moderated by control rejection. This moderator effect implies that a low level of control and a low level of control rejection should have negative effects, but a low level of control and a high level of control

rejection should not have such effects. In terms of a regression analysis, the moderator should, therefore, be of a subtractive form (cf. Southwood, 1978): Noncontrol - Control Rejection (with the coding for control reversed so that a high value of this interaction term indicates that adjustment has not taken place). This moderator should have a positive correlation with psychological impairment according to the adjustment position.

In contrast to this hypothesis, the sour grape position suggests that the relationship between subjective control and psychological impairment should hold regardless of the level of control rejection, since the sour grape reaction does not help to effectively reduce one's "need for control."

I now turn to the second model: that the dysfunctional effect of a low level of control is dependent upon the stress level. According to experimental evidence (Glass & Singer, 1972; Seligman, 1975) and some field studies (Semmer, 1982), a low level of control has a dysfunctional effect only when stress is high. The relevant multiplicative interaction term in the regression analysis is: Noncontrol \times Stress (again with the coding of control reversed, so that a high score implies the most dysfunctional condition of little control and high stress, and a low score the most positive condition of high control and little stress). The different positions with regard to the variable control rejection lead again to different hypotheses. According to the adjustment position, this interaction term "Noncontrol \times Stress" should itself be affected by control rejection. Control rejection helps to undo the moderator effect of control -- the stress situation does not instigate a need for control (since one has a low need for control), and one reacts calmly to the situation. Since higher control rejection means that one really does not want to have control, this situation should be similar to actually having control at work. Only when one has a high need for control is the interaction of "Noncontrol \times Stress" related to psychological dysfunctioning. Thus, in terms of a regression

analysis, a new interaction term has to be developed that has a high positive regression weight according to the adjustment position: (Noncontrol - Control Rejection) x Stress. Unlike the adjustment position, the sour grape concept suggests that control rejection should not have such an effect. Since control rejection is a defense that does not help to reduce the "need for control", control rejection should not have an impact on the moderator effect of control. The interaction term "Noncontrol x Stress" should still account for the major proportion of variance, even when "(Noncontrol - Control Rejection) x Stress" is partialled out.

Correlates of Control Rejection

The adjustment position and the sour grape position also lead to different suggestions concerning the variables with which control rejection should correlate. According to the adjustment position, control rejection should be related to sociological characteristics. For example, Hulin and Blood argue that control rejection should be related to where one was raised and lives now (with higher rejection in people who have been raised in and live in larger cities) and to working class values and activities (higher rejection in members of the labor union and particularly those active in the trade union). Since Hulin and Blood also talk about the Protestant work ethic, one might hypothesize with them that control rejection should be related to religion (lower rejection in Protestants).

According to the sour grape position, control rejection should show correlations with work resources that are available to the person. Work place resources refer most importantly to control at work, to complexity of work, and to one's skills at work. Those workers with lower resources in these areas should show higher control rejection.

In the following, these different hypotheses will be tested.

Since one purpose of this study is to look at the subjective and objective side of the work situation it is necessary to devise a study in which the work place would be rated more objectively than by questionnaire responses (Greif, 1979).

Method

Sample

As part of a larger study on stress at work, a questionnaire on control rejection was developed and used in a cross-sectional study. Subjects were male blue-collar workers in the metal industry in West Germany. To insure the inclusion of rural as well as urban centers, five factories of the rural south and urban middle Germany were selected for the study. They belonged to different companies and were steel and automobile factories. To obtain a wide range in relevant factors (i.e., control at work, complexity of work, and intensity of work speed), the work places were selected with the help of a short screening instrument. A project member walked through the factories and rated various work places with the help of this screening instrument on the variables control, complexity, and intensity of work speed. This rating was done in cooperation with first line supervisors and shop stewards. After these ratings, an attempt was made to include work places in the study that were on the extreme ends of the three dimensions. Once a particular job was included on this basis, three or more workers were selected at random except in those cases where there were fewer than 4 workers working in a particular job. Of the 250 workers thus selected, 218 were able to participate. There were no refusals, but some of the organizational problems of interviewing them were too difficult to overcome (e.g., scheduling so that production would not be disturbed). Of the 218, 12 more had to be rejected because the data came from recent German born immigrants from Poland who did not speak German well enough. The participants filled out a questionnaire on two separate days. They were payed for their participation (at a higher than their usual hourly wage). The

various parts of the questionnaire were given in permuted order. Since the time periods allotted to the study had to be strictly observed for organizational reasons, some subjects were not able to finish certain parts of the questionnaire. This constraint contributed to missing data that decreased the number of subjects in most of the analyses. Unfortunately, the scale of control rejection was given at the end of one part of the study, so there are especially many missing data for this scale (47 missing cases). In order to test whether these missing data lead to a distortion in the results, seven t -tests were calculated for the most important variables of this study (namely, psychosomatic complaints, the three scales of control at work, and the three scale of psychological stress at work). Group 1 did not complete the control rejection scale and group 2 completed it. Multiple t -tests are rather conservative when used in this way since one would expect by chance alone more significant differences than a given p value. There were no significant differences ($p < .05$) between these two groups. For practical purposes, the missing data do not seem to affect the main variables of this study.

Method of Analysis

The methods of analysis used to analyze the data were correlation and regression techniques (Zedeck, 1971; Southwood, 1978). A note on the use of z -scores is in order. The variables that make up the interaction terms were z -standardized, e.g., the composites of the interaction term "Noncontrol \times Stress". Additionally, it is necessary to add a constant to each of the variables that go into the term. If no constant is added, the mean is 0; this would lead to a positive interaction term for a low noncontrol and low stress condition; the interaction term of the high noncontrol and high stress condition would be positive, as well. Obviously, this ambiguity would produce theoretically meaningless results. Instead, the lowest empirically derived score is added as a constant to each z -scored independent variable so that

0 was always the lowest score (e.g., when the lowest z -score was -2.3 , 2.3 was added as a constant for this variable). Regression procedures of this kind lead to the problem of artificial zero scores (Southwood, 1978). To rule out that this problem leads to biased results, a sensitivity test was done by running all of the analyses with arbitrary constants of 5 and 10 added to the z -scored independent variables (so instead of 2.3 as in the example above, 5 or 10 was added to each of the variables). Results will be interpreted only where these sensitivity tests do not lead to differences in results in terms of changing the significance level or the signs of the Beta (actually adding different constants does not change the results).

Measures

An initial measure of control rejection was constructed along the lines of the Person Environment Fit Model (French, Rogers & Cobb, 1974). Thus, questions were asked concerning aspirations and the actual control situation. The items for measuring aspirations asked whether it is important for the person to have more influence regarding certain aspects at work, in the company, in the labor union, and in the community. The results of a pilot study ($N = 68$) of blue collar workers indicated that the 11 items produced little variance and that the item curves were highly skewed. All those who were tested wanted more control than they had at the time of this study (using a scale from one to two, the average mean of the items was 1.75, the mode of every item was 2, the average median was 1.82, and the average standard deviation was 0.05). This can be taken as evidence for a high need for control in practically all workers. One could have stopped at this point and concluded that there actually is no evidence for appreciable differences in control aspirations in blue-collar workers. However, that would have been unfair to the hypothesis advanced in the literature and particularly by practitioners of work design that one does come across differences.

Similarly, our own qualitative interviews indicated that a proportion of workers actually said that they do not want any more control at work. In order to capture this real phenomenon, it was necessary to develop a new scale. To make the scale more meaningful and consequential the new scale would have to incorporate possible problems that workers see associated with an increased level of control. Therefore, another procedure to assess control rejection was developed that supplies possible reasons why high control could lead to unwanted responsibility. The new scale yielded a more normal distribution. The item content, the translated items and the item characteristics of this scale of control rejection are given in Table 1. For most items, the answering scale ranged from "is completely true" to "is not true at all" (1 - 4). In the case of the A/B-item format, the scale was from "very much like A" to "very much like B" (1-4). The reliability was adequate with Cronbach's Alpha = .70. The scale was relatively normally distributed ($\mu=2.24$, median=2.25, kurtosis= .73, skewness=.27 and $s= .50$).

Tables 1,2 and 3 about here

The job dimensions were all measured on three levels (cf. Semmer, 1982 and in press for details on the construction of these scales): (1) Subjective estimates by the workers gathered with a questionnaire. (2) Observer's estimate: The workers' jobs were observed for one and one-half hours by trained observers (engineers or former blue-collar workers; more information on the observations and the interrater reliabilities are given in Semmer, 1982). (3) Group estimate: Since in many cases three or more persons with the same job (but not necessarily working together in the same group) filled out the questionnaire, the median of the each dimension could be calculated for each job. This value was employed as a group estimate of the relevant job dimension for each person. The median was used to insure that idiosyncratic responses had minimal

influence on this score. Hence, idiosyncratic and possibly illusory answers were eliminated in this index to a certain extent. It can, therefore, be taken as a more "objective" measure than the individual's estimate on the respective dimension. At the same time, this index does not encounter the problems of the observer's short time span of observation (no Alpha is computed at this level because the values of the whole scales and not the individual items were used).

The various scales, a sample item, and the Cronbach's Alphas for the scales used in this study are presented in Table 2. To assess work place dimensions the following scales were used: Control at work (the possibility for decisions regarding one's own activities at work), complexity (level of difficulty of the job), and psychological stress at work. Psychological stress is assessed by an index of scales concerning uncertainty in the job (such as ambiguities and conflicts), organizational problems (e.g., not getting needed material on time), environmental stress (e.g., noise), danger of accidents, and intensity (i.e., speed of work). There are good theoretical and empirical reasons for aggregating the scales on psychological stress. The different scales of this index correlate with each other and form a new scale, when each component scale is treated as an item in the overall scale of psychological stress at work. The correlations of the main variables are presented in Table 3. The correlation between observed and subjective control is quite high while the corresponding correlation between observed and subjective stress is relatively low.

The psychosomatic complaint list is a slightly modified version of the scale by Fahrenberg (1975) (modified by Mohr, Note 1). It lists several psychosomatic complaints (headaches, stomach aches, etc.) and is similar to the various English scales on somatic complaints (e.g. the one used by Caplan, Cobb, French, van Harrison & Pinneau, 1975).

Additional items assessed size of town where subject was raised, size of town of current residence, skills, and participation in the labor union.

Furthermore, a scale on defensive reactions with regard to work speed was developed for this study (and is used later to support one particular interpretation of the data). The items center around relatively exaggerated statements regarding the positive nature of job pressure. Finally, a scale on anxiety (adapted by Mohr, Note 1) will be used to support one particular interpretation of the data.

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Results

Tables 4 and 5 about here

Moderator Effects of Control Rejection

The results for the two models of moderator effects of control rejection are presented in Table 4. In the first model, the moderator effect of control rejection (CR) on the relationship between control at work and psychosomatic complaints is assessed with a subtractive term: Noncontrol - Control Rejection. In addition, the linear components of control at work and control rejection are added. The analyses are done separately on the observed, group, and subjective levels. As can be seen in Table 4, noncontrol is significantly related to the dependent variable only on the subjective level and control rejection only on the group level. In none of these analyses does the subtractive moderating term contribute to explaining psychosomatic complaints. These

results are essentially the same when other constants (+5 and +10) are added to the independent z-standardized variables.

The second model is conceptualized on the basis of the experimental results that the interaction of lack of control and stress produces psychological impairment (the relevant multiplicative term is Noncontrol x Stress). Correspondingly, the potential moderator effect of control rejection is based on the following interaction term: (Noncontrol - CR) x Stress. Additionally, the linear components of these interaction terms were included in the regression analysis. In Table 4, the multiplicative term "Noncontrol x Stress" is shown to carry significant standardized regression coefficients on the group and on the subjective levels. It has the highest regression weight in each case. On the other hand, the moderator term "(Noncontrol - CR) x Stress" is not significant or approaching significance in any of the regression analyses. There is a significant negative regression weight for "Noncontrol - CR" on the subjective level. Although the regression weights of "(Noncontrol - R) x Stress" are not significant, the signs of these regression weights are largely negative. All of these results are reproduced when the stability tests with the two other constants (5 and 10) are performed.

Correlates of Control Rejection

The results are presented in Table 5. Control rejection correlates, in general, with control at work and complexity of work, and is related to skill level. In the case of skills, the results are somewhat complicated, but they are generally in the direction that the workers with greater skills show less control rejection (mean for unskilled 1.92, semiskilled 2.32, and skilled 2.11). There are only 6 unskilled blue-collar workers in our sample, so that the mean of 1.92 for this group is not very stable. The difference between the semiskilled and the skilled is still significant when only the two large groups are compared ($F(1,142) = 4.922, p < .05$). In

terms of cultural background, control rejection is related to activities in the labor union (the two types of shop stewards in West Germany are combined and have a mean of 1.99 and those without function in the labor union have a mean of 2.27), but the point biserial correlation with membership in a labor union is not significant. It is not related to religion (with the categories Protestant, Catholic, others, and none) nor to size of town in which one was raised. There is a small but not quite significant relationship of control rejection with the size of the town one currently lives in (with means of 2.37 (N=57) for towns with less than 5,000 inhabitants; 2.17 (N=23) for towns with 5,000 to 10,000; 2.06 (N=14) for 10,000 to 50,000; 2.45 (N=5) for 50,000 to 100,000; and 2.14 (N=46) for 100,000 to 500,000 inhabitants).

Discussion

Adjustment Position Versus Sour Grapes Position

Control rejection is not an effective moderator. It does not moderate the relationship between control at work and psychosomatic complaints (Model 1 in Figure 5), and it does not moderate the more complex relationship of the interaction term "Noncontrol x Stress" with psychosomatic complaints (Model 2). This evidence speaks against the adjustment position. The adjustment position suggests that the two moderator terms involving control rejection should be positively correlated; however, the regression coefficients of the relevant interaction terms are actually negative (although only one namely Noncontrol-CR has a significant Beta on the group level in Model 2). This might suggest that something like overadjustment may even be detrimental. Noncontrol at work seems to make the worker vulnerable to stress effects. According to the adjustment hypothesis, high control rejection should reduce this effect of noncontrol. This is clearly not the case. The hypothesis that control rejection is a defense and therefore not effective in changing the impact of the work situation on psychosomatic

complaints is more compatible with the data.

Thus, control rejection does not seem to have beneficial effects. There are even mild negative effects, as is underscored by the small but significant positive correlation with psychosomatic complaints ($r=.14$, $N=157$, $p<.05$).

Other correlates of control rejection similarly point to the conclusion that the sour grape interpretation of control rejection is more adequate. Control rejection is negatively related to subjective and observed control, as well as to complexity of work (taken as indicators of resources at the work place), and to skill level. This finding is in accord with the sour grape reaction position that hypothesizes control rejection to be a reaction to lack of personal and work place resources. According to Hulin and Blood's arguments control rejection should be related to religion and to having grown up in a small town. There is a slight relationship between the size of the town one currently lives in and control rejection, but the relationship is exactly opposite to the one that would be in line with Hulin and Blood's arguments. People from small towns tend to have the highest score in control rejection. Participation in the labor union also fails to Hulin and Blood's line of reasoning; in contrast to their hypothesis, working class oriented persons tend to have a higher control rejection rate. Participants in labor union activities have lower control rejection than those who are not active. Thus, the hypotheses that result from the adjustment position can all be rejected with these data.

Person-Environment Fit as a Special Case of the Adjustment Position

A special interpretation of the adjustment position could be made within the framework of the person-environment fit model (French et al., 1974; van Harrison, 1978). Although this model was not developed to interpret directly the impact of control, it would also suggest that control rejection should moderate the effect of control at work; but according to this model any deviation of the aspiration level from the actual control at the work place has

negative consequences. Rejecting control when one has it has the same negative consequences as not rejection control when one does not have it. Thus, to test this theory different interaction terms must be used, namely the absolute value of the deviation from control at work: $"/\text{Noncontrol} - \text{CR}/$ and $"/\text{Noncontrol} - \text{CR}/ \times \text{Stress}$ ". High positive values of these terms mean that there is a high misfit between working conditions and aspiration level (the most negative condition according to this reasoning) and low values mean that there is a high fit. The same analyses as shown in Table 4 were done with these two interaction terms. The results are essentially the same as those presented in Table 4. The interaction term "Noncontrol \times Stress" shows a significant Beta on the group level and the subjective level. The two interaction terms that model the person-environment fit theory have nonsignificant Betas in all of the analyses. The additional analyses with different constants added to the z -standardized scores lead, again, to the same results. Thus, the special case of the adjustment hypothesis — the one derived from the person-environment fit model — is rejected by the data as clearly as the general adjustment position.

Problems of Interpretation and Conclusion

The following problems in interpreting the data have to be addressed: the question whether one can generalize from Germany to the U.S., the question of construct validity of control rejection, the question whether objective conditions at work play a role in the development of psychosomatic complaints, and finally the question of causal relationship.

First, can these results be generalized to the U.S.A. and to other countries? We cannot be certain, of course, as long as the study has not been replicated in the United States of America. On the other hand, Hulin and Blood, Fein, and the theoreticians of the person-environment-fit theory have not typically confined their thinking to the situation in the U.S.A. So, at the very least, these results may point to the historical and cultural limitations of the

adjustment position. However, it seems unlikely given the many parallels between the highly industrialized Western countries of the Federal Republic of Germany and the U.S.A. that cultural differences between these two countries are the main reason for our results. One evidence for this interpretation is that managers from both countries report that they know many workers who do not want to get more control at work.

Secondly, one may question whether the scale used in this study really measures control rejection. One interpretation could be that it measures resignation. This implies that the workers realistically perceive their control needs and the noncontrol situation at work, but know that they are not able to do anything about it. There is one result which is more compatible with the sour grape hypothesis than with a resignation position: the correlation between control rejection and defense reaction to the pressure at work is positive ($r = .22$, $N = 158$, $p < .01$). The items of the scale on defense reactions center around the exaggerated attitude, "I can deal with all demands", which is the opposite of a resigned attitude. This is not the place to discuss the validity of this scale as a measure of true defense — no doubt, it can be questioned. It is sufficient for the argument that the resignation position would have hypothesized a negative correlation with this scale rather than the positive one that was obtained.

Another interpretation could be that control rejection measures laziness. Although it is not possible to rule out this interpretation because we do not have objective performance data, this interpretation runs into problems with the positive correlation with defense reaction, as well. As already pointed out, this scale uses exaggerated items of "I can do it; I do not mind high work load". The laziness-interpretation would suggest that there would be a negative correlation between these two constructs.

Finally, the control rejection could be interpreted to contain anxiety and neuroticism. While there is a significant correlation

with the scale on anxiety ($r=.18$, $N=154$, $p<.05$), it is not high enough to suggest its item content to be one of anxiety.

In conclusion, it was not possible to measure the construct of control rejection directly with questions on control aspirations. Asking for control aspirations (as we did in one of our first pilot studies) leads to answers of little variance and of a uniform interest in higher control. To take the hypothesis seriously that there is a phenomenon of control rejection, we had to develop a scale that gave potential reasons for not wanting to have control. This necessarily leads to somewhat more complicated scale content that makes it more difficult to interpret this scale easily. On the other hand, it was developed as a measure of control rejection and there is evidence that control rejection does not measure anxiety, passivity, or resignation.

Third, there are differences in the data between the different assessment levels of job dimensions. There is no significant effect of the interaction term "Noncontrol x Stress" on the observed level of working conditions. Does this mean that the relation of this multiplicative interaction term with psychosomatic complaints is solely a subjective phenomenon? The answer is a provisional no. The assessment by trained observers probably leads to the lower bound of the correlations between job dimensions and psychological dysfunctioning because raters are only seldomly able to observe the high points of stress at work because of the short observational period. Raters probably also underestimate the rate of the daily minor stressors due to lack of intimate knowledge of the work place. The assessment of stressors should be particularly difficult for observers. The correlations between observer ratings and subjective ratings substantiate such a viewpoint. The correlation between subjective control and observed control ($r=.58$) is higher than the corresponding correlation between subjective stress and observed stress ($r=.54$). In order to find out whether a purely subjective account is adequate, the same analysis as presented in Table 4 was

done with observed noncontrol substituted for subjective noncontrol. Thus, for example, the multiplicative interaction term was "Observed Noncontrol x Subjective Stress". The regression coefficient of this multiplicative interaction term is nearly significant ($Beta=.90$, $t=1.94$, $p=.055$). All other coefficients are nonsignificant. Furthermore, it should be noted that the group level data have objective (or at least intersubjective) meaning. On this level, the multiplicative interaction term is substantially related to psychosomatic complaints. Therefore, it can be argued that objective control at work has a meaningful psychological impact regardless of one's attempts to defend against it.

One interpretation of our data could be that the need for control is hardwired -- a natural result of the phylogenetic development (White, 1959). When stress occurs, the need for control is stimulated. Under conditions of noncontrol, the individual is more vulnerable to the negative effects of stress. Control rejection is one attempt -- albeit an unsuccessful one -- to deny the need for control. If this interpretation of the sour grape reaction holds, it calls into question some theoretical suggestions (e.g., by Lazarus, 1982) that denial is usually beneficial and successful when one is not able to do something about the problem. Apparently, workers react to the reality of their work place, even when they attempt to deny their control needs.

Finally, it is not possible to settle the causal relationship between job socialization and job selection (Frese, 1982). Does, for example, little control at work increase the tendency for control rejection, or do people with a tendency towards control rejection search for jobs that offer little control? The latter interpretation is not ruled out by the data, but it involves something similar to the neurotic paradox: Why should a person choose to subject himself to a more aversive job experience (at least when stress is present) if s/he is free not to do so? Against the background of job enrichment studies on redesigning the work place, the first causal

account seems to be more appropriate. Although there is a lack of hard data, researchers involved in job redesign have repeatedly reported that workers' aspiration level for control, for involvement in work policy matters, for production planning, etc., has increased after the introduction of more control such as through semiautonomous work groups (e.g., Bruggemann, 1979; Ulich, 1981; Wall & Clegg, 1981; Gardell, 1977). Thus, workers seem to respond to changes in their objective environment, and when their control is increased they can stop defending against their lack of control by using the attitude of control rejection.

Notes

1. Mohr, G.: Die Erfassung des psychischen Befindes bei Arbeitern, Manuscript, Freie Universitaet Berlin, 1983

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Table 1
Translated items and item values of control rejection

	\bar{X}	S	item-total r (corrected)
I do only what I am told to do. Then nobody can reproach me for anything.	2.64	.97	.40
Work is easier if I am always told how to do it.	1.99	.85	.36
You only run into trouble, if you do something on your own.	1.92	.73	.41
When one is responsible for something, one just gets into a mad rush.	2.72	.83	.34
I would rather be told exactly what I have to do. Then I make fewer errors.	2.16	.95	.62
A acts according to the motto: I follow the orders. Then nobody is going to reproach me. B acts according to the motto: I would rather decide things myself. Then I can arrange the work the way I want to.	2.48	.99	.38
A says: I have to think too much when I have to decide a lot. I would rather work routinely. B says: Work is more interesting, when one has to make decisions.	2.19	.89	.36
A says: I prefer to have a supervisor who gives me complete freedom on how I do what he tells me to do. Then I am also held responsible for it. B says: I rather have a supervisor who tells me exactly what to do and who decides everything. Then he is at fault if something goes wrong. ^a	1.88	.80	.28

^a item is recoded, higher score means higher agreement with B

Product Moment Correlations of Main Variables

(N in parentheses)

Variables	1	2	3	4	5	6	7
1) Noncontrol at work (observed)	X						
2) Noncontrol at work (group)	.41** (168)	X					
3) Noncontrol at work (subject)	.58** (184)	.57** (177)	X				
4) Stress (observed)	-.18** (176)	-.05 (161)	.00 (176)	X			
5) Stress (group)	-.01 (166)	.07 (176)	.11 (174)	.49** (159)	X		
6) Stress (subject)	.02 (153)	.04 (154)	.10 (172)	.34** (153)	.63** (154)	X	
7) Control rejection	.21** (143)	-.01 (137)	.20** (159)	-.01 (139)	.01 (134)	-.03 (134)	X
8) Psychosomatic complaints	.09 (182)	.11 (176)	.20** (200)	.18** (175)	.23** (173)	.40** (172)	.14* (157)

*=p < .05

**=p < .01

Table 2:
Main Measures

Scale and sample item content	Reliabilities (Alphas)	
	observ.	subject.
1. Control at work possibility to decide things at work	.90	.72
2. Complexity of work use of knowledge and qualification	.91	.83
3. Psychological stress at work consisting of the following scales:		
3.1. Intensity time pressure	.71	.81
3.2. Uncertainty Unclear commands/ small error leads to large damage	^a	.72
3.3. Organizational problems material that one needs does not come on time	.56	.71
3.4. Environmental stress noise, dirt, odors	^b	^b
3.5. Danger danger of accidents	^c	.73
4. Psychosomatic complaints Headaches, stomachaches, etc.	-	.89
5. Defense reaction "One can only show one's real capacity when one is under pressure in work."	-	.78
6. Anxiety "I try to avoid complicated situations"	-	.77

Footnotes:

- ^a Only one item in the observed version of this scale; therefore, no reliability was computed.
- ^b No reliability was computed for this index because there is no theoretical reason that the different items should correlate highly.
- ^c This scale was only used in the subjective version since danger of accidents is difficult to observe. Therefore, the subjective and group versions of the index psychological stress include one more scale than the observed. include one more scale than the observed.

Table 4
Control Rejection (CR) as a Moderator (Regression Analyses)

Variable	Levels					
	Observed		Group		Subjective	
	r	Beta	r	Beta	r	Beta
<u>1.1</u>						
Control at work	.08	.17	.10	-- ^a	.16*	.24*
	.13	-- ^a	.14	.24*	.14	-- ^a
Control - CR	-.04	-.15	-.02	.15	.01	-.14
Constant	1.86**		1.83**		1.75**	
(N)	.02(141)		.03(136)		.04(157)	
<u>1.2</u>						
Control at work	.09	.02	.10	-- ^a	.11	-- ^a
Stress at work	.20*	-.04	.23**	-.41**	.41**	-.11
Control x Stress	.25**	.29	.29**	.79*	.42**	.74*
	.12	-- ^a	.12	-.27	.08	-.30
Control - CR	-.03	-.15	-.01	-.30	.03	-.39*
Control - CR) x Stress	.03	.03	-.06	-.28	.05	-.10
Constant	1.87**		2.40**		2.13**	
(N)	.07(136)		.13** (133)		.23** (133)	

The dependent variable is psychosomatic complaints. The independent variables are z-standardized and the zero points are set at the lowest empirical level.

<.05

<.01

Note: ^a the tolerance level was too low (criterion=0.001), so that this variable was not included.

Table 5
Correlates of Control Rejection

Variables	r or F	N	Significance
Control at work observed	-.20	143	p <.01
-- group	.01	137	n.s.
-- subj.	-.21	158	p <.01
Complexity of work obs.	-.22	153	p <.01
-- group	-.08	138	n.s.
-- subj.	-.23	158	p <.01
Skill level	F(2,147)=3.8)	---	p <.05
Activities in labor union	F(1,148)=4.96	---	p <.05
Membership in labor union	-.05	153	n.s.
Religion	F(3,144)=.081	---	n.s.
Size of town where one was raised	F(5,137)=.631)	---	n.s.
Size of town living in	F(4,140)=2.247)	---	p = .067