

Working in East German Socialism in 1980 and in Capitalism 15 Years Later: A Trend Analysis of a Transitional Economy's Working Conditions

Doris Fay*

University of Giessen, Germany

Michael Frese

*University of Amsterdam, The Netherlands
and University of Giessen, Germany*

Beaucoup d'études portent sur les changements qui ont eu lieu depuis la fin du socialisme dans les nouveaux Länder allemands, à savoir l'ancienne République Démocratique d'Allemagne (R.D.A.). La plupart des recherches s'occupent des changements apparus *après* la réunification, mais on sait peu de choses des différences entre la situation actuelle, plus ou moins stabilisée, et la situation telle qu'elle était *avant* l'effondrement du système. Ce travail avait pour objectif d'approfondir nos connaissances sur ces différences. On a comparé des dimensions du travail en R.D.A. en 1980 (N = 337) et dans les nouveaux Länder en 1995 (N = 168). Les résultats montrent qu'en R.D.A. le travail était moins complexe, moins contrôlé, moins bien organisé avec un moindre souci d'amélioration. Aucune différence n'est apparue entre les deux groupes quant à la tension nerveuse et au soutien social apporté par les collègues. Les relations avec le supérieur et la reconnaissance pour les suggestions concernant les améliorations à apporter au travail étaient moins satisfaisantes après l'introduction du capitalisme qu'elles ne l'étaient antérieurement en R.D.A.

Many studies document the changes that have taken place in the new German states, the former German Democratic Republic (GDR), since the end of socialism. Most research looks at the changes that took place after the unification of East and West Germany, but little is known about the differences between the present, somewhat settled situation in the new German states and the stable situation in the GDR before the system change.

* Address for correspondence: Dr Doris Fay, Department of Psychology, University of Giessen, Otto-Behaghel Str. 10 F, 35394 Giessen, Germany. email: doris.fay@psychol.uni-giessen.de

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The goal of this study was to enlarge our knowledge on these differences. With a trend analysis, aspects of work in the GDR in 1980 ($n = 337$) were compared with the new German states in 1995 ($n = 168$). Results showed that there was more job control and complexity, more activity in work improvement and better work organisation in the new German states than in the GDR. There was no difference in stress variables and social support by colleagues between both groups. Relationships with supervisors and appreciation for suggestions for work improvement were better in the GDR than after the introduction of capitalism.

INTRODUCTION

The collapse of communism in the late 1980s in the former Eastern Bloc countries was the onset for tremendous change. In each country, virtually no aspect of society—politics, social structure, economy, and culture—remained unaffected (Roe, 1995). The Communist Party, which had been the dominating, steering, and controlling agent in all domains of society, began to withdraw. In general, the goals shared by most countries in transition were to develop pluralistic parliamentary democracies and to start market reforms to change from a socialist planned economy to a market economy. These common goals gave the transition processes similar features, but transition had its own unique features in each country.

The German Democratic Republic (GDR) differed from all other Eastern Bloc countries because of its unification with a West European country, the Federal Republic of Germany (FRG). After the fall of the Berlin Wall in 1989, the ensuing monetary unification in July 1990, and the political unification only a few months later, changes took place very quickly. The transformation of state enterprises into private firms began, accompanied by a reduction of the labour force, and the breakup of the large collective combines into smaller, more flexible units. The old markets of the GDR broke away virtually overnight, as the introduction of the West German hard currency increased the prices to a level at which the products lost their competitiveness and became unattractive on both domestic and foreign markets (Wittke, Voskamp, & Bluhm, 1993). Additionally, the trade between the COMECON countries collapsed. Industry in the GDR, not much different from other Eastern Bloc countries, had relied heavily on a crude form of mass production. The old GDR companies were confronted with the challenge to survive in an all-German market which had abandoned that type of mass production a decade earlier (Kern & Schumann, 1984; Voskamp & Wittke, 1990a). In a united Germany, the new German states¹ could not maintain the same production paradigm, since they would not

¹ The term “the new German states” will be used throughout this article to refer to the “New Federal States of Germany”, former German Democratic Republic.

have been able to compete with countries with lower labour costs. Thus, new niches needed to be found in a competitive and customer-oriented market selling customer tailored, individualised products. Economy was hampered by obsolete technology and mismanagement, GDR productivity of 1989 was said to be comparable to the West German's productivity in 1965 (Hübner, 1997), and the service sector was poorly developed. To summarise, the new German states were confronted with hard challenges to survive in the new market economy.

EFFECTS OF THE TRANSFORMATION PROCESS

The adaptation to the new demands turned the new German states' economy completely inside out. Reliable information is available on economic changes and development (cf. Statistisches Bundesamt, 1994); in contrast, there is less information about how the transformation affected people's daily experiences at work. What are the differences between working in today's new German states in comparison to working in a socialist economy? Surveys carried out in the new German states which explore recollections and opinions about life in the GDR, or newspaper reports and anecdotes which describe the working conditions there, provide some information about this issue. According to these sources many aspects of work must have been better in the GDR than today, but some improvements seem to have taken place since the unification. Differences between "now" and "then" as reflected in this retrospective data will be briefly described.

One major positive aspect of work in the GDR relates to how much less stressful work was. A recent survey with a representative sample of a thousand citizens from the new German states showed that working in the GDR is remembered as considerably less strenuous than today's work (*Der Spiegel*, 1995). In our own study in the new German states, we asked the participants to compare their current job (in 1995) with the job they held prior to the monetary unification in 1990.² Nearly 70% of the participants indicated that in the meantime work had become harder and more exhausting. On the other hand, working in the GDR is sometimes described as less challenging and interesting than today. We asked our participants to judge different aspects of job complexity and job control. More than half of the participants perceived an increase of these aspects in comparison to about 10% who noted a decrease (the remainder indicated no change).³

² Unpublished data from the sixth wave of the longitudinal study reported in Frese et al. (1996, 1997); $n = 350\text{--}360$. See Method section for description of the sample.

³ cf. footnote 2.

A negative characteristic of work in the GDR relates to the quality of work organisation. Interruptions of the workflow due to inputs that did not arrive in time, chronic lack of spare parts, of supplies, even of resources such as energy, were common. Currently, former GDR citizens regard bad work organisation as the chief cause of low productivity in the GDR (*Der Spiegel*, 1995); and there is a general agreement that these problems have diminished since the unification. In our study, job incumbents judged the quality of work organisation in their current job in comparison to their job in 1990: 67% indicated an improvement, only 2% indicated a deterioration, 31% found the situation unaltered.⁴

Suggestion schemes also represent a somewhat negative aspect of work. They were customary in the companies of the GDR (Neumann, 1988), and were meant to motivate employee initiative to achieve innovation and work improvement (*Neuererbewegung*). However, they had a questionable reputation. Submitted suggestions for improvement regularly remained without effect. A former engineer reported that suggestions were always accepted, but acceptance was followed by the inevitable question, "Where shall I get the necessary material from for implementation?" (*Der Spiegel*, 1991, p. 123). It seems that suggestion schemes have improved since then: in our study, about one third of the respondents stated that they obtained more institutional support for taking initiative and for improving work in the capitalist economy than in the GDR; only 15% of the respondents stated the opposite.⁵

The most positive thoughts about work in the GDR relate to social aspects. The place of work was often seen as "a second home" (Rappensperger, Nerdinger, Rosenstiel, & Spiess, 1993). People complain now about the loss of cohesion, solidarity and good relationships among colleagues (*Der Spiegel*, 1995). Similarly, the "mate-like" relationship between management and staff is said to have disappeared (*Der Spiegel*, 1995).

These surveys and anecdotes provide an interesting, but only a preliminary, insight into the effects of the transformation, since retrospective data bears its specific pitfalls. (For example, recently, two surveys carried out in the new German states in 1990 and 1995 were compared with each other; it revealed the emergence of a nostalgic bias with regard to the GDR. The number of people who believe that the GDR provided better schooling, health care and housing than the FRG increased considerably from 1990 to 1995, *Der Spiegel*, 1995.) Despite the notable research effort that went into documenting the effects of the unification and the transition processes, there is to our knowledge no study that focused on the work-related changes that

⁴ cf. footnote 2.

⁵ cf. footnote 2.

happened in the transition from stable socialism to a somewhat stabilised market economy. Qualitative studies have described changes in various industries (e.g. Gebbert & Gebbert, 1993; Schmidt-Tophoff, 1993); work and organisational psychologists studied work and nonwork attitudes and values (Adler & Brayfield, 1997; Herbert & Wildenmann, 1991; Maier, Rappensperger, Rosenstiel, & Zwarg, 1994), leadership style (Schultz-Gambard & Altschuh, 1993; Wuppertaler Kreis, 1992), and characteristics of the workplace and work behaviours (Frese, Kring, Soose, & Zempel, 1996). But these studies are primarily cross-sectional analyses, comparing East and West German samples or East and West German companies *after* the unification. The few existing longitudinal studies were carried out after the fall of the Berlin Wall in 1989. Research that began in 1989 or 1990 still captured the picture of a socialist society and planned economy, but attitudes and everyday life were different from socialism: on the one hand, the transition time was marked by elevated levels of optimism and enthusiasm about the peaceful revolution that brought about the system change, and on the other hand it was a situation of emerging instability and change in the domain of work. Thus, these studies cannot tell us how work in today's new German states differed from work in times of stable socialism, in which the radical changes to come were not even anticipated.

The goal of this study is to enlarge our knowledge, avoiding the potential retrospective bias of the data described above. In the course of this paper, the perceived deteriorations and improvements in the domain of work will be discussed and then put to a test, by comparing with a secondary analysis some aspects of work in the GDR in 1980 with the new German states in 1995.

HYPOTHESES

Four aspects of work were studied: work-related stress, perceptions of work characteristics (job control and complexity, work organisation), issues related to suggestion schemes, and social relationships at work.

Work-related Stress

What supports the perception that work was less stressful in the GDR? Socialism had less power over its workforce in comparison to firms operating in capitalism, and could thus not force the same intensity of working on their employees (Bahro, 1979). The communist "principle of guaranteed labour and full employment" had created labour surplus within organisations and as a consequence, inefficiencies and idleness (Roe, 1995). Even GDR economists criticised the fact that salaries were paid primarily for attendance at work, not necessarily for performance (Merkel & Merkel,

1990). The introduction of the market economy led to the dissolution of the principle of guaranteed labour, and was accompanied by a vast downsizing of the companies. At the same time, pressure to raise efficiency and profitability increased. This may have increased work load and as a consequence work-related stress.

Hypothesis 1: In the GDR physical and mental stress were lower than in the new German states.

Perceptions of Work Characteristics

Job Control and Complexity. According to the described recollections, job control and complexity were comparatively low in the GDR. Industry in the GDR was highly Taylorised and oriented towards mass production, focusing on the “economies of scale” (Wittke et al., 1993). Tayloristic work design simplified tasks and reduced decision latitude (Frese et al., 1996; Kern & Land, 1991; Münch, 1990; Voskamp & Wittke, 1990a). There was a command and obey structure, and decision making and responsibility were predominantly allocated to top management, giving even middle management little latitude (Wagner, 1988).

After the unification, former outlets for mass production disappeared quickly. Organisations were forced to catch up with the quality demands, cost efficiency, and innovativeness of products and services available in the Western markets. During the transformation process, a great number of West German consultants were called in to support the change process, and a significant proportion of enterprises were taken over by West German companies or were launched by West Germans.⁶ West German participation in the restructuring of the economy resulted in the implementation of management strategies prevalent in the Western industrialised countries such as lean production (Womack, Jones, Roos, & Carpenter, 1990), Total Quality Management (Deming, 1986), or integrated manufacturing (Dean & Snell, 1991). These strategies involve reduced supervision, more job discretion, and more complexity in workers’ jobs (Wall & Jackson, 1995).

Hypothesis 2: Levels of job control and job complexity were lower in the GDR than in the new German states.

Work Organisation. Deficient work organisation was not a problem specific to the GDR but it was one of the cardinal problems in Eastern Bloc countries (Deppe, 1991). Companies were aggregated into large combines;

⁶ 231 participants indicated in the sixth wave of the longitudinal study reported in Frese et al. (1996, 1997) the ownership of the company they worked for: 39% worked for a West German enterprise.

by the end of the 1970s most small and flexible suppliers were destroyed or integrated into the combines. This led to a highly inefficient increase of the vertical range of production (Kern & Land, 1991). Management of these large units relied on top-down processes, which failed whenever there were environmental disturbances.

In the course of the economic transformation, combines were broken up into smaller, more manageable units. Companies gained access to suppliers from West Germany and other West European countries. More sophisticated principles of planning and organising work flow (e.g. just-in-time inventory control) were introduced.

Hypothesis 3: Organisational problems were higher in the GDR than in the new German states.

Suggestion Schemes: Organisations' Responsiveness to Suggestions and Employees' Participation in Suggestion Schemes

There are several reasons for the low reputation of suggestion schemes in the GDR. Just as with everything else in a planned economy, the number of suggestions for improvement and their outcome were prescribed by a plan. This approach, criticised even by GDR scientists (Fuhrmann, 1988), forced management to make ineffective pro forma innovations and to introduce "alibi" improvements (Neumann, 1988; Wittke et al., 1993). Most important however was the shortcoming we already pointed out: useful suggestions for improvement were very often not implemented due to the chronic lack of supplies and capital for new machines (Neumann, 1988). This led to the perception that the organisations' responsiveness to submitted suggestions was low.

Suggestions for improvement are an important facet of new Western production and management strategies. Employees' participation in continuous improvement programmes is seen as a crucial source for innovation, and is hence promoted with job designs that motivate and empower people (cf. Frese, Teng, & Wijnen, 1999; Taira, 1996; Womack et al., 1990). In addition, better access to resources relevant for implementing suggestions should also alter people's perceptions of suggestion schemes.

Hypothesis 4: The organisations' responsiveness for suggestions for improvement was perceived to be lower in the GDR than in the new German states.

We are also interested in the degree to which employees participated in suggestion schemes. Frese et al. (1999) identified in a study carried out in a Dutch company "suggestion inhibitors" as an important (negative) predictor for submitting ideas. Suggestion inhibitors are reasons for not participating in a suggestion programme, such as a high number of rejected

suggestions. It can be taken from the above that in the GDR many such inhibitors were present; it is assumed that inhibitors were diminished with the increasing use of new management strategies, resulting in a higher participation in suggestion schemes.

Hypothesis 5: There was less participation in making suggestions in the GDR than in the new German states.

Social Relationships at Work

What could account for the experience of a deterioration of relationships among colleagues? Since the guarantee of labour was abolished and marked downsizing efforts have been implemented, job incumbents have to compete with each other for scarce jobs and promotions. This may put the sense of solidarity and trust among colleagues at risk.

Hypothesis 6: Social support from colleagues was higher in the GDR than in the new German states.

The relationship with supervisors is a complex topic. In socialism, the realisation of the plan was the central objective. The plan, permissions, and regulations were derived from centralised governmental decisions. Therefore, "... executives learned to focus their attention up rather than down or laterally" (Pearce, Branyiczki, & Bakacsi, 1994, p. 266). This would argue for the hypothesis that the relationship of supervisors to their employees was cool and distant. On the other hand, the very specific role of lower level and middle management gives a different picture: supervisors were responsible for plan execution, but were as powerless as their employees with regard to resources. Moreover, they did not dispose of disciplinary measures to reinforce high performance, since socialist policy made dismissals almost impossible. Goals of the plan were continually raised, but means of production and necessary production processes were not modernised (Kern & Land, 1991). Therefore, supervisors needed to create a good relationship with their "collectives", for example by negotiating goals with their employees (instead of imposing them) and "bribing" employees with small bonuses or other rewards. There was a higher chance of achieving the goals if the collective could be encouraged to employ tricks, to make use of their good connections, to commit so-called "benign plan violations" which were necessary to overcome the barriers posed by the defective work organisation (Brezinski, 1987; Voskamp & Wittke, 1990b). Hence, supervisors depended on the goodwill of the collective, and therefore they had to be concerned about good relationships with their work force. This specific situation of supervisors changed fundamentally in the transformation process, with increasing possibilities to sanction or reward behaviours.

Hypothesis 7: In the GDR the relationship with supervisors was better than in the new German states.

METHOD

We did a secondary analysis of a questionnaire used to study the work situation in the GDR in 1980 and this was compared to the same questionnaire applied in the new German states in 1995.

Sample and Procedure of Study 1: GDR 1980

The data were collected in 1980 by the Institute for Sociology and Social Politics of the Academy of Sciences of the GDR in Berlin.⁷ The questionnaire assessed 337 employees' working and living conditions. Seventy-one participants worked as "cadre" (leading positions) in research and development departments, 169 participants were production workers, and 97 were craftspeople. Other sociodemographic variables such as age, gender, and educational level are not available. The data set did not allow us to identify in what particular job a given person worked. No information about the representativity of the sample was available.

Sample and Procedure of Study 2: New German States in 1995

Data for the new German states is based on the sixth measurement wave (1995) of a longitudinal panel study with a representative sample of working citizens of Dresden, former GDR. Full description of the sample and procedure is given in Frese et al. (1996) and Frese, Fay, Hilburger, Leng, and Tag (1997). In all waves, study participants filled in a questionnaire and took part in a structured interview. In wave six, 489 people participated. Measures relevant for the study reported here were obtained from 365 participants. Participants who did not respond to the questions were those who had become pensioners or were unemployed. Ages ranged from 22 to 67 years, with an average age of 42.5 years ($SD = 10.0$ years); 52.5% were male. The participants were equally distributed over three levels of employment: 30.7% were unskilled, semiskilled, and skilled blue-collar workers; 24.4% were white-collar workers such as lower professionals and administrative workers; and 40.6% were professionals and managers.

The GDR sample and the sample from the new German states differed in some aspects. In comparison to the GDR sample, the new German states' sample was more heterogeneous with regard to the variety of branches they worked in. The participants of the GDR study were employed in industry;

⁷ The Central Archive for Empirical Social Sciences in Cologne gave us access to the data of the study "Arbeits- und Lebensbedingungen als Bestandteil der Lebensweise 1980 (SLAB 80)" (Conditions of work and living 1980).

the sample from the new German states also included employees from public and commercial services. Furthermore, the average employment level appeared to be lower in the GDR sample. To make the two samples comparable, we selected from the new German states' sample a subsample comparable to the GDR sample consisting of 21% of participants who were supervisors, most of them in R&D jobs, and 79% blue-collar workers ($n = 168$); 66% of this sample were male participants, with a mean age of 43.0 years ($SD = 10.0$). This subsample from the new German states will be referred to as the "NGS sample".

Measures

Items from the questionnaire of the GDR study were added to the questionnaire used at wave six of the new German states sample. Those items, called "GDR items", employed in the GDR in 1980 *and* in the new German states in 1995, were used for comparisons between the two samples.

The GDR items were submitted to exploratory factor analyses in order to test whether the samples had a comparable item structure. Factor analyses yielded in both samples four factors (Eigenvalue > 1), explaining 59.1 % variance in the GDR sample, and 65.2% variance in the NGS sample, respectively. Items always loaded on the same factors. This gave some indication of measurement equivalence across time and samples.

Validity check of GDR Items. There was no information available on the reliability and validity of the GDR items. Therefore, the construct validity of the GDR items was checked within the NGS sample, using scale measures from the larger and better developed questionnaire used in the longitudinal study. GDR items were correlated with the corresponding scales or with a measure of a similar, related variable to which the item should show a substantial relationship. The scales used for this validation procedure have been carefully validated before, and within the longitudinal study information on their internal consistency, retest reliability, and construct validity was available. This tested whether the items from the GDR study were useful representations of the respective constructs. Table 1 presents the GDR items—as applied in both samples—and their correlations with the scales (in the NGS sample). Factor analyses were then used to produce scales. In some cases however, items loading on one factor were not aggregated to scales, because, for example, internal consistency would have been too low.

Work-related Stress. Physical and mental stress were assessed with one item each. Each item was significantly related to Zapf's (1991, adaptation of Semmer, 1984) respective scale measure of physical stress and time pressure/concentration demands.

TABLE 1

Items from the GDR Study and their Relationship with Scale Measures from the Longitudinal Study in the New German States

<i>Items from GDR study</i>	<i>Corresponding scales in the new German states study (author of scale and validity study)</i>	<i>Correlation between GDR item and scale¹</i>
<i>Work-related stress</i>		
1 Physical stress is ... 1 (too low)–3 (too high)	Physical stress (Semmer, 1984; Zapf, 1991)	.31*** (141)
2 Mental stress is ... 1 (too low)–3 (too high)	Concentration demands and time pressure (Semmer, 1984; Zapf, 1991)	.30*** (148)
<i>Job control and complexity</i>		
3 In my job, independent working and job control are ... 1 (too low)–3 (too high)	Job control (Semmer, 1984; Zapf, 1991)	.31*** (149)
4 Does your qualification correspond to the demands in your job? 1 (underuse of qualification)–3 (demands exceed qualification)	Job complexity (Semmer, 1984; Zapf, 1991)	.44*** (86)
5 Mental demands in my job are ... 1 (too low)–3 (too high)	Job complexity (Semmer, 1984; Zapf, 1991)	.25*** (150)
Scale: Job control and complexity (items 3, 4, 5)	Job complexity (Semmer, 1984; Zapf, 1991)	.27*** (149)
GDR sample $\alpha = .63$; sample from the new German states $\alpha = .70$	Job control (Semmer, 1984; Zapf, 1991)	.33*** (150)
<i>Work organisation</i>		
6 The way work is organised is ... 1 (very good)–5 (insufficient)	Organisational problems (Semmer, 1984; Zapf, 1991)	.46*** (146)
<i>Organisations' responsiveness for suggestions</i>		
7 Suggestions for work improvement are in general ... 1 (barely taken notice of)–5 (highly appreciated)	Support for initiative (Frese & Hilligloh, 1991)	.39*** (147)
<i>Participation in suggestion schemes</i>		
8 Have you pointed to deficiencies or problems at work? 1 (no)–2 (yes)	Retrospective initiative at work (Frese et al., 1996) <i>interview measure</i>	.32*** (144)

Table 1 (contd)

<i>Items from GDR study</i>	<i>Corresponding scales in the new German states study (author of scale and validity study)</i>	<i>Correlation between GDR item and scale¹</i>
9 Did you develop and submit suggestions and solutions for this problem (verbally or written)? 1 (no)–2 (yes)	Retrospective initiative at work (Frese et al., 1996) <i>interview measure</i>	.42*** (144)
10 Did you participate in the realisation of those suggestions? 1 (no)–2 (yes)	Retrospective initiative at work (Frese et al., 1996) <i>interview measure</i>	.33*** (144)
Scale: Participation in suggestion schemes (items 9, 10, 11) GDR sample $\alpha = .84$; sample from the new German states $\alpha = .88$	Retrospective initiative at work (Frese et al., 1996) <i>interview measure</i>	.41*** (144)
<i>Social support colleagues</i>		
11 Opportunities for contact with colleagues are ... 1 (insufficient)–5 (very good)	Social support from colleagues (Caplan et al., 1975; Frese & Zapf, 1987)	.32*** (138)
12 The relationship among colleagues in my collective is ... 1 (insufficient)–5 (very good)	Social support from colleagues (Caplan et al., 1975; Frese & Zapf, 1987)	.46*** (138)
Index: Social support by colleagues (items 12, 13)	Social support from colleagues (Caplan et al., 1975; Frese & Zapf, 1987)	.43*** (138)
<i>Relationship with supervisor</i>		
13 The relationship between supervisor and collective is ... 1 (insufficient)–5 (very good)	Social support from the supervisor (Caplan et al., 1975; Frese & Zapf, 1987)	.54*** (132)

Note: * = $P < .05$; ** = $P < .01$; *** = $P < .001$ ¹ n in parentheses

Perceptions of Work Characteristics. Job control and complexity were measured with three items: degree of job control, mental requirements, and use of qualification in the job. Items showed significant correlations with the measures of job control and job complexity by Zapf (1991, adaptation of Semmer, 1984). The three items were added to compute a scale of job control and complexity, which had a satisfactory Cronbach's alpha (GDR sample: $\alpha = 0.63$, NGS sample, $\alpha = 0.70$). This scale correlated significantly with Zapf's measures of job control and complexity.

The quality of work organisation was measured with one item. It showed a substantial correlation with Zapf's corresponding measure (1991, adaptation of Semmer, 1984).

Suggestion Schemes. The organisations' responsiveness for suggestions was assessed with one item asking how far suggestions for work improvement found acknowledgment and appreciation. It showed a substantial relationship with the scale of organisational supports for initiative (Frese & Hilligloh, 1991).

Three items assessed the degree of participation in suggestion schemes. Participation in making suggestions for improvement can be seen as one aspect of personal initiative (Frese et al., 1996, 1999). Accordingly, each item was significantly correlated with the scale on retrospective personal initiative at work (Frese et al., 1996). Note that the correlations were free from common method variance since personal initiative was an interview measure. The three items were aggregated to make a scale participation in suggestion schemes (Cronbach's α 0.84 for the GDR sample, 0.88 for the NGS sample). The scale was again significantly correlated with Frese et al.'s (1996) retrospective initiative scale.

Social Relationship at Work. Social support from colleagues was measured with two items: opportunities for interaction with colleagues and the quality of the relationship among colleagues. Items correlated significantly with the social support from colleagues scale by Caplan, Cobb, French, van Harrison and Pinneau (1975; German version Frese & Zapf, 1987). Since both items were substantially interrelated, ($r = 0.45$ in the GDR sample, $r = 0.62$ in NGS sample; always $P < 0.01$), they were added to make an index of colleagues' social support. The index showed also a significant correlation with the scale of Caplan et al. (1975). A single item asked for the quality of relationship with the supervisor. It showed a substantial correlation with the social support by supervisor scale by Caplan et al. (1975).

The correlations between the GDR items and the validated scales show that the GDR items were useful representations of the respective constructs. Note that unreliability of the measures—especially of the single-item measures—leads to an underestimation of the validity coefficients. The

TABLE 2
Means and Standard Deviations of all Study Variables for the Combined Samples and Intercorrelations¹

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
Physical stress	2.11	.49	–	.22**	–.10	.16	.05	–.10	.13	–.12
Mental stress	2.23	.47	.24**	–	.14	.18*	–.01	.15	.02	–.10
Job control and complexity	1.79	.35	.11*	.08	–	–.02	.24**	–.00	–.17*	.19*
Work organisation	2.61	.76	–.02	.07	–.07	–	–.33**	.00	.36**	–.55**
Organisations' responsiveness	3.55	.82	–.07	.02	.06	–.18**	–	.19*	–.34**	.39**
Participation suggestion schemes	1.61	.42	–.13*	.08	–.13*	.25**	.05	–	–.04	–.02
Social support from colleagues	2.08	.65	.05	.05	–.08	.40**	–.26**	.06	–	–.55**
Relationship with supervisor	3.74	.78	.04	–.10	.13*	–.30**	.38**	–.09	–.48**	–

Note: * $P < .05$; ** $P < .01$

¹ Bottom triangle: sample from the German Democratic Republic ($n = 264-334$); top triangle: sample from the new German states ($n = 145-161$)

GDR items, applied in the GDR sample and the NGS sample were used for all further analyses.

RESULTS

Table 2 gives means, standard deviations, and correlations of all study variables. Hypotheses on the differences between the GDR and the new German states were tested with one-tailed *t* tests (Table 3).

We hypothesised lower physical and mental stress in the GDR than in the new German states (Hypothesis 1). No difference between the two samples emerged. Lower job control and job complexity was hypothesised for the GDR sample (Hypothesis 2), which was the case. Supporting the third hypothesis, work organisation was worse in the GDR sample. In contrast to the prediction, the organisations' responsiveness for improvement suggestions was significantly better in the GDR sample than in the NGS sample (Hypothesis 4). In accordance with the fifth hypothesis, the NGS sample reported more participation in suggestion schemes than the GDR sample. With regard to social support by colleagues (Hypothesis 6), a lower level of support was expected for the NGS sample, but no significant difference was found. Hypothesis 7 suggested a better relationship with the supervisor in the GDR sample, which proved to be correct.

As an index of the effect size Cohen's *d* score was calculated (Cohen, 1977). In tests that yielded significant results, *d* ranged between 0.20 and 0.34, thus, the effect sizes were small.

TABLE 3
t Test for GDR Sample and NGS Sample

	<i>GDR</i> ¹			<i>NGS</i> ²			<i>t-value</i>	<i>d</i>
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>		
Physical stress	332	2.10	.47	150	2.14	.54	-.73	.08
Mental stress	332	2.23	.47	151	2.25	.47	-.55	.04
Job control and complexity	334	1.75	.36	151	1.87	.32	-3.53***	.34
Work organisation ³	332	2.66	.78	150	2.49	.71	2.22*	.22
Organisations' responsiveness	330	3.60	.81	152	3.44	.84	2.03*	.20
Participation suggestion schemes	264	1.56	.43	161	1.68	.41	-2.89***	.28
Social support from colleagues	330	2.07	.62	147	2.09	.71	.30	.03
Relationship with supervisor	333	3.82	.76	145	3.57	.80	3.13***	.33

Note: * $P < .05$; ** $P < .01$; *** $P < .001$

¹ GDR = sample from German Democratic Republic

² NGS = sample from the new German states

³ high values indicate bad work organisation

DISCUSSION

The goal of this trend analysis was to gain a better understanding of how the transformation from the German socialist planned economy to the market economy affected people's experiences at work. Our hypotheses were based on former GDR citizens' recollections about work in the GDR, and on their perceptions on how work has changed. We compared the socialist situation in 1980 with the capitalist situation in 1995. We found that the published research on the changes in the new German states based on retrospective accounts were only partially substantiated.

When asked today, many employees in the new German states claim that in the GDR work had been less tiring and strenuous. It was assumed that the low level of work intensity in the GDR was not maintained under the pressure of a competitive market economy, increasing the level of stress. However, our data did not support this—there was no significant difference in levels of stress between 1980 and 1995. On the other hand, in accordance with the second hypothesis a lower level of job control and complexity was found in the GDR sample. This difference is probably the effect of the increased use of new management and production strategies in the new German states, which seek to empower job incumbents and allocate more responsibility and more complex tasks to the lower levels of an organisation. The increase in job resources (i.e. job control and complexity) can also explain why people do not report more work-related stress today: workload may have increased, but the enhanced levels of job resources may have compensated for its potential negative effect, as is suggested by the Karasek model of job stress (Karasek & Theorell, 1990).

Recollections about the bad work organisation in socialism were supported. As pointed out, the improvement may be the effect of the dissolution of the large combines and the use of more sophisticated concepts of planning and organisation of production. Additionally, there was a wider choice of suppliers in a unified Germany. Similar results were obtained by Fay and Lange (1997), who found a significant decrease of organisational problems between 1990 and 1993.⁸

The results on the issue of suggestion schemes were mixed. In contrast to our fourth hypothesis, which predicted that the responsiveness of the organisation for improvement suggestions should be higher in the new German states, a lower responsiveness was found. This unexpected result could be due to the specific nature of the measure of organisations' responsiveness in this study: it was a single item measure about the appreciation of

⁸ Fay and Lange (1997) analysed waves one to five of the longitudinal study of Frese et al. (1996, 1997); note that the study reported here is based on a subsample from wave six.

suggestions. Other facets of responsiveness, that is, careful evaluation of suggestions and their subsequent implementation, could not be assessed. The feeling of higher appreciation of suggestions in the GDR could be a result of the pressure that supervisors felt in socialism to fulfil their "suggestion targets". The supervisor had to encourage and motivate people to submit suggestions, since coercion could not be used. Presumably, any improvement suggestion was appreciated, regardless of quality and usefulness. This is different today, because the effects of an implemented suggestion count more than the mere submission. Thus, supervisors may have changed their "rewarding practices", acknowledging only useful improvement suggestions, hence, showing on average less appreciation. This would imply that the meaning of an organisation's responsiveness to improvement suggestions changed in the transition. Preliminary support for this assumption can be provided. Corresponding to the results of Frese et al. (1999), there was in the sample from the new German states a significant correlation between improvement suggestions and the organisations' responsiveness to them. In contrast, there was no significant relationship in the GDR sample (cf. Table 2). This suggests that improvement suggestions were contingent on the organisation's responsiveness in the sample from the new German states, but not in the GDR sample.

In accordance with the fifth hypothesis, participation in suggestion schemes is higher in the new German states than in the GDR. Participating in suggestion schemes may have become more rewarding because the means to implement good suggestions are now available.

In contrast to the widespread recollection that social support from colleagues was higher in the GDR than it is now, no difference between the two samples emerged. This contradicts the commonly held assumption that the increased competition of a market economy has a negative impact on social support. Results reported by Fay and Lange (1997) indicated that there was no linear trend in the development of social support from colleagues after the unification. Analyses between 1990 and 1993 yielded first a significant decrease of social support, but later again an increase. Fay and Lange also found that those employed in a West German-owned company felt a stronger decrease in social support than those employed in a company owned by East Germans. This shows that the development of the social climate at work in the new German states is a complex issue, with probably more contingencies to be identified. Simply claiming that "solidarity is gone" certainly means that one does not do justice to this issue.

On the other hand, the data support the widespread feeling of former GDR citizens that their relationships with their supervisors were better in 1980. Apparently, the supervisors' role has changed. Additionally, the increased job control might affect the relationship with the supervisors. Employees often reject the responsibility implied in job control (Hulin &

Blood, 1968; this attitude is especially marked in the new German states, cf. Frese, Erbe-Heinbokel, Grefe, Rybowskiak, & Weike, 1994), and might feel forsaken by a supervisor with new demands.

However, there is an alternative account for this finding. In the process of the transformation, a considerable number of managerial positions in the new German states were taken over by West Germans. Differences in leadership style between East and West German managers have been identified (Schultz-Gambard & Altschuh, 1993; Wuppertaler Kreis, 1992), which may lead to conflicts and misunderstandings between East German subordinates and their West German supervisors (Scherer, 1992). Thus, the deterioration in the relationship between supervisors and subordinates in the sample in the new German states could be an effect of West German managers. We made an *a posteriori* test of this idea. Participants with a West German supervisor ($n = 10$) were excluded in a subsequent *t* test, which still yielded a significant difference between the GDR sample and the NGS sample (GDR sample: $M = 3.82$, $SD = .76$, NGS sample: $M = 3.58$, $SD = .76$, $t(1, 439) = 2.78$, $P > .01$). Thus, the presence of West German managers does not account for the worsening of the relationship between supervisor and subordinates in the new German states.

This study has some shortcomings. First, although we attempted to make the GDR and the new German states samples comparable, we do not know whether we have been successful. Second, most of the arguments used to substantiate the hypotheses relate to the changes of working conditions of blue-collar workers, but the nature of the data set from the GDR did not allow us to separate blue-collar workers from supervisors (21%). However, it is likely that there have been partly divergent developments for supervisors and blue-collar workers. For example, in contrast to blue-collar workers, supervisors' job control and complexity may have decreased between 1980 and 1995 since some tasks and responsibilities were delegated to lower levels of the organisation.

Third, the samples did not include people from the service sector. Thus, the results cannot be generalised beyond the blue-collar workers and supervisors in R&D included in the sample. Fourth, we cannot disentangle the processes that were the results of changes taking place prior to unification and transformation process changes.

The starting point for this study was a shortage of research on the differences between today's experiences at work and working in a socialist economy, which circumvent the problems of retrospective data. We used the existing retrospective surveys and our own data to generate the hypotheses. The fact that only a part of these hypotheses were supported shows that the memories are not free from distortions: for example, two of three hypotheses which suggested specific deteriorations of working situations (Hypotheses 1, 6, and 7) were not supported; on the other hand hypotheses

that suggested an improvement of certain experiences at work (Hypotheses 2 and 3) could be empirically substantiated.

With regard to employees' experiences at work, the most relevant results of this study were on job control and complexity and on improvement suggestions. It is well established that job control is one of the key components for understanding workers' well-being, satisfaction, mental flexibility, and other variables (Hackman & Oldham, 1976; Karasek & Theorell, 1990; Kohn & Schooler, 1973). Furthermore, control and complexity are relevant prerequisites for personal initiative (Frese et al., 1996; Frese, Garst, & Fay, 1998). Thus, the results imply that organisational factors relevant for a healthy and successful workforce have improved in the transition.

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