

“Not Another Meeting!” Are Meeting Time Demands Related to Employee Well-Being?

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Using an interruptions framework, this article proposes and tests a set of hypotheses concerning the relationship of meeting time demands with job attitudes and well-being (JAWB). Two Internet surveys were administered to employees who worked 35 hr or more per week. Study 1 examined prescheduled meetings attended in a typical week ($N = 676$), whereas Study 2 investigated prescheduled meetings attended during the current day ($N = 304$). As proposed, the relationship between meeting time demands and JAWB was moderated by task interdependence, meeting experience quality, and accomplishment striving. However, results were somewhat dependent on the time frame of a study and the operational definition used for meeting time demands. Furthermore, perceived meeting effectiveness was found to have a strong, direct relationship with JAWB.

Keywords: meetings, groups or teams, effectiveness, well-being, burnout, satisfaction

The meeting is a vehicle for many organizational activities, and employees spend much time in meetings. It is often suggested that the amount of time in meetings has increased over the past few decades. For example, Mosvick and Nelson (1987) reported that the average executive participated in twice as many meetings in the 1980s than in the 1960s. In Tobia and Becker's (1990) survey of 1,900 business leaders, almost 72% reported spending more time in meetings than they did 5 years ago. Furthermore, the majority of respondents anticipated spending more time in meetings in the near future.

Despite this practical importance, the meeting is a “neglected social form in organizational studies,” as indicated in the title of Schwartzman’s (1986) article. She discussed how the meeting has been used as a methodological tool to study other topics (e.g., small-group dynamics and group decision making) but rarely studied empirically in its own right. Since Schwartzman’s plea, the scant empirical research that does exist has usually focused narrowly on the format (e.g., Bluedorn, Turban, & Love, 1999) or structure (e.g., Volkema & Niederman, 1995) of meetings, or it has been driven by other interests such as technology (e.g., Kiesler & Sproull, 1992; Rawlins, 1990). In addition, a large number of

nonempirical trade articles and books have been published (e.g., Streibel, 2003), based on anecdotal information rather than on research findings.

To the extent that meetings are successful in helping organizations and employees achieve their goals, their utility as an organizational tool is evident. However, a common emphasis in discussion and popular writing is on their negative aspects, for example, how they interrupt more important tasks and generate negative feeling. In this article, we examine the affective correlates of meeting attendance not only to shed empirical light onto the anecdotal claims but also to address a substantial gap in the meetings research literature. Specifically, we argue that time spent in meetings (referred to as *meeting time demands*) does not itself impact overall job attitudes and well-being (hereafter referred to as JAWB). Instead, we propose that the effects of meeting time demands will be moderated by task interdependence, perceived meeting effectiveness, and personal factors such as an individual’s confidence in his or her abilities to perform effectively in meetings. In some circumstances and for some people, meeting time demands will positively relate to JAWB. In other circumstances and for some people, meeting time demands will negatively relate to JAWB. We also expect that perceived meeting effectiveness will directly relate to JAWB.

Interruptions

Most of our hypotheses are informed by research and theory on work interruptions, in that we view many meetings as a particular kind of interruption. Job analysis makes it clear that all work roles have primary tasks and responsibilities, so that the achievement of explicit and/or implicit goals or requirements is central to effective work performance. In addition, individuals often create their own personal objectives within projects that are emotionally salient to

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them. As a recent typology of work interruptions suggests, activities, events, or circumstances (even positive ones) that disrupt the achievement of those goals may function as interruptions (Jett & George, 2003).

Such interruptions to goal achievement are usually experienced negatively. Kirmeyer (1988) measured volume of work, interruptions, and competing demands in a sample of police radio dispatchers. Volume of work did not have a direct effect on perceived role overload, but its effect was instead mediated through interruptions. Zeigarnik and her colleagues (1927, as cited in Butterfield, 1964) found that when people were prevented from finishing a task, they resumed that task when given the freedom to do so. In addition, interrupted tasks were recalled more frequently than finished tasks. Zijlstra, Roe, Leonora, and Krediet (1999) found that when participants in an experimental group were periodically interrupted by telephone calls from the researcher, their effort was increased, yet as a result of this increase in effort expenditure, a negative impact on emotions and well-being occurred.

In explaining the harmful effect of interruptions, Zijlstra et al. (1999) invoked the theory of activity regulation (Hacker, 1978, 1986, as cited in Zijlstra et al., 1999). That theory is built on the fact that work is a goal-directed activity. When an interruption occurs, the regulation of activity and associated cognitive processes are disrupted, and the individual has to modify his or her action plans (perhaps unenthusiastically) to include the interrupting event. In addition, further resources are often needed to deal with the demands of the interruption as well as the regulation of all of the activities collectively. In a similar manner, Zohar (1999) pointed out that when a continuing activity is interrupted by an external factor, the individual must exert greater effort to overcome that obstacle. Consequently, greater effort depletes the resources that could have been allocated to the primary task, which may result in increased fatigue and negative mood. Negative mood can also occur because the rate of progress toward completion of the primary task has been slowed.

Although many events can disrupt employees in that way, we believe that meetings may serve as a unique form of interruption. In many cases, meeting attendance disrupts salient forms of goal achievement (e.g., when ongoing work had to be terminated to meet the new demand). In other cases, attendance may instead aid movement toward that goal. The impact of meetings on JAWB thus depends on several moderating factors. We consider as particularly important (a) the amount of interdependence inherent in one's job, (b) the perceived effectiveness of a meeting, and (c) personal characteristics such as work orientation and meeting confidence.

Task Interdependence

Some jobs require employees to work through interaction with colleagues (high task interdependence), and in others people operate on their own (low task interdependence). The theory of activity regulation would suggest that meetings serve more strongly as interruptions in low task interdependent jobs in that they are more likely to interfere with personal goal-directed activity. Conversely, given that meetings are often used to coordinate and integrate employee work activities, in high task interdependent jobs, they are less likely to be inconsistent with goal-directed activity and in fact may be a welcomed event. This reasoning is

loosely consistent with the argument of Gillie and Broadbent (1989) who, on the basis of a laboratory study, suggested that the nature of the interrupting activity, in particular its similarity to the main task and its complexity in terms of information processing, is more important than just the fact that an interruption occurs. In other words, what makes interruptions demanding is not so much the mere change of activity but rather the fact that accompanying thought processes are affected (e.g., other tasks have to be kept in memory in order to resume work once the interruption has ended).

Hypothesis 1: Task interdependence will moderate the relationship between meeting time demands and JAWB. For employees in low interdependent jobs, meeting time demands will be negatively related to JAWB. In high interdependent jobs, a positive relationship between meeting time demands and JAWB is expected.

Perceived Meeting Effectiveness

The perceived value of meeting activities may also be a determinant of whether that meeting functions as an interruption. For low-quality experiences, meeting time demands are likely to function as interruptions, in that task activities were not only disrupted but the interruption was perceived as a waste of time. Alternatively, high-quality meeting experiences are less likely to be viewed and function as an interruption because they are productive and potentially of value to one or more people. At the very least, the fact that a meeting was experienced positively may mitigate some of the negative processes associated with interruptions.

Hypothesis 2a: Perceived meeting effectiveness will moderate the relationship between meeting time demands and JAWB. Meeting time demands will be negatively related to JAWB when perceptions of meeting effectiveness are low. When perceptions of meeting effectiveness are high, a positive relationship between meeting time demands and JAWB is expected.

Given the prevalence and salience of meetings at work, it would be expected that experiences in a meeting are linked to temporary and more general affect. The notion that perceived performance is related to concurrent affect is well substantiated by empirical research (e.g., Fisher & Noble, 2004) and theory. Control theory (Carver & Scheier, 1990), for example, suggests that when performance is perceived to fall below a desired standard, negative feelings ensue. With regard to more stable work attitudes, decades of research demonstrates that satisfying work activities—tasks are significant determinants of more general feelings toward a job and intentions to quit.

Hypothesis 2b: Perceived meeting effectiveness will be positively related to JAWB.

Personal Characteristics

It is clear that employee behavior is a function of both organizational context and individual characteristics (e.g., Ostroff, 1993). In addition, research has long recognized that personal factors may moderate the relationship between daily events and stress (e.g., Caspi, Bolger, & Eckenrode, 1987). Personal factors may thus be

important in understanding variations in the relationship between meeting time demands and JAWB.

Given the lack of research and theory in the meetings area, we can only speculate as to which characteristics of a person may be the most relevant moderators. Factors were chosen that either relate to an interest in meetings or liking of meetings. The three personal factors we study are accomplishment striving, individualistic orientation, and meeting self-confidence.

Accomplishment Striving

According to Barrick, Stewart, and Piotrowski (2002), "accomplishment striving reflects an individual's intention to accomplish tasks and is characterized by a high task orientation" (p. 44). They continued: "Task oriented employees have a strong desire to accomplish task-related goals as a means of expressing their individual attributes and preferences" (p. 44). Accomplishment striving has been found to be related to job performance, conscientiousness, and extraversion (Barrick et al., 2002).

Again making reference to the theory of activity, individuals with a higher task focus are expected to establish more goals and/or more difficult goals and may become more engaged in accomplishing their immediate work tasks. For those individuals, meetings are more likely to function as interruptions. Conversely, for individuals with lower accomplishment strivings (those less likely to have specific aims to accomplish), meetings may not function as readily as interruptions and may sometimes operate as welcome and positive events. That reasoning is consistent with research by Kirmeyer (1988), who found that Type A individuals were more negatively affected by interruptions than those individuals without this personality pattern.

Hypothesis 3: Accomplishment striving will moderate the relationship between meeting time demands and JAWB. Meeting time demands will be negatively related to JAWB for employees high in accomplishment striving. For individuals low in accomplishment striving, a positive relationship between meeting time demands and JAWB is expected.

Individualistic Orientation

Individualistic orientation refers to a person's propensity to rely on himself–herself rather than others when engaging in tasks. Individuals high in this orientation tend to believe that for something to be done correctly, they have to do it themselves. Individualists tend to maximize their own outcomes with limited regard for others' outcomes, and they tend to do so even when interdependent others demonstrate high levels of cooperation (e.g., Kuhlman & Marshello, 1975; McClintock & Liebrand, 1988). Given that meetings involve collectives of people working together in some fashion (often to make a joint decision), we would expect meetings to function more readily as interruptions for participants high in individualistic orientation. Conversely, for those low in this orientation (who are more collectivistic in nature), meeting attendance may operate as an attractive form of activity rather than a disruption of preferred tasks. This is because people with a disposition toward collectivism often have positive attitudes toward their in-groups, internalize the norms of their in-groups, and enjoy doing what their in-groups expect them to do (Bontempo, Lobel, & Triandis, 1990; Lee & Ward, 1998).

Hypothesis 4: Individualistic orientation will moderate the relationship between meeting time demands and JAWB. Meeting time demands will be negatively related to JAWB for employees high in individualistic orientation. For individuals low in individualistic orientation, a positive relationship between meeting time demands and JAWB is expected.

Meeting Self-Confidence

Meeting self-confidence can be viewed in terms of an individual's judgment of his or her capability to function effectively in a meeting. Consistent with research and theory on self-efficacy across a wide range of tasks and activities (Bandura, 1986, 1997), self-confidence in meetings should influence a participant's thought patterns and emotional reactions. Unlike those high in meeting self-confidence, less confident individuals will be more likely to approach a meeting with feelings of anxiety and uncertainty. As a result, for those with low meeting self-confidence, meetings should tend to function as interruptions to their preferred activities.

Hypothesis 5: Meeting self-confidence will moderate the relationship between meeting time demands and JAWB. Meeting time demands will be negatively related to JAWB for employees low in meeting self-confidence. For individuals high in meeting self-confidence, a positive relationship between meeting time demands and JAWB is expected.

The Present Studies

This article describes two Internet-based investigations to examine the hypotheses outlined above. Study 1 focuses on typical meeting time demands, looking at the general job attitudes and job-related well-being. To complement that more general perspective, Study 2 examines time demands in specific meetings and well-being for that particular day. Consistent with the spirit of research triangulation (e.g., Rogelberg & Brooks-Labер, 2002), the two studies together allow us to view a common phenomenon from partially different perspectives. In both studies, the meetings examined are those that are prescheduled, in that their occurrence was determined in advance of the event as opposed to chance or spontaneous happenings.

Procedure: Both Studies

For both investigations, respondents were contacted through personal referrals, university alumni lists, online interest groups, commercially purchased double-opt-in e-mail services, banner advertisements, university Web sites, and letters in newspapers and professional magazines. The two samples were recruited concurrently but were independent of one another.

For Study 1, a sample of 676 full-time employees (working at least 35 hr per week) was obtained: 69% and 31%, respectively, from the United States and the United Kingdom. Participants were 60% female and averaged 39.15 years of age ($SD = 10.96$). Overall, 52% of respondents supervised others. In terms of tenure with the current organization, 32% had worked 2 years or less, 19% worked 2.01 to 4 years, 26% worked 4.01 to 10 years, and 23% worked 10.01 or more years. Fifty-four percent of the sample worked for private for-profit organizations, 14% worked for private nonprofit organizations, and 32% worked for public sector (e.g., national or city government) organizations. The most common employment sectors were education (20%), finance–insurance–real estate (10%), health care

(8%), manufacturing (7%), other service (7%), public administration (6%), retail trade (4%), and communications (3%).

For Study 2, 304 participants were recruited (80% from the United States, 12% from the United Kingdom, and 8% from Australia). All had attended at least one meeting in the current day. Participants were 70% female and averaged 38.24 years of age ($SD = 10.47$). In total, 53% of respondents supervised others. Regarding tenure with the current organization, 34% had worked 2 years or less, 20% worked 2.01 to 4 years, 30% worked 4.01 to 10 years, and 15% worked 10.01 or more years. Sixty-one percent of the sample worked for private for-profit organizations, 16% worked for private nonprofit organizations, and 23% worked for public sector (e.g., national or city government) organizations. The most common employment sectors were education (16%), health care (14%), finance-insurance-real estate (12%), other service (9%), retail trade (8%), manufacturing (6%), public administration (4%), communications (3%), and transport (2%).

Prior to survey deployment, we implemented an extensive pilot-testing strategy designed for Internet survey research (Burnfield, Rogelberg, Leach, & Warr, 2003). Pilot participants examined the surveys for clarity and perceived relevance of content, ease of use, technical difficulties, and completion time. Content and layout were modified in response to this feedback. The surveys were also tested on different types of computers and browsers to identify the most effective formats and to make modifications as shown to be necessary.

The two studies were introduced in a general e-mail presentation, which contained a link to a survey Web site. Potential participants were advised that the survey would take 15 to 20 min to complete and were informed that

While the security of the Internet cannot be guaranteed with 100% confidence, we do not ask for any information that might identify you personally. In addition, reports of the project will show only aggregated patterns (i.e., your results will be combined with all others).

To encourage participation, we provided the researchers' contact details for those individuals who wanted more information about the research, and we indicated that a summary of results across all participants would be made available at the research Web site (the URL was provided). No participant complaints or problems were reported. Data were compiled on the Internet by a vendor and then downloaded for analysis.

The surveys contained sections on time spent in meetings, meeting experiences, work characteristics, JAWB, personal characteristics, and demographics. Throughout the survey, respondents were reminded of our focus on prescheduled meetings. Given that respondents completed a questionnaire in their free time during the working day or afterward, great efforts were made to restrict the number of items (e.g., shortened versions of scales were used along with single-item indicators¹ when appropriate).

Study 1: Questionnaire Content

Meeting Time Demands

A work meeting was defined for respondents as a scheduled (i.e., prearranged) gathering of two or more individuals for the purpose of a work-related interaction (Schwartzman, 1986) that takes place either on or off site. To promote a common frame of reference, this definition excluded unscheduled and spontaneous interactions. The focus in Study 1 was explicitly on a typical week.

Meeting time demands can be viewed in terms of either the amount of time spent in meetings or as the number of meetings attended. It is desirable to learn about patterns associated with both of those indicators of time demand, and two operational definitions were therefore used.

The first, time spent in meetings, was based on employee responses to the item "On average, approximately how long do you

spend in meetings in a typical week? (Indicate in hours to the nearest hour)____." The second, number of meetings, was based on employee responses to the item "On average, how many meetings do you attend in a typical week? (Indicate the number)____."

Task Interdependence

A single item was used to assess task interdependence: "The nature of my job is such that I generally work independently of others." Responses were made on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Scores were reverse-coded such that higher scores reflected greater interdependence.

Perceived Meeting Effectiveness

Perceived meeting effectiveness was assessed with six items developed for this study. Participants were asked to rate the effectiveness of meetings attended in a typical week in terms of the following: "achieving your own work goals" "achieving colleagues' work goals" "achieving your department-section-unit's goals" "providing you with an opportunity to acquire useful information" "providing you with an opportunity to meet, socialize, or network with people" and "promoting commitment to what was said and done in the meeting." Responses were rated on a 5-point continuum (1 = *extremely ineffective*, 5 = *extremely effective*). Principal-components factor analysis yielded one factor with an eigenvalue over 1.0 that explained 63% of the variance. An average score was computed across the six items. The alpha internal consistency for scores on this scale was .87.

Accomplishment Striving

Three items from Barrick et al.'s (2002) Accomplishment Striving subscale of the Motivational Orientation Inventory were used. This measure is designed to assess three components of accomplishment striving, and we included one item from each: attention and direction ("I set personal goals to get a lot of work accomplished"), intensity and persistence ("I put a lot of effort into completing my work tasks"), and arousal ("It is very important to me that I complete a lot of work"). The alpha internal consistency for the three-item measure was .69.

Individualistic Orientation

Two items were used from Factor 1 of Triandis, Bontempo, Villareal, Asai, and Lucca's (1988) measure of individualism-collectivism (also included in Wagner's, 1995, measure). These items pertain to personal independence and self-reliance: "If you want something done right, you've got to do it yourself" and "In the long run the only person you can count on is yourself." Items were scored on a 5-point *agree-disagree* continuum. The alpha estimate of internal consistency was .72.

¹ Single-item indicators are not ideal. However, they have been used effectively in many studies. For instance, a meta-analysis by Wanous, Reichers, and Hudy (1997) showed that single-item measures of job satisfaction are highly correlated with multi-item measures of that construct.

Meeting Self-Confidence

Eight items were developed to assess self-confidence in one's ability to work effectively in meetings. Each item covered a different element of meeting behavior (e.g., "presenting your work–data to others" "proposing new ideas to others" "engaging in 'small talk' with others" "participating in general discussions"). Participants rated their confidence in each respect on a 5-point scale (1 = *not at all confident*, 5 = *very confident*). The alpha internal consistency reliability estimate for scores on this measure was .90.

JAWB

Four measures differing in their emphasis on immediate affect or attitude were used to assess JAWB. Two scales examined feelings about the job, one item assessed overall satisfaction, and a final measure assessed intentions to quit.

Warr's (1990) Job-Related Well-Being questionnaire (as in Mullarkey, Wall, Warr, Clegg, & Stride, 1999) was used to assess two axes of job-related affect: from anxiety to comfort and from depression to enthusiasm. Those two axes run between opposite quadrants of a conceptual space containing the orthogonal dimensions of pleasure and psychological arousal. Although significantly intercorrelated, the two forms of well-being are differentially related to several organizational features (e.g., Warr, 1990). For example, employees in higher level jobs report significantly less job-related depression but significantly more job-related anxiety, and anxiety–comfort is more strongly associated with work overload than is depression–enthusiasm. That differential overload pattern suggests that anxiety–comfort may be particularly responsive to meetings that create additional load by interrupting task activities.

Instructions for the well-being scales were as follows: "Thinking of your work overall, to what extent does it make you feel each of the following?" The Anxiety–Comfort scale is composed of six adjectives: *tense, anxious, calm, relaxed, worried, and comfortable*. The Depression–Enthusiasm scale comprises *optimistic, gloomy, motivated, depressed, miserable, and enthusiastic*. The two scales were intermixed in presentation, with a 5-point response scale (1 = *not at all*, 5 = *to a great extent*). Negative items were reverse-scored, so that higher means represented

more positive well-being. Alpha internal consistency estimates were .85 for job-related anxiety–comfort and .88 for job-related depression–enthusiasm.

Overall satisfaction with the job was assessed through a single item: "Overall, I am satisfied with my job." Responses were made on a 5-point continuum ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

The final index of JAWB, assessing an individual's intention to leave his or her job. Three items were used to measure intentions to quit (Parra, 1995), namely, "I may look for another job soon" "I often think of quitting my present job" and "I intend to stay in my present job." Responses were 3 (*yes*), 0 (*no*), and 1 (*cannot decide*), and the alpha internal consistency estimate was .83.

Results

Using standard conventions (Tabachnick & Fidell, 2001), we screened the data set for univariate and bivariate outliers. Very few extraneous values were identified. The outlier group was too small to study in and of itself and thus was deleted. Means, standard deviations, and intercorrelations among the principal variables examined in Study 1 are displayed in Table 1.

Meeting time demands. Employees spent, on average, 5.60 hr ($SD = 5.10$) in scheduled meetings during a typical week. That time involved, on average, 4.20 meetings ($SD = 3.48$). It is noteworthy that the range of responses for both indices was quite large; considerable variability in meeting time demands was found. The association between time and number of meetings was strong and positive ($r = .87, p < .05$).

Supervisors spent more time ($p < .05$) in prescheduled meetings ($M = 6.60$ hr, $SD = 5.69$) and attended more often ($M = 5.00$ meetings, $SD = 3.87$) than nonsupervisors ($M = 4.35$ hr, $SD = 4.04$; $M = 3.34$ meetings, $SD = 2.72$). Men ($p < .05$) spent more time ($M = 6.88$ hr, $SD = 5.95$) and attended more meetings ($M = 5.07$ meetings, $SD = 3.78$) than women ($M = 4.56$ hr, $SD = 4.15$; $M = 3.59$ meetings, $SD = 3.04$). Organizational size (number of employees) was positively related to time spent in meetings ($r = .24, p < .05$) and number of prescheduled meetings ($r = .23, p < .05$). The amount of task interdependence in one's job was positively related to time spent in meetings ($r = .20, p < .05$) and number of meetings ($r = .24, p < .05$).

Table 1
Study 1 Means, Standard Deviations, and Intercorrelations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Time	5.60	5.10	—										
2. Number	4.20	3.46	.87**	—									
3. Task interdependence	3.81	0.89	.20**	.24**	—								
4. Meeting effectiveness	3.62	0.77	.01	.03	.07	—							
5. Accomplishment striving	4.01	0.63	.06	.05	.02	.20**	—						
6. Individual orientation	3.09	0.96	-.16**	-.15**	-.28**	-.22**	.13**	—					
7. Meeting confidence	3.34	0.82	.17**	.17**	.03	.15**	.22**	-.07	—				
8. Anxiety–comfort	3.16	0.83	-.05	-.03	-.03	.35**	.04	-.21**	.23**	—			
9. Depression–enthusiasm	3.87	0.85	.14**	.16**	.07	.54**	.26**	-.34**	.25**	.60**	—		
10. Job satisfaction	3.79	1.04	.01	.03	-.01	.45**	.27**	-.19**	.17**	.51**	.74**	—	
11. Intentions to quit	2.47	3.11	-.04	-.05	-.08*	-.32**	-.20**	.21**	-.08	-.37**	-.61**	-.67**	—

Note. $N = 621$ –626.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

These four significant predictors, when collectively regressed on time in meetings or number of meetings, remained independently significant ($p < .05$) and collectively accounted for a moderate proportion of variance (adjusted $R^2 = .15$ and $.17$, $p < .05$, for time and number, respectively). The small correlations of meeting time demands with age and tenure dissipated after controlling for the other significant demographic indicators.

Meeting time demands and JAWB. Table 1 shows that, with the exception of significant correlations with the enthusiasm well-being index, neither index of meeting time demands was linearly correlated with any form of JAWB. In addition, no curvilinear relationships (quadratic and cubic) were found.

Testing the hypotheses. To test the study hypotheses, we undertook moderated multiple regression analyses. In each analysis, the demographic variables (see above) that yielded significant mean differences for meeting time demands were controlled (gender, supervisory status, and organizational size). Data source (i.e., country) was also controlled in each analysis. A logarithmic transformation was undertaken on both indicators of meeting time demands to reduce the significant ($p < .05$) skew that would serve to violate the normality assumption. It is noteworthy that when analyses were run without the logarithmic transformation, a nearly identical pattern of results emerged in all cases.

Our hypotheses were a priori, directional, and derived from theory. Consistent with statistical theory (e.g., Loether & McTavish, 1988, p. 544), we use a one-tailed test of statistical significance. Pragmatically, the use of a one-tailed test also serves to improve the power of our moderated regression analyses (which typically lack power; Aiken & West, 1991). The $p < .05$ convention was used to determine statistical significance.

When applicable, we plotted significant interaction effects using procedures (e.g., plotting values $\pm 1 SD$) recommended by Aiken and West (1991). To promote interpretability, we centered our primary predictors prior to the creation of a cross-product term.

Task interdependence. Hypothesis 1 states that task interdependence will moderate the relationship between meeting time demands and JAWB. For the first operational definition of demands, the interaction of interdependence² with time spent in meetings was significant ($p < .05$) for the enthusiasm well-being index, the job satisfaction index, and the intention to quit index. The interaction was not significant for the comfort well-being index. See Table 2 for a summary of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 1. That diagram shows that time spent in meetings in a typical week is negatively related to satisfaction for those in jobs with low task interdependence. Conversely, meeting time is positively correlated with satisfaction for those in jobs with high task interdependence. This pattern supports Hypothesis 1.

A similar but more robust pattern of results emerged for the number of meetings attended. The interaction between task interdependence (see Footnote 2) and number of meetings was significant ($p < .05$) for job-related comfort, job-related enthusiasm, job satisfaction, and intention to quit. See Table 3 for a summary of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 1.

Perceived meeting effectiveness. Hypothesis 2a states that perceived meeting effectiveness will moderate the relationship between meeting time demands and JAWB. For neither operational

Table 2
Study 1 Moderated Regression Results Involving
Interdependence and Time in Meetings

Step and predictor	Depression–enthusiasm	Job satisfaction	Intentions to quit
Step 1			
Country code	.06	.11*	.10*
Organization size	-.10*	-.10*	.04
Gender	-.03	-.04	.07*
Total R^2	.00	.02*	.01*
Step 2			
Time in meetings	.13*	.03	-.00
Interdependence	.07*	.02	-.11*
Total R^2	.03*	.02	.02*
ΔR^2	.03*	.00	.01*
Step 3			
Time in Meetings \times Interdependence	.09*	.09*	-.10*
Total R^2	.04*	.03*	.03*
ΔR^2	.01*	.01*	.01*

Note. The standardized regression coefficients presented are those derived at the third step.

* $p < .05$, one-tailed.

definition of demands (time or number of meetings) was the interaction significant for any of the indicators of JAWB.

Hypothesis 2b (that perceived meeting effectiveness will be positively related to JAWB) was supported across all of the indicators ($p < .05$). JAWB measures were regressed (one at a time) on perceived meeting effectiveness (controlling for number of meetings attended, country source, gender, supervisory status, and organizational size). Beta weights associated with perceived meeting effectiveness were positively ($p < .05$) related to job-related comfort ($\Delta R^2 = .07$), job-related enthusiasm ($\Delta R^2 = .22$), job satisfaction ($\Delta R^2 = .20$), and intention to quit ($\Delta R^2 = .10$). Nearly identical results were found when time in meetings was controlled for instead of number of meetings.

Personal characteristics. Hypothesis 3 states that accomplishment striving will moderate the relationship between meeting time demands and JAWB. For time spent in meetings, the interaction with striving was significant ($p < .05$) for the job-related comfort index, job-related enthusiasm index, the job satisfaction index, and the intention to quit index. See Table 4 for a summary of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 2. Namely, a positive relationship between meeting time demands and job satisfaction was found for individuals low in accomplishment striving, but a negative relationship was found for individuals high in accomplishment striving.

A similar but less robust pattern of results emerged for the second operational definition, number of meetings. The interaction was significant ($p < .05$) only for job-related enthusiasm and intention to quit. See Table 5 for a summary of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 2.

Hypothesis 4 states that individualistic orientation will moderate the relationship between meeting time demands and JAWB. For

² Supervisory status was not controlled in these analyses given its conceptual overlap with interdependence as a construct.

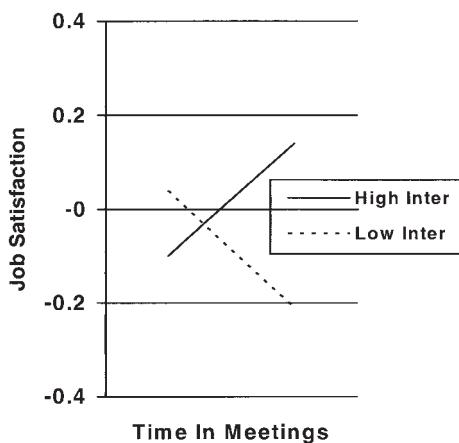


Figure 1. Two-way interaction of task interdependence (inter) and time in meetings to predict job satisfaction in Study 1.

both operational definitions, the interaction term was not significant for any of the indicators of JAWB.

Hypothesis 5 states that meeting self-confidence will moderate the relationship between meeting time demands and JAWB. However, the interaction term was not significant for any of the indicators of JAWB for either time in meetings or number of meetings. Note that Table 1 shows a positive correlation of meeting self-confidence with each indicator of JAWB ($p < .05$).

Summary

Study 1 examined the relationship of meeting time demands with JAWB, focusing on typical weekly meetings. As expected, task interdependence and accomplishment striving were found to moderate, in the predicted direction, the relationship between meeting time demands and JAWB. For instance, the relationship between time in meetings in a typical week and job satisfaction is strong and positive when task interdependence is high but is negative when interdependence was low.

Table 3
Study 1 Moderated Regression Results Involving Interdependence and Number of Meetings

Step and predictor	Anxiety-comfort	Depression-enthusiasm	Job satisfaction	Intentions to quit
Step 1				
Country code	.02	.05	.11*	.10*
Gender	-.11*	-.03	-.04	.07*
Organization size	-.07	-.10*	-.10*	.04
Total R^2	.02*	.01	.02*	.01*
Step 2				
No. of meetings	-.06	.15*	.02	.01
Interdependence	.01	.07	.03	.12*
Total R^2	.02*	.04*	.02*	.02*
ΔR^2	.00	.03*	.00	.01*
Step 3				
No. of Meetings \times Interdependence	.07*	.11*	.09*	.12*
Total R^2	.02*	.05*	.03*	.04*
ΔR^2	.00*	.01*	.01*	.02*

Note. The standardized regression coefficients presented are those derived at the third step.
* $p < .05$, one-tailed.

As predicted, perceived meeting effectiveness was positively and significantly associated with JAWB, regardless of the amount of time that individuals spent in meetings or the number of meetings they attended. For instance, across the analyses, perceived meeting effectiveness accounted for some 27% and 19% of the variance in job-related enthusiasm and job satisfaction scores, respectively.

Although the pattern of significant interactions was similar for both indices of time demands, reflecting the strong association between the two aspects of demand, it was not identical. Specifically, accomplishment striving moderated the relationship between time in meetings and all four measures of JAWB, but the pattern of findings was less consistent for number of meetings. The converse applied, but to a lesser extent, to the moderating effects of task independence on the relationship of time and number with JAWB. Overall, the results of Study 1 suggest that our hypotheses concerning the relationship between meeting time demands and in general forms of JAWB has some explanatory value when the frame of reference is a typical week.

Study 2 was designed to examine the hypotheses in a more restricted time period—a single day. At the day level of analysis, finer distinctions can be examined (it is more proximal to the meeting event). Because of the potential variations in daily meeting experience, it is possible that the pattern of results at this more proximal level of analysis could differ from a more aggregated conceptualization of meetings because of the potential variations in daily meeting experience. Similarly, the potential effects of an interruption should be more salient at the daily level rather than at the more abstract “in general” level.

Study 2

This study examined meeting time demands and JAWB for a given day. For Study 2, JAWB was operationalized in a slightly different manner. Given our interest in feelings about a particular day, the more stable intentions to quit index was dropped. Perceived productivity for the day (amount of work completed) was added and assessed along with three indicators of feelings about

Table 4
Study 1 Moderated Regression Results Involving Accomplishment Striving and Time in Meetings

Step and predictor	Anxiety-comfort	Depression-enthusiasm	Job satisfaction	Intentions to quit
Step 1				
Country code	-.00	.01	.06	-.05
Organization size	-.06	-.08*	-.09*	.03
Gender	-.13*	-.07*	-.09*	.10*
Supervise others	-.03	.04	.01	-.03
Total R^2	.02*	.01*	.02*	.01*
Step 2				
Time in meetings	-.07	.11*	.00	-.00
Accomplishment striving	.06	.25*	.26*	-.19*
Total R^2	.03*	.08*	.09*	.05*
ΔR^2	.01*	.07*	.08*	.04*
Step 3				
Time in Meetings \times Accomplishment Striving	-.09*	-.09*	-.10*	.08*
Total R^2	.03*	.09*	.10*	.06*
ΔR^2	.01*	.01*	.01*	.01*

Note. The standardized regression coefficients presented are those derived at the third step.
* $p < .05$, one-tailed.

the particular work day. Measures for this study were all completed at the end of a work day. At that time, specific ratings were requested for each of a person's meetings attended that day.

Meeting Time Demands

As in Study 1, individuals reported on the number of their prescheduled work-related meetings, defined in the same way. However, in this case, focus was on the present day rather than a typical week. Respondents also indicated for each meeting they had attended how long it had lasted; 15-min intervals were specified on the questionnaire (e.g., 16 to 30 min, 31 to 45 min). The separate meeting lengths were added together to index a person's time spent in meetings during that day.

Perceived effectiveness of today's meetings was measured by computing the average score of the single-item ratings of each

meeting attended that day. Ratings were provided on a 5-point scale (1 = *complete waste of time*, 5 = *excellent use of time*).

For today's job-related anxiety-comfort and job-related depression-enthusiasm (measured as before), alpha coefficients were .87 and .86, respectively. Task interdependence was assessed by the same single item, and today's overall job satisfaction was measured by "Overall, I was satisfied with my job today," with five possible responses from 1 (*strongly disagree*) to 5 (*strongly agree*).

Perceived productivity for the current work day was examined through two items: "My work-day today was productive" and "I

Table 5
Study 1 Moderated Regression Results Involving Accomplishment Striving and Time in Meetings

Step and predictor	Depression-enthusiasm	Intentions to quit
Step 1		
Country code	.00	-.05
Organization size	-.09*	.03
Gender	-.07	.10*
Supervise others	.03	-.03
Total R^2	.01*	.01
Step 2		
No. of meetings	.14*	.00
Accomplishment striving	.25*	-.19*
Total R^2	.10*	.05*
ΔR^2	.09*	.04*
Step 3		
No. of Meetings \times Accomplishment Striving	-.07*	.08*
Total R^2	.10*	.06*
ΔR^2	.00*	.01*

Note. The standardized regression coefficients presented are those derived at the third step.

* $p < .05$, one-tailed.

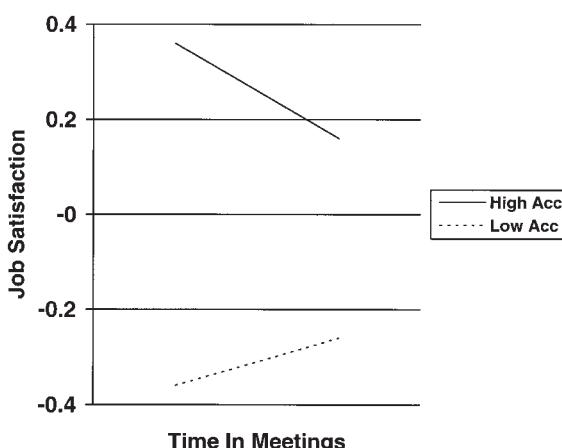


Figure 2. Two-way interaction of accomplishment striving (acc) and time in meetings to predict job satisfaction in Study 2.

got a lot done today at work." The same 5-point response continuum was provided, and the alpha coefficient was .92.

One's accomplishment striving, individualistic orientation, and meeting self-confidence in general were measured with the same items as in Study 1. Alpha coefficients of internal consistency were .77, .78, and .92, respectively.

Results

Means, standard deviations, and intercorrelations among the principal variables examined in Study 2 are displayed in Table 6.

Meeting time demands. In total, 219 respondents attended one meeting in their work day, 58 attended two meetings, 19 attended three meetings, and 8 respondents had four meetings in their work day. Supervisors, $t(301) = 4.23, p < .05$, had more meetings ($M = 1.55, SD = 0.84$) than nonsupervisors ($M = 1.21, SD = 0.52$). Men ($M = 1.70, SD = 0.90$) had more ($p < .05$) meetings than women ($M = 1.27, SD = 0.60$). Reported task interdependence in one's job was positively related to the number of meetings attended today ($r = .20, p < .05$) and time spent in meetings ($r = .15, p < .05$). These three significant predictors, when collectively regressed on today's number, remained independently significant ($p < .05$) and collectively accounted for a moderate proportion of variance (adjusted $R^2 = .13, p < .05$).

As with the more extended time perspective of Study 1, the relationship between today's time and number of meetings is strongly positive ($r = .67, p < .05$). Today's meeting time was significantly ($p < .05$) related to supervisory status, gender, and task interdependence. These three significant predictors, when collectively regressed on today's time, remained independently significant ($p < .05$) and collectively accounted for a moderate proportion of variance (adjusted $R^2 = .11, p < .05$). The small correlation of today's meeting time with organizational size dissipated after controlling for the other significant demographic indicators. The pattern of results using number of meetings as the criterion variable was nearly identical to the above.

Neither indicator of today's meeting time demands (time or number) was correlated with any indicator of JAWB, except for time and job-related comfort ($r = -.11, p < .05$). No curvilinear relationships (quadratic or cubic) were found.

Testing the hypotheses. As for Study 1, multiple regression analyses were undertaken. Demographic variables were again controlled, as was the country of each respondent. Given potential day of week effects on JAWB (Egloff, Tausch, Kohlmann, & Krohne, 1995; Parkinson, Briner, Reynolds, & Totterdell, 1995), day of survey completion was also controlled. To conform with data analytic assumptions, a square root transformation was applied to the two measures of meeting time demands to reduce the significant skew ($p < .05$). When analyses were run without the transformation, a nearly identical pattern of results emerged. Hypotheses were tested using one-tailed tests of significance. The $p < .05$ convention was used to determine statistical significance.

When applicable, we plotted significant interaction effects using procedures (plotting values $\pm 1 SD$) recommended by Aiken and West (1991). To promote interpretability, we centered our primary predictors prior to the creation of a cross-product term.

Task interdependence. Hypothesis 1 is that the relationship of meeting time demands with JAWB will be moderated by task interdependence. For both indicators of time demand, the interaction beta weight (see Footnote 2) was not significant for any of the outcome variables.

Perceived meeting effectiveness. Hypothesis 2a states that perceived meeting effectiveness will moderate the relationship between meeting demands and JAWB. The interaction between number of meetings and perceived meeting effectiveness was significant ($p < .05$) for today's job-related comfort, job-related enthusiasm, job satisfaction, and perceptions of productivity. See Table 7 for a summary of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 3. It can be seen that for individuals reporting high perceived meeting effectiveness, a positive relationship is present between meeting time demands and job satisfaction but that for individuals reporting lower perceived meeting effectiveness, a negative relationship exists.

Similar, but weaker, results were found for amount of time in meetings today. The interaction with perceived meeting effectiveness was significant ($p < .05$) for the job-related comfort index, the job-related enthusiasm index, and perceptions of productivity but not for the job satisfaction index. See Table 8 for a summary

Table 6
Study 2 Means, Standard Deviations, and Intercorrelations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Time	5.71	5.34	—										
2. Number ^a	1.39	0.72	.67**	—									
3. Task interdependence	2.51	1.21	.15**	.20**	—								
4. Meeting effectiveness ^b	3.79	0.91	.01	.02	-.06	—							
5. Accomplishment striving	4.00	0.66	.15**	.03	-.16**	.25**	—						
6. Individual orientation	3.37	0.96	-.12*	-.13*	-.26**	-.12*	.20**	—					
7. Meeting confidence	3.62	0.86	.16**	.17**	-.12**	.17**	.37**	-.04	—				
8. Anxiety-comfort	3.43	0.92	-.11*	-.11	-.16**	.25**	.15**	-.17**	.23**	—			
9. Depression-enthusiasm	3.77	0.85	.05	-.04	-.07	.48**	.36**	-.21	.29**	.63**	—		
10. Job satisfaction	3.76	1.05	.03	-.04	-.17**	.39**	.46**	.02	.38**	.42**	.64**	—	
11. Perceived productivity	3.79	0.96	.04	-.06	-.15**	.30**	.46**	.05	.42**	.35**	.54**	.85**	—

Note. $N = 455-479$.

^a $N = 300-304$. ^b $N = 378-381$.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Table 7
Study 2 Moderated Regression Results Involving Perceived Meeting Effectiveness and Number of Meetings

Step and predictor	Anxiety-comfort	Depression-enthusiasm	Job satisfaction	Productive
Step 1				
Country Dummy Code 1	-.05	-.00	.00	.03
Country Dummy Code 2	-.05	.02	-.08	-.13*
Day of week Dummy Code 1	-.00	-.03	-.02	-.04
Day of week Dummy Code 2	.10	.03	.03	.02
Day of week Dummy Code 3	.10	-.07	-.00	-.03
Day of week Dummy Code 4	.03	-.13*	-.12*	-.12
Gender	.05	-.04	.07	.04
Supervise others	.14*	.01	.10*	.05
Total R^2	.05*	.02	.05*	.04
Step 2				
No. of meetings	-.11*	-.08	.03	-.02
Meeting effectiveness	.31*	.53*	.50*	.40
Total R^2	.13*	.25*	.24*	.15*
ΔR^2	.08*	.23*	.19*	.11*
Step 3				
No. of Meetings \times Meeting Effectiveness	.14*	.12*	.15*	.22*
Total R^2	.15*	.26*	.26*	.19*
ΔR^2	.02*	.01*	.02*	.04*

Note. The standardized regression coefficients presented are those derived at the third step.

* $p < .05$, one-tailed.

of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 3.

Hypothesis 2b suggests that perceived meeting effectiveness will be positively related to JAWB, and this was found to be the case. JAWB measures were regressed (one at a time) on perceived meeting effectiveness (controlling for number of meetings attended, country source, day of week, gender, supervisory status, and organizational size).

Beta weights associated with perceived meeting effectiveness were positively ($p < .05$) related to job-related comfort ($\Delta R^2 = .07$), enthusiasm ($\Delta R^2 = .23$), job satisfaction ($\Delta R^2 = .20$), and perceived productivity ($\Delta R^2 = .11$). Nearly identical results were

found when time in meetings was controlled for instead of number of meetings.

Personal characteristics. Hypothesis 3 (that the relationship between meeting demands and JAWB will be moderated by ac-

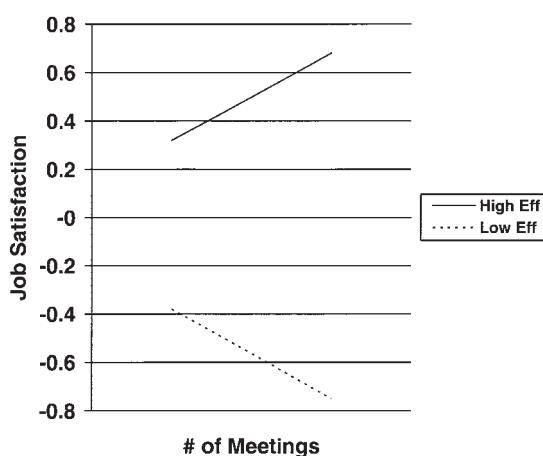


Figure 3. Two-way interaction of number (#) of meetings and perceived meeting effectiveness (eff) to predict job satisfaction in Study 2.

Table 8
Study 2 Moderated Regression Results Involving Perceived Meeting Effectiveness and Time in Meetings

Step and predictor	Anxiety-comfort	Depression-enthusiasm
Step 1		
Country Dummy Code 1	-.05	-.00
Country Dummy Code 2	-.05	.01
Day of week Dummy Code 1	-.00	-.03
Day of week Dummy Code 2	.10	.03
Day of week Dummy Code 3	.10	-.06
Day of week Dummy Code 4	.02	-.13*
Gender	.05	.03
Supervise others	.16*	.02
Total R^2	.05	.02
Step 2		
Time in meetings	-.15*	-.04
Meeting effectiveness	.29*	.51*
Total R^2	.14*	.25*
ΔR^2	.09*	.23*
Step 3		
Time in Meetings \times Meeting Effectiveness	.11*	.13*
Total R^2	.15*	.27*
ΔR^2	.01*	.02*

Note. The standardized regression coefficients presented are those derived at the third step.

* $p < .05$, one-tailed.

accomplishment striving) was also examined for both operational definitions of time demands. The interaction between accomplishment striving and number of meetings was significant ($p < .05$) for the job-related enthusiasm index, job satisfaction, and perceived productivity, but not for job-related comfort. See Table 9 for a summary of the results. Each interaction plot revealed the same basic pattern of results, as illustrated in Figure 2. For individuals high in accomplishment striving, there was a negative relationship between number of meetings today and JAWB, but for those low in accomplishment striving, a positive relationship was found. On the other hand, for time spent in meetings today, this interaction was not significant for any of the outcome variables.

Hypothesis 4 suggests that the association between meeting time demands and JAWB will be moderated by individualistic orientation. For both indicators of today's meeting time demands, the interaction was nonsignificant for any of the indicators of JAWB.

The same null result was obtained for Hypothesis 5 (that the relationship between meeting time demands and JAWB will be moderated by meeting self-confidence). Examination of Table 6 shows that, as in Study 1, meeting self-confidence was positively correlated with each indicator of JAWB ($p < .05$).

Summary

The focus of Study 2 was on meeting time demands and their correlates in a single day. The article's theoretical hypotheses were again partially supported. Perceived meeting effectiveness was found to moderate the relationship between both indices of meeting time demands and JAWB. For instance, a strong and positive relationship between number of meetings today and job-related comfort occurred when rated meeting effectiveness was high, but

a negative relationship was present when perceived effectiveness was low. In addition, accomplishment striving moderated the relationship of number of meetings today with JAWB and perceived personal productivity. For instance, a negative relationship between today's meeting number and personal productivity was found when accomplishment striving was high, but a positive relationship was found when such striving was low. However, the interaction between accomplishment striving and time in meetings on JAWB was not significant, and no moderation effects were found for task interdependence, individualistic orientation, and self-confidence in meetings.

As expected, the findings show that meeting effectiveness has a strong, direct relationship with JAWB, even after taking into account the amount of time spent in meetings and the number of meetings attended. In particular, across the analyses, meeting effectiveness accounted for some 22%, 20%, and 10% of the variance in job-related enthusiasm, job satisfaction, and reported productivity, respectively.

General Discussion

These investigations of the conditions under which meeting time demands impact JAWB provide both theoretical and practical contributions to the scant empirical literature in this area. In two studies, we tested the moderating effects of task interdependence, accomplishment striving, individualistic orientation, confidence in meetings, and perceived meeting effectiveness on the relationship between meeting time demands and JAWB. In addition, the direct effect of perceived meeting effectiveness was examined. In doing so, we used two indices of time demands: how much time people spend in meetings and how many meetings they attend.

These two indicators were examined from two perspectives. The first considered attendance at meetings in a typical week relative to general JAWB (Study 1), whereas the second time frame was more specific, concerning the relationship between meetings today and JAWB on that single day (Study 2). Across the studies, neither indicator of meeting time demands was consistently related to the outcome variables. Instead, differential relationships with JAWB were found for three out of the five suggested moderators, namely, task interdependence (Hypothesis 1), meeting experience quality (Hypothesis 2), and accomplishment striving (Hypothesis 3). Moderating results for accomplishment striving were consistent across Studies 1 and 2. However, the pattern of other findings was different in some respects across the studies. First, task interdependence was found to moderate the relationship of meeting time demands with JAWB in Study 1 but not in Study 2. Second, meeting experience quality moderated³ the relationship of time demands with JAWB in Study 2 but not in Study 1.

The differential pattern of effects for task interdependence and meeting quality may be seen to reflect the different perspectives of the two studies (i.e., on either a typical week or today's meetings). Viewed in this way, task interdependence is a salient factor for understanding the effects of typical meetings on more general

Table 9
Study 2 Moderated Regression Results Involving
Accomplishment Striving and Number of Meetings

Step and predictor	Depression-enthusiasm	Job satisfaction	Productive
Step 1			
Country Dummy Code 1	-.04	-.02	.01
Country Dummy Code 2	.04	-.04	-.09
Day of week Dummy Code 1	-.06	-.03	-.05
Day of week Dummy Code 2	.02	.04	.04
Day of week Dummy Code 3	-.03	.03	-.00
Day of week Dummy Code 4	-.11	-.09	-.09*
Gender	-.06	.03	-.01
Supervise others	.00	.07	.00
Total R^2	.02	.05*	.04
Step 2			
No. of meetings	-.09	-.06	-.05
Accomplishment striving	.35*	.47*	.50*
Total R^2	.15*	.27*	.29*
ΔR^2	.13*	.22*	.25*
Step 3			
No. of Meetings \times Accomplishment Striving	-.13*	-.11*	-.09*
Total R^2	.16*	.28*	.30*
ΔR^2	.02*	.01*	.01*

Note. The standardized regression coefficients presented are those derived at the third step.
* $p < .05$, one-tailed.

³ Given that perceived meeting effectiveness could be conceived as a mediator, we ran some additional analyses. In neither study did perceived effectiveness mediate the relationship between meeting time demands and JAWB.

JAWB but less important when considered for the meetings of a single day. In other words, the interruption effect of meetings for individuals who work independently of others is evident over the longer, rather than the shorter, term. In contrast, perceived meeting effectiveness has a more apparent short-term effect, being useful for understanding the impact of meetings on how people feel at the end of a day.

Assessment of meeting effectiveness for one particular day's meetings is likely to be more descriptive of actual events than is perceived meeting effectiveness for a typical week, which may draw on broad recollections and possible invalid generalizations. Although not a diary study, by examining meetings in a single day and JAWB at the end of the day, Study 2 shares one advantage of diary studies in that it reduces retrospective bias by capturing experience close to the time of occurrence (Stone, Shiffman, Schwartz, Brodereick, & Hufford, 2003). Taken together, this finding demonstrates the value of conducting research on the daily level of analysis as a complement to research using a more extended frame of reference; a short- and long-term measurement perspective can be differentially relevant for understanding some processes.

Another issue of note concerns the operational definition of meeting time demands. Overall, our findings suggest that either index of meeting time demands is appropriate for understanding stable JAWB as a function of meeting attendance, although the effects are not identical for the two indices. The pattern of findings for Study 2 indicates that number of prescheduled meetings attended today is more closely associated with JAWB than is time spent in meetings. Furthermore, taking into account effects at both $p < .05$ and $p < .10$, number of meetings is more frequently related to JAWB across both studies. Such a pattern is consistent with the interruptions framework on which both studies are based: The number of meetings attended, rather than the length of each meeting, will be most associated with task disruption, because of the repeated disturbance of activity regulation and effort required to incorporate many meetings.

Particularly robust was the moderating impact of accomplishment striving. Across both studies, that personal characteristics emerged as a key factor linking meeting time demands to JAWB, and it is one to which the interruptions framework is particularly relevant. For individuals with a strong desire to accomplish work goals, meetings are arguably more of an interruption than for those with a lower desire. It is intriguing, however, that a greater number of meetings is associated with increased JAWB for those lower in accomplishment striving. For those who are less goal oriented, our findings highlight the possibility that some meetings may be desired, for example, to permit social interaction or to provide structure to an unstructured day.

Across the studies, no significant effects were found for meeting self-confidence or individualistic orientation. It seems probable that the relationship between self-confidence and JAWB might be more complex than was originally hypothesized. Self-confidence might play a key role when one is expected to lead or facilitate a meeting but becomes less important when one is able merely to observe in a passive manner. A finer grained analysis than is possible here is required to learn about such patterns. A similar line of reasoning can also be applied to individualistic orientation: Some types of meetings do not require individuals to work together on a task (e.g., those that primarily involve information

dissemination), whereas others (e.g., joint problem solving) pose more collective requirements. The latter type of meeting would presumably be more troublesome for participants of an individualistic disposition, whereas this aspect of personality is irrelevant in meetings that require no interdependent working. A more in-depth empirical investigation of specific meeting types is required to test for differentiated patterns of that kind.

Finally, despite our effect sizes being fairly typical in multivariate moderator analyses, we posit that our findings are actually conservative estimates of the interruptive potential of meetings. Specifically, meetings that are scheduled in advance should have less of a negative effect than unscheduled meetings (i.e., less likely to be an interruption; less likely to hinder goal activity) because (a) a worker can arrange his or her schedule to take the meeting into account, and (b) the worker can plan to make good use of the meeting time. Unscheduled meetings, on the other hand, are more likely to strongly disrupt activities. In fact, it may be the case that for unscheduled meetings a main effect relationship may be found such that the frequency of unscheduled meeting is negatively related to JAWB. However, assessing unscheduled meetings is not without challenge. They are more difficult to define (e.g., Do informal stop-in-the-hallway meetings count as a meeting?) and thus count objectively compared with prescheduled meetings.

The findings have both conceptual and practical implications. This study provides support for our conceptual stance on meetings as a form of interruption, with negative effects on certain individuals. This perspective, as far as we are aware, has not previously been incorporated into the meetings literature. Follow-up research, building on the interruptions framework, is now warranted. For example, future research should examine the actual mechanisms through which meetings influence well-being and how meeting time demands actually translate to or function as perceived or real interruptions (e.g., how meetings impact activity regulation and cognitive effort).

In terms of practical implications, two issues are important. The first concerns the assessed effectiveness of meetings and factors related to it. Across the studies, perceived meeting effectiveness was a strong predictor of JAWB and was found to moderate the relationship of today's meeting time demands with JAWB (Study 2). Trade literature (e.g., Streibel, 2003) argues that perceptions of meeting effectiveness would appear to be promoted to the extent that people come prepared to meetings, an agenda is used, meetings are punctual (start and end on time), purposes are clear, and there is widespread attendee participation. We recommend that organizations include such factors in good-practice guidelines for the conduct of their meetings.

To understand components of overall job attitudes, one should consider the principal tasks—activities in which employees are required to spend large amounts of time (Taber & Alliger, 1995). Given the organizational reliance on meetings, meeting attendance is a task whose evaluation should often be examined. Our data suggest that these affective reactions figure prominently in an employee's general JAWB. Taken together, organizations should consider assessing perceived meeting effectiveness in surveys of employee satisfaction.

Although a large number of people took part in this research and our hypotheses of meeting time demands and JAWB were tested from two partially contrasting perspectives, the present studies have limitations. The first concerns the fact that they were cross-

sectional in design. Although the findings are consistent with several predictions, they provide a limited basis for establishing causality. Nevertheless, cross-sectional investigations are particularly appropriate in undeveloped research domains, where identification of interrelationships and the development of conceptual frameworks are still needed. In addition, longitudinal within-person designs are required in order to examine the relationship between meeting experiences and effects over time. For example, how do individuals feel on days where meeting time demands are greater or less than what is usual for that person, more or less effective than usual, use more or less appropriate structures, and so forth? Another longitudinal possibility is to collect reports of JAWB in the morning and end of the work day, then determine if meeting variables during that day predict change in affect.

In addition to further examination of our nonsignificant findings in more detailed research conditions, there is much scope to develop the present framework of moderator variables. For instance, the perceived dullness of one's job could be examined as a moderator: For those who feel that their work is tedious, meetings may be perceived as a welcome interruption, as they provide an opportunity for social interaction. Furthermore, consistent with Jett and George's (2003) interruptions typology, interruptions (in this case, meetings) may be detrimental to the person being interrupted to the extent that they result in (a) insufficient time to perform time-sensitive tasks, (b) stress or anxiety associated with feelings of increased time pressure, and/or (c) a disruption of a person's focused attention on a task. Future research should examine the role of time pressure in current task activities and incongruity with meeting context to explore this notion further.

Anecdotally, it is not uncommon to hear claims that meetings are a "waste of time," an "impediment," and so forth. It is interesting to note that participants' data do not appear to support these claims. The observed average scores for perceived meeting effectiveness are above the scale midpoint. Furthermore, if meetings were perceived as generally undesirable, a negative correlation between meeting time demands and JAWB would have been found. It was not. Future research should examine how far an individual's public claims about meetings are consistent with his or her private response. It may be socially unacceptable to publicly claim that meetings are desirable. Instead, a social norm to complain about meetings may exist—not doing so could reflect poorly on the employee.

There is a need to carry out more focused studies in terms of sample selection. Findings from the present studies are likely to be generalizable, as both samples extend across occupational positions and organizational types. However, it would be worthwhile to examine whether the same pattern of findings is evident for specific groups of employees (e.g., junior managers who work for the same employer) to assess whether (and, if so, how) unique contextual factors affect meeting experiences and outcomes.

Most important, future research should incorporate meeting-level variables. Meetings differ among themselves in several ways. The typology suggested by Schwartzman (1986) distinguished primarily between those that are scheduled or planned in advance and others that are chance or spontaneous happenings. Many employees experience meetings of both kinds. It is important to investigate separately the two kinds of event and to seek to account for key processes in terms that are distinct from each other (although some themes are of course common to both). Likewise,

there is a need to examine the impact of different meeting types on JAWB. Future studies could test, for example, whether specific types have a stronger relationship with JAWB than others and whether the moderation effect of accomplishment striving or other variables is equivalent for all types of meeting. In addition to meeting type, focused studies could examine an individual's role in the meeting (e.g., did he or she call the meeting?), whether meeting attendance was voluntary, and how confident and comfortable was the individual with the meetings he or she attended in a particular day. These factors may all relate to how meetings impact well-being. It is important that the interdependence construct be assessed at a more microlevel to determine how closely each meeting was aligned with the person's individual job responsibilities and ongoing work activities for that day. According to an interruptions framework, this focused assessment is likely to yield more robust findings and will more directly test the claims of Gillie and Broadbent (1989) that the nature of the interrupting activity, in particular its similarity to the main task, is more important than just the fact that an interruption occurs.

In general, our goal was to examine meeting demands and meeting experiences to seek its relationship to JAWB. It was not our aim to conclude that meetings are either effective or ineffective (both types obviously exist). Rather, our research attempted to uncover broad, macroissues of importance in addition to establishing the meeting as a viable research topic in and of itself. By building on our proposed framework and findings, we hope that future studies will further elucidate the conditions under which work meetings can maximally benefit both employees and the organization.

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