Real Time Affect at Work: A Neglected Phenomenon in Organisational Behaviour

by
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Abstract:
This paper describes a program of research on real time affect while working. Three sets of hypotheses were tested in a data set comprising fifty reports of momentary affect from each of 120 respondents. Between and within-person analyses were used to explore the correlates of aggregated and momentary affect. Findings suggest that: (i) average real time affect at work shares some variance with job satisfaction, but is not isomorphic with it; (ii) average positive and negative affect have somewhat different antecedents and consequences; and (iii) most people experience a strong within-person relationship between momentary affect and concurrent perceptions of task performance.

Keywords:
AFFECT; JOB SATISFACTION; MOOD; EMOTIONS; JOB PERFORMANCE.

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1. Introduction

Affect (mood and emotion) at work has recently received increased attention from scholars after decades of neglect. Of particular interest are real time affective experiences while working on the job, in contrast to positive-negative attitudinal judgments about the job. It can be argued that real time affective reactions in large measure comprise subjective quality of work life, and as such they deserve serious research attention (c.f. Ashforth & Humphrey 1995; Briner 1999; Fisher & Ashkanasy 2000; George & Brief 1996). Further, momentary affect is likely to be related to concurrent behaviour, and in the aggregate, may contribute to other variables such as job satisfaction.

At present, there is little theory and even less data regarding the causes or consequences of real time affect at work and how such affect may be related to other variables of interest to organisational behaviour researchers. The research described below provides a start at embedding real time affect at work in a nomological network. Specifically, this paper summarises the results of a program of research addressing three sets of research questions about the likely causes and consequences of real time affect in organisational behaviour. Affective Events Theory largely inspired the current program of research, so it will be described first.

2. Affective Events Theory

The heart of Weiss and Cropanzano’s (1996) Affective Events Theory is momentary events, which cause concurrent positive or negative affective reactions. For instance, the discrete event of encountering a malfunctioning photocopier at 9:50 this morning while rushing to prepare for a 10:00 lecture may cause one to feel frustration or anger for a short while. AET suggests that stable work environment features predispose the occurrence of different types of events. For instance, an understaffed workplace may more frequently result in minor stressful events. Individual differences in trait affectivity also are hypothesised to influence momentary affect, with those high in dispositional positive affectivity being especially responsive to potentially pleasing events in the work environment, and the reverse for those high in dispositional negative affectivity (Bolger & Schilling 1991; Larsen & Ketelaar 1991). Momentary affect may influence momentary behaviour in real time. For instance, one may snap at a secretary while frustrated about the photocopier. Weiss and Cropanzano (1996) refer to such actions as ‘affect-driven behaviours.’ Over time, a series of momentary affective experiences may cumulate to influence job attitudes. Finally, AET suggests that some behaviours are ‘judgment-driven’ by attitudes rather than being directly influenced by current affect.

3. Methodology

Nearly all prior research on affect in organisations has utilised one-time retrospective measures of mood at work over the past week or month. This is not desirable, as there is evidence of considerable bias in reporting affective phenomena after the fact (c.f. Barrett 1997; Cutler, Larsen, & Bunce 1996; Diener,
Smith, & Fujita 1995; Hedges, Jandorf, & Stone 1985; Parkinson, Briner, Reynolds, & Totterdell 1995, Thomas & Diener 1990). Further, one-time retrospective measurement does not allow for the investigation of within-person relationships between momentary affect and equally momentary causes or consequences. The research effort reported here is one of very few to collect momentary affect data from employees repeatedly in real time.

A single data collection effort was designed to provide information for tests of three distinct sets of hypotheses about real time affect while working. The centre-piece of the data collection effort was a two week experience sampling period during which respondents wore programmed alarm watches and were signalled to report their immediate positive and negative affective reactions at random intervals five times each day. (See Alliger & Williams 1993; Larson & Csikszentmihalyi 1983 for more on experience sampling methodology.) The average number of responses received per person was 37. For some analyses, these reports were averaged within-person to produce summary affect scores for use in between person analyses. In other cases, separate signal-level responses were utilised for within-person analyses. One hundred and twenty employees from 65 organisations and many job categories participated in the study. Longer surveys assessing work environment features, attitudes, intentions, and self-rated behaviour were administered before and after the experience sampling period. More information about the sample, procedures, and measures can be found in Fisher (2000a). The next sections of this paper summarise the hypotheses, results, and implications for the three sets of research questions.

4. Real Time Affect and Job Satisfaction

The first set of research questions involved the relationship between aggregated real time affect and standard measures of overall job satisfaction (Fisher 2000a). As an attitude, job satisfaction should contain both cognitive and affective components, though we often describe job satisfaction as ‘an affective response to one’s job’. Thus, one hypothesis was that measures of average momentary mood, positive affective reactions while working, and negative affective reactions while working, would be related to standard measures of overall job satisfaction such as the Job In General Scale (Ironson, Smith, Brannick, Gibson & Paul 1989) and the Facet-Free Job Satisfaction Scale (Quinn & Staines 1979). This hypothesis was supported, with correlations between average affect and job satisfaction between |0.22 and 0.34|. A one item faces measure (Kunin 1955) of overall satisfaction was found to capture greater affective variance (r’s |0.45 to 0.54|). These findings indicate that job satisfaction and momentary affect while working are related but are not identical, and that standard verbal measures of overall satisfaction are not particularly good at capturing the affective experience of work (see also Brief and Roberson 1989). Researchers wishing to capture both affect at work and cognitions about work should consider using faces measures or supplementing standard satisfaction scales with separate scales designed to assess affect (Weiss 2002).

A second hypothesis suggested that real time affect would contribute to the variance in overall job satisfaction above and beyond the contribution of facet satisfactions. A combination of facet satisfactions generally accounts for only about 50% of the variance in overall job satisfaction (Ferratt 1981; Highhouse & Becker
leading scholars to question whether all the important pieces of job satisfaction have been identified (Scarpello & Campbell 1983). In the current study, affect accounted for incremental variance in overall satisfaction beyond five facet satisfactions. Facet measures appear to be particularly cognitive/evaluative (average correlations with affect of only .18), and affect appears to be part of the extra meaning respondents are including in their overall judgments of satisfaction.

A final hypothesis was drawn from the well-being literature (Diener, Sandvik, & Pavot 1991). It proposed that the percent of time that momentary positive affect was stronger than negative affect would be a better predictor of job satisfaction than would the average intensity of positive affect when it was experienced. In other words, it is more satisfying to be at least a little happy most of the time than to be intensely happy from time to time. This hypothesis was supported. Although causality has yet to be demonstrated, a possible implication of this finding is that employers should concentrate on providing a work environment free of the minor ‘hassles’ which tip the balance toward frequent, if mild, negative affect (Kanner, Coyne, Schaefer, & Lazarus 1981). They might also build in small frequent positive reinforcements or ‘uplifts,’ perhaps through job design and informal reward systems, rather than relying on possibly more intense but less frequent positive feelings created by formal rewards or promotions, in order to enhance satisfaction.

5. A Cross-Sectional Test of Affective Events Theory

The second set of research questions involved tests of some links in Affective Events Theory (Fisher 1998; 1999, 2002). In this study, the work environment feature of enriched job characteristics was hypothesised to predict average positive affective reactions at work, while role conflict was hypothesised to predict average negative affective reactions. The rationale was that enriched jobs should present more opportunities for discrete pleasant events to occur (such as receipt of positive feedback, successful completion of an important task, etc.), while role conflict should produce primarily unpleasant events (specific incidents of encountering incompatible demands). The idea that positive and negative affective experiences have different antecedents is reminiscent of Herzberg, Mausner, and Snyderman’s Two Factor Theory (1959). However, studies of the effect of daily events on mood also find that different classes of events impact positive mood than impact negative mood (Clark & Watson 1988; Kanner et al. 1981). Further, recent studies in the well-being literature support a ‘two-domain’ theory of well-being, with positive and negative affect having different and largely non-overlapping predictors (c.f. Gannon, Vaux, Rhodes, & Luchetta 1992; Stallings, Dunham, Gatz, Baker & Bengtson 1997).

Positive and negative affective dispositions were also hypothesised to predict positive and negative affective experiences, respectively. Further, the impact of affective disposition on job satisfaction (c.f. Staw, Bell, & Clausen 1986; Watson & Slack 1993) was hypothesised to be mediated through real time affective reactions. Consistent with AET, the effects of work environment features on job satisfaction were predicted to be both direct (presumably via cognitive evaluations of the desirability of the feature) as well as indirect via affective reactions. Both
positive and negative affective reactions were expected to predict job satisfaction, while only positive affective reactions were expected to predict affective organisational commitment.

Finally, AET suggests that some outcomes are ‘affect-driven’ while others are ‘judgment-driven.’ In the present study, helping behaviour was expected to be predicted by positive affective reactions rather than by attitudes, as individuals may choose to help those around them spontaneously when in a positive affective state (Carlson, Charlin, & Miller 1988; George & Brief 1992; Isen & Baron 1991). In contrast, quitting a job is often portrayed as a carefully considered multi-step decision culminating in an intention to quit (Hom, Caranikas-Walker, Prussia & Griffeth 1992; Mobley 1977), so it was expected to be judgment-driven by attitudes rather than real time affect.

The hypothesised model fits the data as well as or better than less parsimonious alternative models. Figure 1 displays the path coefficients for the final model. (A link between role conflict and intention to leave was not hypothesised but was added to improve fit.) All paths were significant at \( p < 0.01 \) except for those marked non-significant in the Figure. Most of the hypotheses were supported, thus providing support for AET (see Fisher 2002, for more detail). One finding contrary to the hypotheses was the non-significant paths between average affect and job satisfaction, though the zero order correlations were significant and about 0.30.

### 6. Performance-Affect Relationships in Real Time

The final set of research questions sought to understand within-person variation in affective reactions over time. A considerable proportion (47% to 78%) of the total variation in affect measures was within-person, demonstrating that individuals fluctuate considerably over time in how they feel while working. One hypothesised predictor of momentary affect was self-perceived momentary performance. (For a description and tests of other predictors, see Fisher & Noble 2000a). Perceived task performance also varies within-person, and would seem to be a salient class of ‘event’ for most employees. Control theory, social cognitive theory, and goal setting theory all suggest that perceived performance is causally related to affect (Bandura 1986; Carver & Scheier 1990; Hsee & Abelson 1991; Locke & Latham 1990). The fundamental concept in these models is that individuals monitor their performance against goals or standards. The perception that performance is below the standard produces negative affect, while the perception that one is on track to meet a goal produces positive affect.

A second explanation for the expected relationship between momentary affect and performance comes from the mood literature, which shows that induced positive mood can facilitate performance on some kinds of tasks (c.f. Ashby, Isen & Turken 1999; Isen 1999). Whatever the causal mechanism, measures of momentary mood, positive and negative affect, and momentary task satisfaction were expected to be correlated with momentary performance within-person. Analyses using Hierarchical Linear Modeling (Bryk & Raudenbush 1992) provided strong support for these predictions, with average within-person correlations between various measures of affect and performance ranging from \( |0.43| \) to \( |0.057| \).
Figure 1
Final Structural Model Testing Propositions Derived from Affective Events Theory

Note: $\chi^2 = 33.13$, df 24, $p < 0.11$
GFI 0.95
IFI 0.97
RMSEA 0.06
Most individuals felt more positive and experienced more task satisfaction than usual, for them, when performing better than usual, for them. There was also significant between-person variation in the strength of the within-person correlations. For instance, within-person correlations between task satisfaction and performance averaged 0.57 but ranged from –0.30 to 0.89. It was hypothesised that growth need strength, job involvement, dimensions of enriched job characteristics (e.g., autonomy, task significance, etc.) and overall enriched job characteristics would moderate the strength of the within-person correlations between affect and performance. These hypotheses received some support, with the moderating effects of enriched job characteristics being the most consistent. Individuals working on more enriched jobs were more affectively reactive to their performance (Fisher & Noble 2000a).

The fact that most individuals experience a fairly strong relationship between performance and affect at the momentary level suggests a possible explanation for a long-standing mystery in organisational behaviour: why so many people believe that ‘a happy worker is a productive worker.’ While researchers know that the relationship between job performance and job satisfaction is weak at the between persons level (Iaffaldano & Muchinsky 1985; Judge, Thoresen, Bono, & Patton 2001), everyone else seems to assume that a strong relationship exists. Perhaps this is because individuals experience a strong relationship between their own feelings of task satisfaction and performance from moment to moment and mistakenly generalise this within-person relationship to the between persons level (Fisher & Noble 2000b). In this study, the average within person correlation between momentary task satisfaction and momentary job performance was 0.57, while the between person correlation between overall job satisfaction and overall job performance for the same people was 0.10.

7. Conclusions
Organisational behaviour researchers have recently become aware of the fact that employees have feelings as well as attitudes. The first set of research questions described above documented that affect while working is only moderately related to standard measures of job satisfaction. Affect while working varies substantially within-person over time, though average affect also varies significantly between persons. A picture of the role of real time affect at work is starting to emerge. Consistent with the predictions of AET, average affect while working is predicted by affective disposition and work environment features. Average affect while working is not as strong a predictor of job satisfaction as might have been expected. However, positive affect while working does appear to be important in predicting affective commitment and spontaneous helping behaviour (see also Basch & Fisher 2001).

Generalising from between to within-person levels is often inappropriate (Jaccard & Dittus 1990). The processes that occur at each level may be quite different, as in the case of relationships between satisfaction and performance. To understand affective and motivational processes that occur at the momentary level, within-person data collection and analyses are necessary (Fisher 2000b). Such studies are extremely rare in organisational behaviour, though the work reported above is a start in this direction. The present research found that perceived
momentary performance is a strong correlate of concurrent affect. Further work at this level may shed light on how affect, task environments and characteristics, motivation, and performance, influence each other in real time. Most of our theories of motivation are quite distal. Research of the type described above may open the door to more proximal theories of motivation, as individuals make decisions to persist, increase or decrease effort, or abandon tasks in real time. It is likely that the affective consequences of task engagement will be a major determinant of such choices.

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References


