The Importance of Time Congruity In The Organisation

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In 1991 Kaufman, Lane and Lindquist proposed that time congruity in terms of an individual's time preferences and the time use methods of an organisation would lead to satisfactory performance and enhancement of quality of work and general life. The research reported here presents a study which uses commensurate person and job measures of time personality in an organisational setting to assess the effects of time congruity on one aspect of work life, job-related affective well-being. Results show that time personality and time congruity were found to have direct effects on well-being and the influence of time congruity was found to be mediated through time personality, thus contributing to the person-job (P-J) fit literature which suggests that direct effects are often more important than indirect effects. The study also provides some practical examples of ways to address some of the previously cited methodological issues in P-J fit research.

Introduction

Person – Job fit

The notion of an interplay between a person and the environment is the basis of interactionism which underlies much of the past research in work motivation (Hackman & Oldham,1980; Lee, Locke & Latham,1989), job satisfaction (Dawis & Lofquist,1984), job stress (French, Caplan & Harrison,1982) and vocational choice (Holland,1985). The central tenet of much of this work, known as P-E (person-environment) fit theory, is that a 'fit' or 'match' between the person and the situation will produce positive outcomes, whereas a 'mis-match' will produce negative outcomes. Many aspects of fit have been considered ranging from whether the person's ability or personality suits the environmental demands to whether the person's desires/needs are met by the environmental supplies (Edwards,1991). Similarly, the effects of fit on a number of outcomes have been considered; evidence for P-J fit effects have been shown across widely different occupations (Harrison,1978), different age groups (Kahana, Liang & Felton,1980) and in different countries (Tannenbaum & Kuleck,1978). In general, Edwards (1991) concludes (a) fit (as represented by desires/supplies) has been shown to be positively related to job satisfaction, (b) the results with performance have been equivocal, (c) negative relationships have been shown to exist with absenteesism, turnover and resentment and (d) positive relationships have been shown to exist with job involvement, commitment, trust and well-being. This paper is concerned directly with the relationships between fit and job satisfaction and well-being (and through these indirectly with turnover). It presents an empirical study of an organisation where the

introduction of new technology had altered the 'environmental demands' side of the P-J fit equation.

Organisational Context of the Study

The company, a major warehouse distribution company, had introduced a new technological system of allocating workloads amongst parcel delivery drivers to all of its depots over a 5 year period from 1990. Since the system had been introduced turnover amongst drivers had notably increased from 25% in 1993 to 33% in 1994. The old system allowed drivers to plan their own routes and workload for the day. They worked on a 'job and finish' basis i.e. drivers selected which parcels to deliver, loaded them onto their van, delivered the parcels and then finished for the day, irrespective of actual clock time. In the latter years of this system the company was receiving an increasing number of customer complaints related to poor service, particularly that of customers being kept waiting for several days for a parcel to be delivered. As drivers were able to decide which parcels to deliver each day they would choose to deliver only those parcels which were in a similar area. This could, in effect, mean a parcel might lay waiting in the stack for several days until another one for the same area turned up. Under the new system the parcel delivery manager (aided by the new technology) planned the driver's day and route thus ensuring all parcels were turned around reasonably quickly and customers therefore not kept waiting for parcels. For the driver this meant (a) the overall time spent delivering the same number of parcels was increased, (b) the driver had less control over the planning and scheduling of

his working day and (c) the driver clocked in and out and thus worked and was paid for his contractual hours in a day plus any overtime he accrued.

Whilst the actual effects of the introduction of this new system at the organisational level were not objectively assessed, subjective perceptions about the effects were suggested by the Divisional Training Manager as (1) an increase in turnover of drivers; (2) a reduction in general morale and job satisfaction amongst those drivers who had worked on both systems; (3) new recruits who stayed beyond the induction period appeared to have a different attitude towards time to either those who left before completing induction or drivers who left previously and (4) new recruits with this different attitude towards time appeared to be more satisfied with their job than longer tenured employees who had worked on both systems. The organisation was interested to know the extent to which a mis-fit between drivers' time-related attitudes and behaviours (Time Personality) and the time characteristics of the job (Job Time Characteristics) could account for the perceived resistance to the new technology.

Resistance to new technology

It has been noted that investments in new technology-based work systems can be costly in both financial and human terms (Martinko, Henry & Zmud,1996). Whilst these impacts can relate to the organisation, work groups, or individuals it is the individual level of analysis which has been most widely studied and many new technology driven systems have been known to fail because of 'individual resistance'. Numerous studies have identified effects of

this resistance typically as apprehension, anxiety, stress, dissatisfaction and fear (e.g. Meyer & Goes,1988; Yaverbaum,1988). The extent to which such negative individual effects ultimately lead to decisions to leave an organisation and hence effect turnover is an interesting question. 'Turnover' research at present utilises two different methodologies: (a) traditional - where turnover is seen as a binary outcome variable that defines an employee as either a 'stayer' or 'leaver' and (b) survival - where the conditional probability of leaving is estimated and turnover behaviour is modelled in terms of the risk of leaving based on how long a person has been attached to the organisation (Somers & Birnbaum,1999).   Interestingly, whilst studies utilising the traditional methodology have shown job withdrawal intentions as most predictive of turnover (Tett & Meyer,1993), survival methodologies show job satisfaction, age and tenure as most predictive (Darden,Hampton & Boatright,1987; Somers,1996; Dickter,Roznowski & Harrison,1996). These survival studies provide evidence that work attitudes such as job satisfaction directly effect turnover.

Recent research by Pelled and Xin (1999, p.886) emphasises the importance of consideration of emotions in turnover research "Unpleasant emotional states experienced in a given situation encourage escape from that situation, while pleasurable emotional states discourage such escape". They provide evidence that mood also predicts turnover (where mood is defined as the experience of negative and positive emotions e.g.distressed, fearful, nervous, anxious, enthusiastic, active and alert e.g. Watson, Clark & Tellegen,1985; Warr, 1990). George and Jones (1996) suggests both job satisfaction and

mood should be considered in turnover studies because mood gauges affect at work and job satisfaction gauges affect about or toward work .

The notion that such resistance may arise from a mis-match between 'what the new technology requires of the individual' and 'what the individual can give' is supported by Markus (1983,p.431) who suggests it may arise from a variety of sources; as a result of specific attributes of the person (e.g. certain personality characteristics or cognitive orientations), the situation (specific design features of the system) or '…the situation-dependent interaction between characteristics related to the people and characteristics related to the system…'. Whilst this study is concerned with 'time' it must be acknowledged that there may be other mis-matches which may well also have contributed to the resistance (e.g. cognitive ability, need for affiliation, power, achievement). For example, job satisfaction has been shown to be dependent on value congruence (Chatman,1989); goal congruence (Pervin,1989), needs congruence (Dawis & Lofquist,1984) and personality/culture congruence (Assouline,1987). There may also be specific personal characteristics which have a direct relationship with resistance (e.g. age and tenure). Under the new survival methodologies, these have been found to be negatively associated with turnover (i.e. employees who are older and have longer tenure are less likely to leave) (Darden, Hampton & Boatright,1987). Conceivably, however this relationship may well be reversed where new technology is introduced and perceived as 'more demanding' by those of greater age and tenure. Given that (a) there is a methodological and statistical limitation to the number of predictors which can be explored in any

one study and (b) that an objective of this study was to contribute to a wider research program exploring the role of Time Personality in occupational life, it was deemed appropriate to confine the predictors in this study to Time Personality, time congruity, age and tenure whilst acknowledging that any of the other 'causes of resistance' identified above may well have a role to play.

Time congruity

The notion of the importance of 'fit' specifically in relation to time has been referred to by a number of authors (e.g. Bluedorn, Kaufman & Lane (1992), Schriber & Gutek (1987), Kaufman, Lane & Lindquist (1991), Macan (1994), McGrath & Rotchford (1983), Vinton (1992) and Woodilla (1993)). Much work has suggested the importance of matching employees' and organisations' perceptions of the use of time (e.g. Das,1986; English,1989; Jacques,1982; Matejka, Dunsing & Beck,1988; Kaufman et al.,1991; McGrath & Rotchford,1983; Schriber & Gutek,1987). Kaufman et al. (1991,p.80) sums this up in her notion of time congruity claiming:

> 'individuals and organisations have styles of time use which can be identified; these styles combine to form overall time personalities which govern responses to different time-related situations. That is, individuals have time personalities, organisations have time personalities, and the relationship between the two is important for productivity and individual well-being.'

The literature to-date (as mentioned above e.g. Kaufman et.al. (1991)) has proposed that time congruity might have a direct effect on job satisfaction, psychological health, performance, absenteeism, intention to leave and

accident rate. More specifically, these proposals suggest that rather than a time-related construct per se being a good predictor of performance (i.e. all those high on the construct will be good performers) the relationship will be dependent on the job. Different jobs will have different requirements in terms of time, and it is the degree of match between the person and the job which will predict the outcomes. For example, one might imagine there to be a good match (high time congruity) between a person who is normally very punctual and the job of a train driver, the person's personality enables them to meet the demands of the job. The effects on satisfaction, health, absenteeism and intention to leave are thought to be explained by the generalised 'congruence' hypothesis (that match = satisfaction, good health, low absenteeism and low intention to leave).

Woodilla (1993), in a consideration of Person-Organisation time fit, considers the effects of incongruence will only be manifest if the individual evaluates the mis-match to be of importance.   In a similar way it is here suggested that the effects of incongruence in particular time-related constructs will be dependent on the relative importance of that construct for job performance. Typically, future planning orientation might be a good predictor of success as a fashion buyer but not as a production line worker and hence a mis-match in orientation in a production line worker is unlikely to show an effect. Similarly, task synchronisation may be a good predictor of performance for a shop foreman but not an artist, future planning might be important for a manager not a shop-floor worker, doing more than one thing at a time (polychronicity) might be important for an office worker but not a

priest and punctuality might predict performance for a hairdresser but not a post-graduate student!   With respect to accident rate it would presumably be a match in pace which would be of importance. Thus, it may well be that congruence in only certain time-related constructs will be important for performance. Recent work in the area of personality accepts that where there is more than one construct being considered then it is also important to acknowledge the interactions that may occur between constructs (Robertson & Callinan,1998).   This is achieved through a consideration of the personality profile as a whole. Thus, whilst it may well be that congruence in only certain time-related constructs will be important this is best measured by consideration of profiles rather than separate constructs.

At the organisational level time congruity, through increased individual performance, might have a direct and positive effect on productivity. Mismatches between people in terms of time congruity may also result in increased conflict and decreased co-operation (e.g. meeting deadlines in team-work).

These proposed effects may well have implications for the functions of selection, training, motivation and career development at the individual level, and mergers and acquisitions at the organisational level.   In selection, fitting the person to the job might include a consideration of time-related personality characteristics. Indeed, according to Schneider's ASA framework (1987 p.444) 'the people make the place'; people are attracted (A) to, selected (S) by and if they don't fit leave (Atttrition) an organisation which has the same

personality profile as they do and which they believe will be most instrumental in obtaining their valued outcomes (Tom,1971 and Vroom, 1966 cited in Schneider,1987). Training might need to find alternative ways for people to cope with time-related problems where this fit is not perfect. Motivation might need to consider individual differences in pace and indeed perception of pace (typically filling one person's in-tray full of papers might be a motivator, to another person it might spell disaster and adding a few pages at a time would be a better strategy). Career development and mergers and acquisitions might need to take account of time orientation.

Whilst there has been much writing at the theoretical level relatively few empirical studies have actually been carried out. Elbing, Gadon and Gordon (1977, cited in Kaufman,1991) provided evidence in support of the beneficial effects of time congruity between the individual and his/her work in terms of being able to work at times to suit themselves (i.e. the use of flexi-time). Findings showed an increase in organisational productivity resulting from reduced sick leave, absenteeism and turnover, and increased personal satisfaction for individuals.

P-J fit research limitations

One possible reason for the lack of empirical work maybe the acknowledged difficulties inherent in carrying out P-J fit research. Typically, there has been much debate over the use of Profile Similarity Indices (PSIs) for measuring congruence (Edwards & Cooper,1990; Edwards, 1991; Edwards, 1993; Edwards, 1994a; Edwards, 1994b). Tisak and Smith (1994) however, argue

that whilst they acknowledge there are several problems relating to difference scores and PSIs the problems are not sufficient just to abandon difference and PSI scores altogether, but that each of the problems should be considered in the context of the study being carried out.

This study explores the effects of time congruity on well-being using a PSI but takes into account three of the recommendations made by Edwards (1991) : (1) that commensurate person and job measures should be used; (2) that person and job should be measured independently and not in just one item; (separate but commensurate person and job measures are used :Time Personality Indicator and Job Time Characteristics measure) and (3) that direct effects of person and job are explored as well as fit effects (direct effects of person are examined).

The preceeding discussion has outlined the rationale for the measurement of job-related affective well-being as effects of mis-match. In 1990 Warr proposed a model of job-related well-being comprised of three axes : (1) pleased-displeased (job satisfaction JS); (2) anxious-contented (AC) and (3) enthusiastic-depressed (DE). This study combines measures of these three axes to form a single aggregate measure named job-related affective well-being (JAWB).

Whilst Time Personality has been eluded to theoretically in previous research (see Kaufman et al. (1991,p.80)) and there has been much empirical research on some specific aspects of it (e.g. type A behaviour (e.g. Edwards, Baglioni

& Cooper, 1990), polychronicity (e.g. Bluedorn, Kaufman & Lane,1992), there appears to be little in terms of empirical work synthesising this previous work into a broader framework of personality. In 1999 the authors presented a five-factor model of Time Personality (Francis-Smythe and Robertson,1999a) based on an analysis and synthesis of existing measures of individual attitudes/approaches to time, a small scale qualitative study and a large scale quantitative study. The five factors, each measured through separate sub-scales are labelled Leisure Time Awareness, Punctuality , Planning , Polychronicity and Impatience. The latter four sub-scales are job-related and it is from these scales that the commensurate Job Time Characteristics measure is developed to assess the Time Personality of the job.

Fit is measured as an index of similarity (PSI) between the *profile* of the Time Personality of the person (from the 4 sub-scale measures of punctuality, planning, polychronicity and impatience) and the job *profile*. It is therefore a single fit measure, not simply of the differences between the individual and the job on four separate measures , but of the two profiles as a whole. This fine level of analysis would be lost if the aggregate measures were considered alone. Similarly, whilst we are interested in the relative importance of each of the five factors in predicting well-being, given this is the first exploratory study in this area, it is Time Personality as a whole that is our focus. We therefore do not present hypotheses for each of the five factors separately but simply refer to Time Personality. The analyses allow us to compare the relative contributions of each of the factors which we then offer comment on in the Discussion.

Research hypotheses

The following hypotheses and models based on analytical models proposed by

Edwards (1991) were tested. The first two models (Model 1 and Model 2,

Figure 1) giving rise to hypotheses 1 and 2 are direct effects models where the

direct effects of both Time Personality and fit on outcome measures is

assessed.

Hypothesis 1

Time Personality will predict job-related affective well-being

 (Model 1 in Figure 1).

Hypothesis 2

Time congruity (fit) will predict job-related affective well-being

(Model 2 in Figure 1).

Hypothesis 1 proposes that those with higher scores on Time Personality will

experience greater job-related affective well-being. The rationale being that,

in general, the world of work requires people to be punctual, meet deadlines

and generally do more in less time and those who meet workplace demands

are most likely to be more satisfied and experience less strain. Hypothesis 2

proposes that those people whose Time Personality matches the time

characteristics of their job will experience greater affective well-being than

those who are not well-matched; not all jobs are equal in terms of time-related

characteristics and it is the match that is important not Time Personality per se.

The third model is an additive model where consideration is given to the effects of Time Personality on outcome being mediated by fit (i.e. the mediator, fit, is the explanatory variable and Time Personality only effects outcome through fit). Fit is the mechanism ("mediators speak to how or why such effects occur", Baron & Kenny, 1986, p.1176).

Hypothesis 3

In the prediction of job-related affective well-being, the effect of Time Personality is expected to be mediated through fit (Model 3 in Figure 1).

The fourth and final model is an interactive model where the effects of Time Personality on the relationship between fit and outcomes is assessed i.e. where Time Personality is considered as a moderator. This acknowledges that the hypothesised relationship between fit and well-being may not be universally true but may be dependent on Time Personality.

Hypothesis 4

Time personality will moderate the relationships between fit and job-related affective well-being (Model 4 in Figure 1).

In a study of workplace stress Moyle (1995) showed the pathways above to operate simultaneously. This study therefore adopts the same analytical

model in setting out to determine not only in quantitative terms, the

contribution of Time Personality and fit to the prediction of job related

affective well-being, but also the potential roles they might play.

Method

Procedure

Anonymous questionnaires and a covering letter were sent to 780 drivers

across 34 depots. Two hundred and seventy seven drivers completed

questionnaires giving an overall response rate of 36%. Response rate varied

across locations from a minimum of 0% to a maximum of 83%; only one

depot produced the zero response. A response rate of 36% is a little low if one

considers the view expressed by Moyle (1995) that their response rates of

70%, 45% and 57% were comparable to those reported by other researchers

working in applied settings (e.g. McClaney and Hurrell,1988 and Spector,

1987 cited in Moyle, 1995). However, the nature/setting of the participant's

work may well affect the response rate. Typically, in Moyle's study all

participants were office workers. This means it is highly likely they would

have had the opportunity to complete the measures during work time and at

their normal place of work, the same would apply to any professional

workers. For the participants in this study completion would need to take

place either in the driving cab or at home and hence it is suggested this is

likely to have lowered response rates. 63% of the responding sample was

known to be male, 51% to be less than 35 years and 45% to be over 35 years.

The mean tenure was 77 months with a standard deviation of 55 months,

minimum 6 months and maximum 258 months. 20% of the sample had tenure

<24 months, 50% < than 65 months, and 75% < than 108 months.

Measures

Job satisfaction The 16 item scale of Warr, Cook & Wall (1979) was used to measure intrinsic, extrinsic and total job satisfaction. α coefficients were reported by Warr et al. (1979) to range from 0.79 to 0.85 on the intrinsic scale and 0.74 to 0.78 on the extrinsic, coefficients in this study were 0.82 and 0.74 respectively.

Affective well-being The 12 word instrument of Warr (1990) was used to measure 2 scales of affective well-being: anxiety-contentment and depression-enthusiasm. α coefficients reported by Warr (1990) were 0.86 for depression-enthusiasm and ranged from 0.88 to 0.89 for anxiety-contentment, coefficients in this study were 0.83 and 0.82 respectively.

Job-related Affective well-being(JAWB) Scores of intrinsic and extrinsic job satisfaction, anxiety-contentment and depressive-enthusiasm were combined (equal weights) to give the aggregate JAWB score. Inter-correlations between each of these variables ranged from +0.57 to +0.80 and correlations of the variables with the aggregate measure ranged from +0.84 to +0.88, (Table 1).

Time Personality Indicator (TPI) The 43 item 5-point scale (Francis-Smythe & Robertson, 1999a) was used to measure an individual's Time Personality. The five scales were:Time Awareness (relates to actual time and how time is spent

- high score = very aware, $\alpha = 0.77$), Punctuality (attitude to 'being on time' -

high score = very punctual, $\alpha = 0.71$), Planning (attitude towards planning and

sequencing of tasks in advance - high score = forward planner, $\alpha = 0.70$),

Polychronicity (preference for doing more than one thing at a time -high score

= highly polychronic, $\alpha = 0.63$) and Impatience (a tendency to want to

complete a task quickly - high score =very impatient, $\alpha = 0.65$). Social

desirability responding was assessed in the original development of the TPI

(see Francis-Smythe and Robertson (1999a)). In this it was shown that only

the student sub-set of the original sample involving 8 different occupational

groups (technical, professional, managerial, supervisory, manual, clerical,

sales and students) showed any evidence of social desirability responding and

consequently the social desirability items were then dropped from the scale.

The mode of delivery and collection of the questionnaires, and the procedure

for preservation of anonymity means that it is highly unlikely that participants

in this study felt obliged to answer in any particular way.

Job Time Characteristics Measure (JTC)

One of the criticisms of previous P-J fit research has been that fit between 'person' and 'job' have been measured in the same questionnaire in just one item, thus respondents are simply asked to rate how they perceive they 'fit'. The approach used here was a modification of approaches by Algera (1983) and Ostroff (1993). Ratings of the job were obtained from a number of people in the same job position (these respondents were not involved any further in the study) and an average score computed to give the 'job' measure which was then used in the fit computations.

The TPI served as the basis for the development of the Job Time Characteristics measure. Each item in the TPI was re-worded from an individual preference or behaviour to a job characteristic for example: 'At work, I prefer to have to work quickly' was changed to: 'To do your job to what extent do you actually need to work quickly ?'. Item responses were on a 5 point Likert scale (Very Little through to Very Much). The wording of the Job Time Characteristics measure as 'The job requires…' is more objective than the self-report TPI measure worded as 'I prefer…' because whilst it does still require a rater's subjective perception of what is needed in the job it allows acknowledgement of the fact that this may not be the same as an individual worker prefers or is capable of. The JTC ratings were given anonymously by people in the job but not involved in the self-report part of the study. It is deemed objective only to a similar extent as defined by the other researchers in this area (Frese,1985; Gupta & Beehr,1982,

Spector,1988) and is simply presented as a reasonable (albeit not perfect) way of addressing the complex issue of objective job measures. Scale development and validation involved the generation of Job Time Characteristics profiles for 3 jobs: parcel delivery manager, driver and lecturer. The profile for each job comprised the group mean response on each of the job-related four TPI scales (Punctuality, Planning, Polychronicity, Impatience) scale.

Demonstration of the acceptability of the group mean of each scale as an appropriate representative measure for the group was shown through (a) the variability of scores between individuals within scales being acceptably small and (b) the overall profiles between individuals within the same job being reasonably similar. The latter was demonstrated by showing rank ordering of scales within an individual's profile as relatively consistent between members of the same job type, through (a) deriving a profile for each job incumbent; (b) computing the Pearson correlation coefficient between each incumbent; (c) calculating the average value of these coefficients. The correlation between profiles of 0.75 for drivers was deemed as very acceptable showing there is good consistency between drivers in their perceptions of the relative importance of each of the four time-related constructs in their job.

To demonstrate the measure's ability to discriminate between different jobs a validation study was carried out using responses from parcel delivery managers of the organisation involved in the fit study (n=22), parcel delivery drivers from the same organisation (not involved in fit study) (n=51) and

lecturers from a local University (n=34). These jobs were chosen as it was expected they would result in different job time profiles. In a multivariate analysis of variance Job Time Characteristics differed significantly across jobs (F=17.20,dF=8,204, p<0.001). An analysis of sub-group means showed drivers to be highest on Punctuality and lowest on Planning and Polychronicity whereas lecturers were lowest on Punctuality and highest on Planning and Polychronicity.

Time Congruity (fit) measure

The driver's Job Time Characteristic Profile was used in the calculation of fit. r_p , the coefficient of similarity, a PSI originally developed by Cattell, Eber and Tatsuoka (1970) was calculated for each of the 277 drivers who had completed TPIs. The mean sten profile of the Job Time Characteristics Measure for a driver's job was used as the group profile matched against each individual driver's (N=277) TPI sten profile for the four sub-scales using the equation given by Cattell et al. (1970, p.141). Values of r_p ranged from -0.57 to +0.98. The mean r_p was 0.13 with a standard deviation of 0.34, the distribution was approximately normally distributed showing a good range of fit between driver and job across the sample.

Analysis and Results

Table 1 shows the descriptive statistics, scale maxima, alphas and inter-correlations for each of the variables in the study.

Regression Analyses: Prediction of job-related affective well-being scores

The four hypotheses presented earlier were tested using regression analyses.

1.   *Time Personality will predict job-related affective well-being (Model 1*

in Figure 1).

To test Model 1 a simple multiple regression model was set up with job-related affective well-being as the dependent variable, and the sub-scales of Time Personality (Leisure Time Awareness, Punctuality, Planning, Polychronicity and Impatience) as the independent variables. Independent variables were forced to enter the regression equation; those making a significant contribution were as marked in Table 2 which displays standardised regression coefficients (betas).

Hypothesis 1 was supported: Punctuality, Planning and Polychronicity significantly predicted approximately 35% of the variance in job-related affective well-being.

2.   *Time congruity (fit) will predict job-related affective well-being (Model*

2 in Figure 1).

To test Model 2 a simple multiple regression model was set up with job-related affective well-being as the dependent variable and r_p as the

independent variable. The independent variable was forced to enter the

regression equation; significant contributions were as marked in Table 2.

Hypothesis 2 was supported:fit significantly predicted approximately 9% of

the variance in job-related affective well-being.

3.   *In the prediction of job-related affective well-being, the effect of Time*

   Personality is expected to be mediated through fit (Model 3 in Figure 3).

To demonstrate mediation effects as per Baron and Kenny (1986) first it is

necessary to show that in independent analyses both Time Personality and fit

predict outcome (Models 1 and 2). The second stage then involves entering

both Time Personality and fit into the regression simultaneously. If Time

Personality becomes reduced in its explanatory power (no longer significant

or only partially) when both variables are entered together then fit is acting as

a mediator, i.e. the effects of Time Personality on outcomes is mediated by fit

(Model 3 Figure 1). These changes are assessed by both changes in

significance levels and reductions in the unstandardised regression

coefficients.

An assumption is made in Model 3 Figure 1 that Time Personality precedes fit

i.e. that Time Personality is a stable characteristic.   If consideration was to be

given to the notion that fit might actually have an effect on Time Personality

(i.e. that peoples' Time Personality changes as a result of their perceptions of

their fit to the job) then TP could act as a mediator. This would be

demonstrated by fit becoming reduced in its explanatory power (no longer

significant or partially) when both fit and TP were entered together.

Independent variables were forced to enter the regression equation;

significant contributions were as marked in Table 2.

The predictive power of Time Personality is very slightly reduced as the sub-

scale Planning becomes not significant. Punctuality and Polychronicity

remain very predictive. However, the predictive power of fit is greatly

reduced from Model 2 to Model 3 suggesting, if the assumption that TP

precedes fit is relaxed and account is taken of the fact that fit may effect TP

through socialisation effects on the job, then TP is acting as a mediator.

Re-considering the results in Table 2, then, to demonstrate TP as a mediator it

is necessary that both TP and fit affect outcome (Models 1 and 2) and that the

explanatory power of fit is reduced in size in Model 3 over that in Model 2 and

reduced to non-significance. These conditions are all met, and thus, it appears

that fit is affecting TP through socialisation effects, and TP is acting as a

mediator in the fit to outcome relationships.

4.   *Time personality will moderate the relationships between fit and job-*

related affective well-being (Model 4 in Figure 1).

The procedure used for testing moderation effects was again as given by

Baron and Kenny (1986). To test Model 4, a hierarchical multiple regression

model was set up with job-related affective well-being as the dependent

variable and Leisure Time Awareness, Punctuality, Planning, Polychronicity

and Impatience as the first block of independent variables, r_p as the second

block and the interaction terms Leisure Time Awareness x r_p, Punctuality x

r_p, Planning x r_p, Polychronicity x r_p and Impatience x r_p as the third block.

Independent variables were forced to enter the regression equation; those

making a significant contribution were as marked in Table 3.

The interaction terms, as a block, did not contribute significantly to the

prediction of job-related affective well-being. The only interaction term

making a small significant contribution was Leisure Time Awareness x Fit.

The only aspect of Time Personality which could be conceived as acting as a

moderator was Leisure Time Awareness.   Hypothesis 4 was therefore only

partially supported.

Age and tenure as predictors of job-related affective well-being

Whilst the study has focused on the importance and role of Time Personality

as a predictor, as outlined in the Introduction, it is important to also consider

its role relative to that of other hypothesised predictor variables such as age

and tenure. In this respect a hierarchical regression model exploring the

predictive power of each of the three sets of variables involved in the study

was set up (demographics - age,tenure, Time Personality and Fit). Age and

tenure were entered first so that any variance predicted by the time variables

would represent incremental variance. Time personality was shown to predict

approximately 8% variance compared with prediction of approximately 16% demographics and 0% fit and interactions.

The sample was split into five groups by tenure ((0-24mths, 25-59 mths, 60-94mths, 95-122mths, 123-300mths). There was a significant difference in well-being between groups (F=5.4,dF=2,258,p<0.001), longer tenure employees showing less well-being. There were no significant differences in any of the Time Personality constructs although there was a trend towards higher TPI scores for lower tenures in each case. Whilst the effect was not significant fit was noticeably better in the second tenure group than any others. Employees with tenure of 25-58 months had average fit scores of +0.20 compared to all other groups of between +0.12 and +0.14.

These results mean that the variance predictions discussed in the earlier analyses should be interpreted with some degree of caution in that the explained variance discussed may be also partially explained by other individual variables. It must be noted however that, even whilst controlling for these other variables, Time Personality did still have significant predictive power.

Discussion

The main objective of the study was to explore the role of Time Personality both as a direct effect and as an indirect effect through fit in the prediction of

job-related affective well-being of transport drivers at a warehouse distribution company.

In order to explore the role of Time Personality analysis proceeded in two stages: (1) consideration of Time Personality alone and (2) consideration of Time Personality alongside other possible explanatory variables.

In the first stage, regression analysis showed that Time Personality (as a direct effect, and specifically Punctuality, Planning and Polychronicity) predicted approximately 35% of the variance in job-related affective well-being. Although initially it appeared that the direct effects of fit also predicted the dependent variable, later analyses showed the effect of fit was mediated by Time Personality. There was no support for the role of fit as a mediator in the Time Personality to outcomes relationships.   Only the Leisure Time Awareness factor of Time Personality appeared to be acting as a moderator in the fit to job-related affective well-being relationship.

When consideration was given to age and tenure, it was found that Time Personality predicted an additional 8% incremental variance. The important point then is that Time Personality does still add significant incremental variance even after the effects of the demographic variables were accounted for (as suggested by Chen & Spector,1991).

These findings would therefore appear to endorse the views of Wall and Payne (1973) and Edwards (1991) who claim that in many instances the direct

effects of person or job are often more important than the notion of fit. Many studies in the P-J fit literature report the importance of fit simply because they have not explored the direct effects. This study has shown that when the two are considered simultaneously, Time Personality, as a direct effect, assumes far more importance in the prediction of job-related affective well-being than when it is considered as an indirect effect through fit.

Comment on Results

Of the five Time Personality sub-scales, Punctuality, Planning and Polychronicity were the best predictors of job-related affective well-being. It is likley that, being punctual, organised, meeting deadlines and being flexible enough to do more than one thing at a time all serve to enhance the quality of workplace interactions and relationships with colleagues,clients and line managers. Typically, when working on a project in a team these characteristics are likely to increase team productivity and reduce conflict, in a client situation they are likely to promote customer satisfaction (e.g. serving MacDonalds fast food) and for the line-manager they are likely to mean less management is required. Each of these situations generates satisfaction/contentment in others and it is suggested that it is this which then in turn helps to promote affective well-being in the individual. It would be interesting to explore this in relation to the recent findings with respect to 'emotional labour' where having to keep people happy (e.g. smile and say 'have a nice day') is found to be stressful. It is perhaps worth commenting at this point that The issue of why these specific factors and indeed why Time

Personality per se is associated with affective well-being in the workplace needs to be explored in future research.

It was originally hypothesised that fit would act as a mediator in the Time Personality to outcome relationships on the basis that fit would be the process through which the effects of Time Personality would become manifest. The regression results have however suggested the converse, that Time Personality is the process through which the effect of fit becomes manifest. Ostroff (1997) suggests that, in accordance with the Schneider ASA (1987) framework, people are attracted to organisations which have characteristics similar to their own, they select people who have the particular competencies and attributes that 'fit' the organisation and the degree of fit increases with increasing tenure as people who do not fit leave. An additional explanation could be that fit increases with tenure because some people who do not fit do *not* leave they *change* to better fit the organisation. The theory then becomes one of Attraction-Selection-Adaptation *not* Attrition. Evidence for this effect might be seen in the current study where fit is highest with employees in the 25-58 month tenure range (the second of five tenure ranges), this may indeed be evidence of this process of socialisation. Previous literature suggests longer tenure equates with greatest well-being. The fact that this was not supported in this study in that the newer employees had significantly greater well-being may be evidence of the hypothesised resistance effect to the new technology by longer serving employees.

Some comment should also be made with respect to the four issues related to the analysis of PSIs as highlighted by Edwards (1991, 1993, 1994a,1994b). Two issues which were not satisfactorily addressed in this study relate to the inability of PSIs to convey directional information in terms of the match or mis-match, and the fact that PSIs are also insensitive to the actual source of the differences which are represented in the index. The implications of these issues in the context of this study mean that typically an r_p of -0.80 might mean that a driver's profile was either significantly higher in absolute terms than the job profile or significantly lower. It may be that if Time Personality does have a direct effect, as has been shown, then it might be expected that the driver with an r_p of -0.80 and whose profile is significantly higher than the job will have greater well-being than the driver whose r_p is -0.80 but whose profile is significantly lower than the job. With respect to r_p being insensitive to the source of the difference (i.e. whether the driver and job profile differ greatly on say Planning or Punctuality), again one can envisage different effects. Given that the results have shown that Punctuality, Planning and Polychronicity were the three most important predictors of each of the outcomes, the question must be raised as to why one can expect an r_p of say -0.80 which reflects a large mis-match in either of these two key factors to have the same effect as an equivalent sized mis-match in one of the other two Time Personality factors. Had the study results shown that each of the factors had roughly equivalent predictive power then this would not have been such an issue. Future work needs therefore to explore ways of measuring fit which both preserves directional information and takes account of the source of the differences.

Limitations of Study

Some further limitations to the study need to be acknowledged. Firstly, the study is cross-sectional and not sufficient to imply causation. A longitudinal study is required to examine true cause and effect. The second limitation is that the study only involved one job and hence the job measure (Job Time Characteristics) was a constant. Had the Time Personality measure per se only included the four sub-scales as used in the fit index rather than the five as per the complete instrument, then a previously cited criticism that when the job is held constant, the fit and person measure are supplying the same information would have been valid. In this study the Time Personality measure provides information over and above that of the fit measure. In sampling only one job it is very possible that there might have been a range restriction effect in terms of fit; however, from an examination of the fit indices this did not appear to be the case. The very obvious limitation, however, is that it is not possible to generalise the results of this study to any other job. Additional to the issue of there being only one job, there is also only one organisation. Livingstone, Nelson and Barr (1997) suggest this may lead to range restriction in the measurement of the person component through self-selection into either the job or the organisation.

The study has contributed to the P-J fit literature in an attempt to counter some of the criticisms pertaining to P-J fit research methodologies by providing an example of (a) how commensurate measures can be derived and utilised and (b) by demonstrating how person and job can be measured

independently by utilising different sources of information. Other criticisms addressed included ensuring direct, moderating and mediating effects of Time Personality and fit were explored. The results of the study also contribute to the literature by providing support for the views of typically Wall and Payne (1973), and Edwards (1991, 1993, 1994a, 1994b), who claim that in many instances the direct effects of person or job are often more important than the notion of fit.

As far as the organisation is concerned the results of the study have shown that it is not fit per se that is important in predicting drivers' job-related affective well-being but Time Personality itself. Those drivers who score highest on the Time Personality Indicator are likely to experience greatest affective well-being.

Acknowledgements

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Table 1

Descriptive statistics of measured and derived variables

	N	Alpha	Max	Mean	SD	LTA	PUNC	PLAN	POLY	IMPAT	r_p	AWB	INT JS	EXT JS	AC	DE	Ten
LTA	277	0.77	45	21.20	6.65	X	59***	46***	52***	47***	42***	38***	34***	33***	32***	30***	-10
PUNC	277	0.71	50	35.55	8.85		X	61***	58***	54***	45***	54***	44***	52***	44***	43***	-08
PLAN	277	0.70	45	23.96	7.19			X	50***	54***	04	45***	40***	40***	33***	39***	-16*
POLY	277	0.63	40	17.06	5.87				X	50***	70***	49***	40***	46***	44***	39***	-15*
IMPAT	277	0.65	35	18.12	5.37					X	38***	38***	30***	34***	29***	36***	-07
r_p	277			0.13	0.34						X	30***	23***	30***	29***	19**	-04
AWB	277		177	87.54	28.15							X	88***	88***	85***	84***	-29***
INT JS	277	0.82	49	22.35	8.66								X	80***	60***	58***	-27***
EXT JS	277	0.74	56	29.07	9.21									X	59***	57***	-33***
AC	277	0.83	36	17.38	7.23										X	81***	-18**
DE	277	0.82	36	18.75	7.45											X	-17**
Ten	259			84.15	59.84												X

*p<0.05; ** p<0.01; *** p<0.001

Note. LTA=Leisure Time Awareness; PUNC=Punctuality; PLAN=Planning; POLY=Polychronicity; IMPAT=Impatience; r_p=coefficient of similarity; AWB=Affective well-being; INTJS=internal job satisfaction; EXTJS=external job satisfaction; AC=anxiety-contentment; DE=depressive-enthusiasm; Ten=Tenure

Table 2

Regression analyses exploring the extent and potential mediating role of Time Personality and

Fit as predictors of job related affective well-being

Source Model	Model 1	Model 2	Model 3
Leisure Time Awareness	0.00		0.01
Punctuality	0.31***		
			0.33***
Planning	0.13*		0.08
Polychronicity	0.26***		0.29**
Impatience	0.02		0.03
r_p FIT		0.30***	-0.07
Leisure Time Awareness x r_p			
Punctuality x r_p			
Planning x r_p			
Polychronicity x r_p			
Impatience x r_p			
Model R^2	0.35***	0.09***	0.35***

* $p<0.05$, **$p<0.01$, ***$p<0.001$

<u>Note</u>. Numbers in table represent standardised regression coefficients (beta)

All independent variables entered in one step as one block in each model

Table 3

Hierarchical regression analyses exploring the potential moderating role of Time Personality

in the prediction of job related affective well-being

Predictors entered	Change in R2	Beta at entry	Beta at final
Step 1			
Leisure Time Awareness		0.00	0.03
Punctuality		0.31***	0.24**
Planning		0.13*	0.02
Polychronicity		0.24***	0.29**
Impatience	0.35*	0.02	-0.02
Step 2			
r_p FIT	0.00	-0.07	0.59
Step 3			
Leisure Time Awareness x r_p		-0.53*	-0.53*
Punctuality x r_p		-0.20	-0.20
Planning x r_p		-0.12	-0.12
Polychronicity xr_p		-0.00	-0.01
Impatience x r_p	0.03	0.20	0.21
Model R^2	0.38***		

* p<0.05, **p<0.01, ***p<0.001

Note. Numbers in table represent standardised regression coefficients (beta)

Hierarchical = variables entered simultaneously as a block at each step

Table 4

Hierarchical regression analyses predicting job related affective well-being from age, tenure,

Time Personality and fit

|	Change in R2	Beta at entry	Beta at final
Step 1			
Age		0.35***	0.30***
Tenure	0.16***	-0.47***	-0.40***
Step 2			
Leisure Time Awareness		-0.03	0.00
Punctuality		0.17**	0.18*
Planning		0.04	0.00
Polychronicity		0.17**	0.20*
Impatience	0.08**	0.00	0.01
Step 3			
r_p FIT	0.00	-0.05	0.00
Step 4			
Leisure Time Awareness x r_p		-0.38	-0.38
Punctuality x r_p		0.15	0.15
Planning x r_p		0.00	0.00
Polychronicity x r_p		-0.06	-0.06
Impatience x r_p	0.01	0.22	0.22
Model R^2	0.25**		

* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Note. Numbers in table represent standardised regression coefficients (beta)

Hierarchical = variables entered simultaneously as a block at each step

Figure 1   Four possible pathways through which Time Personality might
                influence outcomes
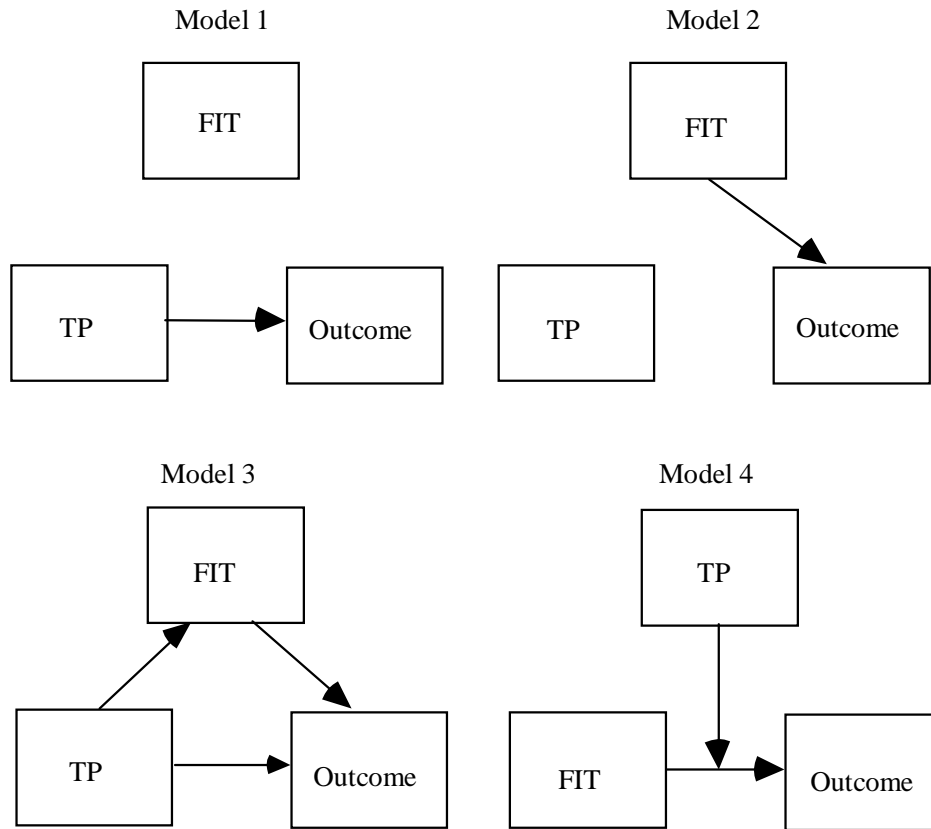
TP=Time personality; Outcome=Job satisfaction and Affective well-being