## Temporal Intelligence and Time Management

14<sup>th</sup> European Congress of Work and Organizational Psychology 15<sup>th</sup> May 2009

> Andrew Doyle and Dr Jan Francis-Smythe Centre for People at Work University of Worcester



### Multi-level Analysis of Time in Organisations

- Organisational (e.g. Schriber & Gutek, 1987)
- Individual (for review see Francis-Smythe & Robertson,1996)
  - Time Management (Macan, 1994; Claessens et al. 2007)
  - Antecedents of time management behaviours
  - •Time Personality (Francis-Smythe & University Robertson, 1996)

Centre for People @ Work

### Structure of Time Personality

- Planning
- Polychronicity
- Impatience
- Punctuality
- Leisure Time Awareness



### Role Specific Analysis

- Job time characteristics (Francis-Smythe & Robertson, 2003)
- Leadership role (Halbesleben et.al., 2003)



### Development of Temporal Intelligence

• Conceptual model of Temporal Intelligence based on a literature review



### Temporal Intelligence in Leadership and Management

Self-reference temporal practices

Leader's own Time Personality

Follower-referenced temporal practices



# Temporal Intelligence Development (TI)

- Conceptual model of Temporal Intelligence based on literature review
  - Awareness and behavioural responses to followers' time personality
  - Time-related job characteristics (Francis-Smythe and Robertson, 2003)
  - 13 time dimensions of organisational culture (Schriber & Gutek, 1987)
  - Temporal complexity in Leadership (Halbesleben et al. 2003)
- Repertory-grid interviews with leaders (n=16)
- Temporal Intelligence Questionnaire (TI-Q) development



### Pilot of the Temporal Intelligence Questionnaire (TI-Q)

Sample= 203 n leader-managers 86 Male (42.4%); 113 (55.7 %) Female; 4 missing (2%)

19-25=2%	26-35=10.8%
36-45=34.5%	46-55= 36.5%
56-65=12.3%	66-75= 1.5%

Private sector= 32. 6% Public sector= 64%



### Factor Analysis

- Principle Axis factoring using a direct oblique rotation
- Factors retained based upon Parallel Analysis (PA) and using the 95<sup>th</sup> percentile
- 10 factor solution found from PA accounting for 39% of variance
- 2 factors dropped as a consequence of poor reliability and evidence of being 'weak'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)

# Awareness of followers' time personality and job time characteristics

'I am aware of which job roles require an individual to complete one work activity before beginning another in order to get their job done effectively'

'I am aware of who likes to complete one work activity before beginning another'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)

The extent to which the leader-manager consistently has high expectations of their followers work in terms of both speed and quality

'I always express a sense of urgency for work activities to be completed'

'I use internal deadlines to make them feel under pressure'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)

The leader-manager's monitoring of followers' work within the deadline lifespan, which includes responsive actions

'If others miss a deadline, I ask them to present clear steps to show me what they intend to do in order to complete the work'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)
4	Autonomy	3.1 %	9	.754	5.28 (.73)

The leader-manager's expectations and behaviours that influence the degree to which followers are autonomous in their work activities

'Apart from any deadlines I set, others are responsible for managing their own workload'

*When it is my decision, I let others work at home if they request to '* 



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)
4	Autonomy	3.1 %	9	.754	5.28 (.73)
5	Flexing Speed and Quality	2.5%	7	.705	4.67 (.84)

The degree to which a leader-manager flexibly changes their emphasis on speed in relation to quality of their followers' work

'Sometimes it is better for people to get something done fast rather than ensuring the quality is high'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)
4	Autonomy	3.1 %	9	.754	5.28 (.73)
5	Flexing Speed and Quality	2.5%	7	.705	4.67 (.84)
6	Breaks in Workflow	2.2%	6	.769	4.87 (.97)

The leader-manager's role in guiding the occurrence of socially orientated breaks in the workplace among followers

*'I encourage people to take short breaks (under 10 minutes) if I perceive their concentration reduced from the demands of a work activity'* 



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)
4	Autonomy	3.1 %	9	.754	5.28 (.73)
5	Flexing Speed and Quality	2.5%	7	.705	4.67 (.84)
6	Breaks in Workflow	2.2%	6	.769	4.87 (.97)
7	Autocratic Leadership	2%	9	.710	2.65 (.75)

#### The extent to which the leader-manager is independent and is not influenced by their followers' opinions in the decision-making process

'I take as much time making a decision as I want'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)
4	Autonomy	3.1 %	9	.754	5.28 (.73)
5	Flexing Speed and Quality	2.5%	7	.705	4.67 (.84)
6	Breaks in Workflow	2.2%	6	.769	4.87 (.97)
7	Autocratic Leadership	2%	9	.710	2.65 (.75)
8	Temporal Depth	1.8%	10	.753	5.62 (.59)

The leader-manager's reflection in the past, living in the present and projecting to the future in relation to interactions with his or her followers. This scale considers the extent to which the leadermanager simultaneously uses different time perspectives

'If I commit others to work on a long term work objective, I will proactively seek information that may affect whether I should stop that commitment'



Factor Number	Factor Name	Variance explained	Number of Items	Cronbach's a	Mean (SD)
1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	Pace	5.1%	14	.809	4.31 (.77)
3	Deadline Orientated Behaviour	4.8%	13	.894	5.41 (.81)
4	Autonomy	3.1 %	9	.754	5.28 (.73)
5	Flexing Speed and Quality	2.5%	7	.705	4.67 (.84)
6	Breaks in Workflow	2.2%	6	.769	4.87 (.97)
7	Autocratic Leadership	2%	9	.710	2.65 (.75)
8	Temporal Depth	1.8%	10	.753	5.62 (.59)

### **Future Directions**

• Construct validation of TI-Q following a within-subjects design:

TI-Q NEO PI-R MLQ (5x short)

• TI-Q and, subordinate well-being and leadership effectiveness

