

# Temporal Intelligence in Leadership and Management

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‘Firms that have not adapted to both functional and social aspects of time will find it difficult to remain competitive with their flexible and responsive global rivals. Managers need to develop a clear understanding of both functional and social dimensions of time’

Harvey (2001)



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# Multi-level Analysis of Time in Organisations

- Organisational (e.g. Schriber & Gutek, 1987)
- Team (Gevers et al. 2006)
- 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 & Robertson, 1996)

# Structure of Time Personality

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



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# Role Specific Analysis

- Job time characteristics - (Francis-Smythe and Robertson, 2003)
- Leadership role - Halbesleben

# Temporal Intelligence

‘an awareness and knowledge of time...’ (Clemens and Dalrymple, 2005)

‘leaders who display a deeper understanding of time exhibit what is known as ‘temporal intelligence’. Like emotional intelligence, it is a competency that can make the difference between being a run-of-the-mill leader and a great one’ (Clemens & Dalrymple, 2005)



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# 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*

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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, 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%



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# 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’



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



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'*



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1	Time Personality and Job Role Characteristics	14.4%	10	.878	5.53 (.63)
2	<b>Pace</b>	<b>5.1%</b>	<b>14</b>	<b>.809</b>	<b>4.31 (.77)</b>

The extent to which the leader consistently has high expectations of their followers work. This includes expectations in both speed and quality of work.

*‘I always express a sense of urgency for work activities to be completed’*

*‘I use internal deadlines to make them feel under pressure’*

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2	Pace	5.1%	14	.809	4.31 (.77)
3	<b>Deadline Orientated Behaviour</b>	<b>4.8%</b>	<b>13</b>	<b>.894</b>	<b>5.41 (.81)</b>



The leader'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'*



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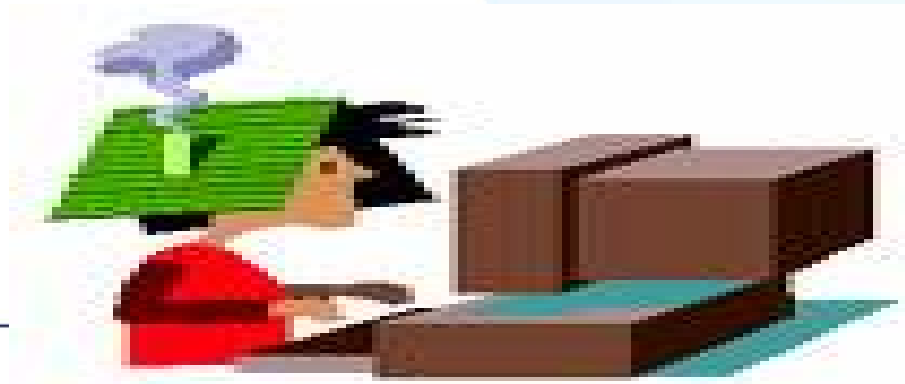
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<b>4</b>	<b>Autonomy</b>	<b>3.1 %</b>	<b>9</b>	<b>.754</b>	<b>5.28 (.73)</b>

The leader'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'*



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4	Autonomy	3.1 %	9	.754	5.28 (.73)
<b>5</b>	<b>Flexing Speed and Quality</b>	<b>2.5%</b>	<b>7</b>	<b>.705</b>	<b>4.67 (.84)</b>

The degree to which a leader 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’*



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5	Flexing Speed and Quality	2.5%	7	.705	4.67 (.84)
<b>6</b>	<b>Breaks in Workflow</b>	<b>2.2%</b>	<b>6</b>	<b>.769</b>	<b>4.87 (.97)</b>

The leaders' 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'*



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6	Breaks in Workflow	2.2%	6	.769	4.87 (.97)
<b>7</b>	<b>Autocratic Leadership</b>	<b>2%</b>	<b>9</b>	<b>.710</b>	<b>2.65 (.75)</b>





The extent to which the leader 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’*

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7	Autocratic Leadership	2%	9	.710	2.65 (.75)
<b>8</b>	<b>Temporal Depth</b>	<b>1.8%</b>	<b>10</b>	<b>.753</b>	<b>5.62 (.59)</b>



The leader'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 leader 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'*



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# Informing leadership and management practice

- Evidence based approach
- Relationships between TI-Q:
  - follower well-being
  - leadership effectiveness
- Leadership and management development

# References

Claessens, B. J. C., van Erde, W., Rutte, C.G. & Roe, R.A. (2007). A review of the time management literature. *Personnel Review*, 36(2), 255-276.

Clemens, J. K. & Dalrymple, S. (2005). *Time Mastery*. Brussels: American Management Association.

Francis-Smythe, J. & Robertson, I. (1999). Time related Individual Differences. *Time & Society*, 8(2), 273-292.

Francis-Smythe, J. A. & Robertson, I. T. (2003). The Importance of Time Congruity in the Organisation. *Applied Psychology: An International Review*, 52(2), 298-321.

Halbesleben, J. R. B., Novicevic, M. M., Harvey, M. G., & Buckley, M. R. (2003). Awareness of temporal complexity in leadership of creativity and innovation: A competency-based model. *Leadership Quarterly*, 14, 433-454.

Macan, T (1994). Time Management: Test of a process model. *Journal of Applied Psychology*. 79,3,381-391.

Schriber, J.B. & Gutek, B.A (1987). *Journal of Applied Psychology*. 72,4, 642-650.

