Enchanting the Mind

A thesis on the art of persuasion and
the role of figurative language
in management communication

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“Master rhetoric and you have mastered persuasion. Persuade, and you have gone a long way towards mastering your social environment” (Epsy 1983, p.16).
Abstract

Persuasive communication is critical to the effectiveness of leadership and organisational change. Within a considered understanding of the broader context of persuasion, this thesis explores the idea that figurative language plays a useful role in the persuasiveness of management communication. Figurative language is language that uses figures of speech with typical examples including irony, metaphors, puns, alliterations, rhymes, synonyms, rhetorical questions, antitheses, ellipses and hundreds of others.

Using an Aristotelian theory of persuasion founded on credibility, emotion and logic—supplemented with a separate assessment of support for the speaker—this thesis researches the persuasiveness of particular figures of speech reflecting four archetypal categories, namely: alliteration (a simple scheme), antithesis (a complex scheme), rhetorical question (a simple trope) and metaphor (a complex trope). Schemes are figures that reflect a non-standard style or excessively regular and orderly arrangement of literal language, while tropes involve figures with an unexpected non-literal meaning. The research also tests a suspected ascending order in the persuasiveness of simple and complex schemes and tropes in line with their increasing complexity and deviation from literal language. Finally, the study explores the idea that the persuasiveness of language is affected by the thinking orientation of the listener in terms of their experiential or rational thinking style.

These propositions were explored within an online experiment that assessed the relative persuasiveness of the different figures and categories in separate versions of the same management speech, with an additional consolidated version included for comparison purposes. All opposing versions were assessed against a control containing equivalent literal language. The independent-groups design used in the study involved six language types (i.e. literal, alliteration, antithesis, rhetorical question, metaphor and consolidated), two thinking styles (i.e. experiential and rational) and four dependent variables (i.e. credibility, emotion, logic and support for the speaker). The sample comprised 420 respondents aged between 20-65 years—all from English speaking backgrounds.
The results of the experiment showed there was no evidence to support the idea that figurative language *per se* improved the persuasiveness of management communication or that there was an ascending order in the persuasiveness of figures of speech based on their increasing complexity and deviation from literal language. However, the study did confirm a valid three-dimension (credibility, emotion and logic) persuasion construct within the data—conceptually supporting Aristotle’s theory—and demonstrated the correlation between these three variables and support for the speaker. In addition, it showed that the thinking orientation of listeners influenced the persuasiveness of a message, such that listeners who rated high as experiential thinkers were more persuaded, in general, than those who rated high as rational thinkers. These findings suggest that the thinking orientation of the listener may be more important as an ingredient for persuasion than the actual nature of the language used to convey a message.

Respondents with a higher education were also shown to be more critical and less ‘persuadable’ than those with a lower education, as well as disproportionately rational in their thinking orientation. Rational thinking was also more prevalent amongst male respondents, with experiential thinking more prevalent amongst female respondents.

A comparison between the results of this research and earlier studies in an advertising context, also suggests that figures of speech may be more potent when used in short-form messages, although this remains to be confirmed.

The practical implications of the thinking orientation and education findings have highlighted the significance of understanding the audience and tailoring the speaker’s performance and message accordingly. In addition, they have highlighted the complementary need to use other inclusive strategies that appeal across the thinking orientation spectrum in order to communicate effectively with mixed audiences. The results of the study also have implications for followership theory, characteristics and behaviour.

*Keywords: Persuasion, figurative language, thinking orientation, Aristotle, communication.*
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Dedication

To the ancient Ionians who first showed me that the world was knowable

To the Classical Greeks whose crazy ideas and humanity stir the heart

To Aristotle and his timeless aspiration for human kind

To the anguished mind of the modern dreamer

I dedicate this humble contribution to understanding the human condition
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### Abbreviations

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<th>Definition</th>
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<tbody>
<tr>
<td>A</td>
<td>Alliteration</td>
</tr>
<tr>
<td>AGFI</td>
<td>Adjusted Goodness of Fit Index</td>
</tr>
<tr>
<td>AMOS™</td>
<td>Analysis of MOment Structures (structural equation modeling) program</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of variance</td>
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<tr>
<td>AT</td>
<td>Antithesis</td>
</tr>
<tr>
<td>AVE</td>
<td>Average Variance Extracted</td>
</tr>
<tr>
<td>BCE</td>
<td>Before the Common Era</td>
</tr>
<tr>
<td>CA</td>
<td>California</td>
</tr>
<tr>
<td>CEST</td>
<td>Cognitive–Experiential Self-Theory</td>
</tr>
<tr>
<td>CFI</td>
<td>Comparative Fit Index</td>
</tr>
<tr>
<td>CT</td>
<td>Connecticut</td>
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<tr>
<td>DC</td>
<td>District of Columbia</td>
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<td>Ed.</td>
<td>Editor</td>
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<tr>
<td>ELM</td>
<td>Elaboration Likelihood Model</td>
</tr>
<tr>
<td>F</td>
<td>Factual Statements</td>
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<td>GFI</td>
<td>Goodness of Fit Index</td>
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<tr>
<td>IA</td>
<td>Iowa</td>
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<td>IL</td>
<td>Illinois</td>
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<tr>
<td>IN</td>
<td>Indiana</td>
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<tr>
<td>JSTOR</td>
<td>Online trade-marked Journal Storage system</td>
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<td>LM</td>
<td>Live Metaphor</td>
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<tr>
<td>MSA</td>
<td>Measure of Sampling Adequacy</td>
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<tr>
<td>NA</td>
<td>Negative Affect</td>
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<tr>
<td>NJ</td>
<td>New Jersey</td>
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<td>No.</td>
<td>Number</td>
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<td>NSW</td>
<td>New South Wales</td>
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<td>NY</td>
<td>New York</td>
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<td>O</td>
<td>FOil statements</td>
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<tr>
<td>PA</td>
<td>Positive Affect</td>
</tr>
<tr>
<td>PANAS</td>
<td>Positive and Negative Affect Scale</td>
</tr>
<tr>
<td>P-Close</td>
<td>Probability that the RMSEA statistic is Close to zero</td>
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<td>pp.</td>
<td>Pages</td>
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<tr>
<td>PhD</td>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>R</td>
<td>Reverse-scored statements</td>
</tr>
<tr>
<td>RMSEA</td>
<td>Root Mean Square Error for Approximation</td>
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<tr>
<td>RQ</td>
<td>Rhetorical Question</td>
</tr>
<tr>
<td>SPSS™</td>
<td>IBM Statistical Package for the Social Sciences program</td>
</tr>
<tr>
<td>TLI</td>
<td>Tucker Lewis Index</td>
</tr>
<tr>
<td>TV</td>
<td>Television</td>
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<td>TX</td>
<td>Texas</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>UT</td>
<td>Utah</td>
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<td>MA</td>
<td>Massachusetts</td>
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<tr>
<td>Vol.</td>
<td>Volume</td>
</tr>
<tr>
<td>MANOVA</td>
<td>Multivariate Analysis of Variance</td>
</tr>
<tr>
<td>WA</td>
<td>Western Australia</td>
</tr>
<tr>
<td><strong>Glossary</strong></td>
<td></td>
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<tr>
<td><strong>Absolutism</strong></td>
<td>A worldview that reflects a preference for abstract logic mirroring a rational world of universal principles</td>
</tr>
<tr>
<td><strong>Active voice</strong></td>
<td>Sentence construction where the primary subject precedes the verb</td>
</tr>
<tr>
<td><strong>Actuality</strong></td>
<td>Words and language that paint a vivid picture</td>
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<tr>
<td><strong>Adage</strong></td>
<td>A proverb</td>
</tr>
<tr>
<td>** Allegory**</td>
<td>Narrative description of something under the guise of another that has similarities to it (i.e. symbolical representation)</td>
</tr>
<tr>
<td><strong>Alliteration</strong></td>
<td>Repetition of initial consonant sounds or vowel sounds within a phrase</td>
</tr>
<tr>
<td><strong>Alpha reliability</strong></td>
<td>Reliability coefficient that assesses the consistency of a whole scale, with Cronbach’s alpha the most widely used measure</td>
</tr>
<tr>
<td><strong>Anadiplosis</strong></td>
<td>Repetition in the use of the last word of one line or clause to begin the next (Lanham 1991)</td>
</tr>
<tr>
<td><strong>Analogy</strong></td>
<td>Reasoning based on a parallel case</td>
</tr>
<tr>
<td><strong>Anaphora</strong></td>
<td>Repetition of the same opening word or phrase in successive clauses</td>
</tr>
<tr>
<td><strong>Anastrophe</strong></td>
<td>Unusual arrangement of words in a sentence that are out of the normal order (e.g. “Ask not what your country can do for you, ask what you can do for your country”)</td>
</tr>
<tr>
<td><strong>ANOVA</strong></td>
<td>Analysis of Variance that determines whether samples from two or more groups come from populations with equal means</td>
</tr>
<tr>
<td><strong>Antimetabole</strong></td>
<td>Inverting (reversing) the order of repeated words to sharpen their sense or to contrast the ideas they convey, or both (Lanham 1991)</td>
</tr>
<tr>
<td><strong>Antithesis</strong></td>
<td>Conjoined opposites (i.e. contrasting/opposite ideas or concepts) in a sentence or phrase</td>
</tr>
<tr>
<td><strong>Aristotelian</strong></td>
<td>Aristotle’s theory about the art of persuasion, centred on the trilogy</td>
</tr>
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</table>
theory of credibility, emotion and logic

Artistic proof
Aristotle’s concept of artificial proof (i.e. rhetorical evidence or arguments created by the speaker)

Asyndeton
Omission of conjunctions between words, phrases or clauses

Attitude
Learned summary evaluations that reflect multiple beliefs

Babyboomers
People born between 1943 and 1960

Backing
Additional information or credentials that certify or confirm warrants

Belief
An opinion or cognition about the world

Body language
Non-verbal cues that a person emits

Boxplot
‘Box and whisker’ method of graphically representing the distribution of a variable

Canonical correlation
Strength of the relationship between pairs of variates

Central tendency
Measure of the dispersion of data around the mean, median or mode

Chime
Key words in a phrase beginning with identical sounds or letters

Circa
About or approximately (with respect to dates)

Claim
Assertions or conclusions believed to be supported by data

Cognitive dissonance
Psychological discomfort caused when information or cues clash with established attitudes or behaviour

Colon
An independent clause or segment within a sentence

Commonplace
A useful set-piece argument or dissertation on a particular theme that a speaker can memorise and insert into differing speeches for a variety of occasions.

Conclusion
A brief summary; peroratio or peroration

Confirmatio
The Latin term for the part of an oration setting forth the arguments or proof (pistis) that support the position advocated (Lanham 1991)

Congeneric
A measurement model where there is no covariance between or within the error variances of difference constructs—meaning they are all fixed at zero (Hair et al 2010)

Convergent
Extent to which a set of measures accurately represent a concept of
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>validity</td>
<td>interest and correlate with other known measures of the concept</td>
</tr>
<tr>
<td>Correlation</td>
<td>Examination of the relationship or association between variables</td>
</tr>
<tr>
<td>analysis</td>
<td></td>
</tr>
<tr>
<td>Cronbach alpha</td>
<td>Statistical measure of reliability that ranges from 0 to 1, with values of 0.60 to 0.70 generally deemed the lower limit of acceptability</td>
</tr>
<tr>
<td>Data</td>
<td>Empirical evidence from which claims are drawn</td>
</tr>
<tr>
<td>Decision rule</td>
<td>An accumulated rule a person uses to judge the validity of messages</td>
</tr>
<tr>
<td>Deduction</td>
<td>Logic based on deducing one fact from another</td>
</tr>
<tr>
<td>Dependent variable</td>
<td>A variable whose value is predicted or explained by other variables</td>
</tr>
<tr>
<td>Dialectic</td>
<td>Art of exploring the truth of opinions through discussion and reasoned discourse</td>
</tr>
<tr>
<td>Discriminant validity</td>
<td>Extent to which a set of measures accurately represent a concept of interest and are sufficiently different from other similar measures so as to be distinct</td>
</tr>
<tr>
<td>Doublet</td>
<td>Repetition of a word with no other words in between or use of different paired words to say the same thing (Lanham 1991; Berry 2006)</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>Squared canonical (basic, unique) correlations which provide an estimate of the amount of shared variance between two canonical variates</td>
</tr>
<tr>
<td>Elaboration</td>
<td>Deep thinking</td>
</tr>
<tr>
<td>Ellipsis</td>
<td>Expression where one or more words are omitted and intended to be supplied by the listener or reader</td>
</tr>
<tr>
<td>Energeia</td>
<td>The Greek term meaning activity or actualisation; giving energy, life or movement to inanimate objects</td>
</tr>
<tr>
<td>Enthymeme</td>
<td>A syllogism in which the premises are only generally or probably true</td>
</tr>
<tr>
<td>Epanalepsis</td>
<td>Repetition at the end of a clause or sentence with the word or phrase with which it began (Lanham 1991)</td>
</tr>
<tr>
<td>Epanorthosis</td>
<td>Rhetorical correction of a word or phrase used previously (e.g. call it</td>
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</table>
not patience, it is despair) (Lanham 1991)

<table>
<thead>
<tr>
<th>Term</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epideictic</td>
<td>Ceremonial oratory—in the classical sense, oratory used to either praise or blame a person or subject</td>
</tr>
<tr>
<td>Epigram</td>
<td>Witty saying</td>
</tr>
<tr>
<td>Epilogue</td>
<td>Conclusion to a speech</td>
</tr>
<tr>
<td>Epiphetep</td>
<td>Repetition of a closing word or words at the end of several usually successive clauses, sentences or verses (Lanham 1991)</td>
</tr>
<tr>
<td>Ethos</td>
<td>The Greek term meaning the perceived moral character and credibility of the speaker</td>
</tr>
<tr>
<td>Exordium</td>
<td>The Latin term for the initial part of an oration aimed at catching the attention of the audience (Lanham 1991)</td>
</tr>
<tr>
<td>Extended</td>
<td>Refers to a line of metaphors that are all drawn as extensions of the first one and share the same developing theme</td>
</tr>
<tr>
<td>metaphor</td>
<td></td>
</tr>
<tr>
<td>Extreme value</td>
<td>An observation or value that is three or more times the distance between the 25th and 75th percentile in a boxplot (i.e. the box length) and is therefore significantly outside the normal distribution (Coakes and Ong 2010)</td>
</tr>
<tr>
<td>Factor analysis</td>
<td>Analysis of the interrelationships among a large number of variables in terms of common underlying dimensions (factors)</td>
</tr>
<tr>
<td>Fallacious</td>
<td>Reasoning that is logically flawed or wrong</td>
</tr>
<tr>
<td>reasoning</td>
<td></td>
</tr>
<tr>
<td>Figurative</td>
<td>Language that uses figures of speech</td>
</tr>
<tr>
<td>language</td>
<td></td>
</tr>
<tr>
<td>Figure of speech</td>
<td>An artful deviation of language involving either a <em>scheme</em> or <em>trope</em></td>
</tr>
<tr>
<td>Foil statement</td>
<td>Statement that appeared plausible in the context but was not actually contained in or answerable from the (speech) script</td>
</tr>
<tr>
<td>Framing</td>
<td>A technique used to affect the perspective from which an issue is seen and/or judged by others (Templeton 2011)</td>
</tr>
<tr>
<td>Frequency</td>
<td>Analysis of the frequency of a particular response or value</td>
</tr>
<tr>
<td><strong>Analysis</strong></td>
<td><strong>People born between 1961 and 1981</strong></td>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td><strong>Generation X</strong></td>
<td><strong>Examination of data using charts and other pictorial representations</strong></td>
</tr>
<tr>
<td><strong>Graphical examination</strong></td>
<td><strong>Graphical representation of data that compares observations characterised on more than two variables</strong></td>
</tr>
<tr>
<td><strong>Graphical profile</strong></td>
<td><strong>A form of involvement centred on the processing of information for entertainment (Slater 2002)</strong></td>
</tr>
<tr>
<td><strong>Hedonic processing</strong></td>
<td><strong>Self-discovery via trial and error</strong></td>
</tr>
<tr>
<td><strong>Heuristic</strong></td>
<td><strong>Graphical representation of the distribution of a single variable via the frequency of occurrences of data values within categories</strong></td>
</tr>
<tr>
<td><strong>Histogram</strong></td>
<td><strong>Use of similar endings to words, phrases or sentences</strong></td>
</tr>
<tr>
<td><strong>Homoioteleuton</strong></td>
<td><strong>Exaggerated statement used for emphasis</strong></td>
</tr>
<tr>
<td><strong>Homoscedasticity</strong></td>
<td><strong>Supposition intended for further investigation</strong></td>
</tr>
<tr>
<td><strong>Hyperbole</strong></td>
<td><strong>Colloquial expression where the meaning is not deducible from a literal interpretation of the words</strong></td>
</tr>
<tr>
<td><strong>Hypothesis</strong></td>
<td><strong>Aristotle’s concept of inartificial proof (e.g. laws, witnesses or contracts) that existed prior to the speaker saying a word</strong></td>
</tr>
<tr>
<td><strong>Independent variable</strong></td>
<td><strong>A variable whose value is independent of other variables and not predicted or explained by them</strong></td>
</tr>
<tr>
<td><strong>Indirect request</strong></td>
<td><strong>Logic based on drawing conclusions from examples</strong></td>
</tr>
<tr>
<td><strong>Involvement</strong></td>
<td><strong>Extent of personal relevance, interest and/or subjective feeling a person has about an issue</strong></td>
</tr>
<tr>
<td><strong>Interquartile range</strong></td>
<td><strong>Measure of dispersion of data around the median excluding the top and bottom 25% quartiles (i.e. the middle 50% of observations)</strong></td>
</tr>
<tr>
<td><strong>Irony</strong></td>
<td><strong>Statement implying a meaning opposite to its literal meaning</strong></td>
</tr>
<tr>
<td><strong>Joke</strong></td>
<td><strong>A witty story or expression intended to excite laughter</strong></td>
</tr>
</tbody>
</table>
Kurtosis is the measure of the peakedness or flatness of a distribution when compared with a normal distribution.

Lexis is the Greek term meaning the manner of expression, how something is said, the style used (Kennedy 1991).

Linearity is the regularity in the pattern of association or correlation between variables whereby a constant unit change in an independent variable gives rise to a constant unit change in a dependent variable.

Logic is the art of reasoning.

Logos is the Greek term meaning logical reasoning.

Manipulation check is an independent measure used to compare and cross-check the results of other measures.

MANOVA is Multivariate Analysis of Variance that tests whether vectors of means from multiple dependent variables across groups come from similar populations.

Maxim is a common or generally accepted truth.

Mean is the total or sum of all values in a set of observations divided by the number of observations (i.e. the average).

Median is the middle number in a set of values when ranked from low to high.

Mental models are cognitive mindsets that reflect the beliefs, values and assumptions people hold on topics, which in turn underpin their reasoning.

Metacognitive intercession is dissonance that causes a person to pause and switch thinking styles.

Metaphor is allegorical substitution of one thing for another where it is not literally applicable.

Metonym is substitution of an attribute for the whole thing meant.

Metric variable is a quantitative variable with a constant unit of measurement.

Missing data is information not available as a consequence of a respondent failing to answer a particular question in a survey.

Mode is the observation or number that appears most often.

Moderating is a variable having a strong contingent effect on the relationship.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>variable</td>
<td>between an independent and dependent variable</td>
</tr>
<tr>
<td>Motivated reasoning</td>
<td>Reasoning in which people access, construct and evaluate arguments in a biased fashion to arrive at or endorse a preferred conclusion</td>
</tr>
<tr>
<td>Motivational resonance</td>
<td>Extent to which material (such as the theme in a metaphor) resonates with an individual’s preferences and interests</td>
</tr>
<tr>
<td>Multivariate analysis</td>
<td>Analysis of multiple variables</td>
</tr>
<tr>
<td>Multiple regression</td>
<td>An examination of the linear relationships between three or more variables in order to determine the extent to which one can be explained or predicted by one or more of the others</td>
</tr>
<tr>
<td>Narratio</td>
<td>The Latin term for the second part of an oration (i.e. the narration) which sets forth the facts and history of the problem to be addressed (Lanham 1991)</td>
</tr>
<tr>
<td>Need for cognition</td>
<td>Intrinsic need to think through and understand issues</td>
</tr>
<tr>
<td>Nominal components</td>
<td>Qualitative non-metric variables</td>
</tr>
<tr>
<td>Non-verbal cues</td>
<td>Gestures and other non-verbal signals that transmit information</td>
</tr>
<tr>
<td>Normality</td>
<td>Degree to which the distribution of sample data corresponds with a normal distribution (a symmetrical, uni-modal ‘bell-shaped’ curve clustered around the mean)</td>
</tr>
<tr>
<td>Oratory</td>
<td>Eloquent speaking or rhetoric</td>
</tr>
<tr>
<td>Organon</td>
<td>The standard collection of six Aristotelian works on logic</td>
</tr>
<tr>
<td>Outlier</td>
<td>An observation or value that is between one and a half and three times the distance between the 25th and 75th percentile in a boxplot (i.e. the box length) and is therefore outside the normal distribution (Coakes and Ong 2010)</td>
</tr>
<tr>
<td>Paradox</td>
<td>A seemingly self-contradictory statement which is shown to be true, sometimes in a surprising way</td>
</tr>
<tr>
<td>Parison</td>
<td>Clauses or phrases of approximately the same length</td>
</tr>
<tr>
<td>Paromoeosis</td>
<td>Parallelism of sound in the words of two parisons</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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<tr>
<td><strong>Passive voice</strong></td>
<td>Sentence construction where the primary subject follows the verb</td>
</tr>
<tr>
<td><strong>Pathos</strong></td>
<td>The Greek term meaning the power to arouse emotions</td>
</tr>
<tr>
<td><strong>Peripatetics</strong></td>
<td>Followers of Aristotle who debated ideas while walking on the covered colonnades of the Lyceum which were known as <em>peripatoi</em></td>
</tr>
<tr>
<td><strong>Peroratio</strong></td>
<td>The Latin term for the final part of an oration (i.e. the peroration or conclusion) that sums up the arguments and stirs the audience (Lanham 1991)</td>
</tr>
<tr>
<td><strong>Personification</strong></td>
<td>Expression where an animal or inanimate object is represented as having human attributes and addressed or made to speak as if it were human</td>
</tr>
<tr>
<td><strong>Persuasion</strong></td>
<td>Ability to present a message in a way that leads others to support it</td>
</tr>
<tr>
<td><strong>Philosophy</strong></td>
<td>The art of seeking wisdom or knowledge</td>
</tr>
<tr>
<td><strong>Pistis</strong></td>
<td>The Greek term meaning proof and/or means of persuasion involving ethos, pathos and logos (Kennedy 1991)</td>
</tr>
<tr>
<td><strong>Polysyndeton</strong></td>
<td>Use of a conjunction between each word, phrase or clause (opposite of asyndeton)</td>
</tr>
<tr>
<td><strong>Powerful speech</strong></td>
<td>Speech involving fluent, concise and unqualified language</td>
</tr>
<tr>
<td><strong>Powerless speech</strong></td>
<td>Speech involving hesitations, hedges, tags and disclaimers</td>
</tr>
<tr>
<td><strong>Preface</strong></td>
<td>Introduction or preamble</td>
</tr>
<tr>
<td><strong>Premise</strong></td>
<td>A proposition (or one of many) from which a conclusion is drawn</td>
</tr>
<tr>
<td><strong>Presence</strong></td>
<td>Increasing the significance and immediacy of stasis issues in the minds of listeners</td>
</tr>
<tr>
<td><strong>Processing pleasure</strong></td>
<td>The reward that comes from processing a clever use of language form, interpretation or arrangement</td>
</tr>
<tr>
<td><strong>Proem</strong></td>
<td>Introduction within a speech</td>
</tr>
<tr>
<td><strong>Proof</strong></td>
<td>The facts or evidence in an argument</td>
</tr>
<tr>
<td><strong>Proverb</strong></td>
<td>A short saying in general use</td>
</tr>
<tr>
<td><strong>Pun</strong></td>
<td>Expression containing a word with a humorous double meaning or a word of the same or similar sound with a different meaning</td>
</tr>
<tr>
<td><strong>Qualifier</strong></td>
<td>Degree of confidence or limitations attached to a claim, given the</td>
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</tbody>
</table>
substance of backing and rebuttals

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantitative</strong></td>
<td>Analysis using mathematical techniques as opposed to qualitative reasoning</td>
</tr>
<tr>
<td><strong>Rebuttal</strong></td>
<td>Refutations, specified conditions or arguments on which possible or anticipated objections can be challenged</td>
</tr>
<tr>
<td><strong>Reciprocity</strong></td>
<td>Mutual action, the practice of ‘give and take’</td>
</tr>
<tr>
<td><strong>Relativism</strong></td>
<td>A worldview that reflects a notion that all knowledge is situationally dependent, a product of the ‘historico-cultural’ context and limited to and by the social setting</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>Analysis of the extent to which a variable or set of variables are consistent with what they are intended to measure</td>
</tr>
<tr>
<td><strong>Research Now</strong></td>
<td>The commercial research company that undertook the online data gathering exercise for this study</td>
</tr>
<tr>
<td><strong>Rhetoric</strong></td>
<td>Language designed to persuade or impress others</td>
</tr>
<tr>
<td><strong>Rhetorical period</strong></td>
<td>A long structured sentence involving a series of clauses often balanced and/or antithetical to one another, separated by commas or semi-colons</td>
</tr>
<tr>
<td><strong>Rhetorical question</strong></td>
<td>Nominal question asked purely for effect not information and not intended to be answered</td>
</tr>
<tr>
<td><strong>Rhyme</strong></td>
<td>Word with the same terminal sound as another</td>
</tr>
<tr>
<td><strong>Riddle</strong></td>
<td>Expression intended to test ingenuity or give amusement in determining its meaning</td>
</tr>
<tr>
<td><strong>Scatterplot</strong></td>
<td>Representation of the relationship between two metric variables via the joint values of each observation in a two-dimensional graph</td>
</tr>
<tr>
<td><strong>Scheme</strong></td>
<td>Figure of speech that reflects a non-standard style or arrangement of literal language that is excessively regular and orderly</td>
</tr>
<tr>
<td><strong>Simile</strong></td>
<td>Expression containing an explicit comparison of one thing to another</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>Measure of the symmetry of a variable’s distribution</td>
</tr>
<tr>
<td><strong>Social psychology</strong></td>
<td>Study of the mind and how mental states and processes are affected in social situations</td>
</tr>
<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td><strong>Sophistry</strong></td>
<td>Communication that uses the best available means to influence others irrespective of the truth</td>
</tr>
<tr>
<td><strong>Standard deviation</strong></td>
<td>Measure of the extent to which observations or values deviate from the mean</td>
</tr>
<tr>
<td><strong>Stasis</strong></td>
<td>The crux or turning point in an argument</td>
</tr>
<tr>
<td><strong>Stately words</strong></td>
<td>Known but unusual words free from meanness and adornment</td>
</tr>
<tr>
<td><strong>Stem and leaf diagram</strong></td>
<td>A variant of the histogram presenting the same graphical picture along with an enumeration of the actual data values</td>
</tr>
<tr>
<td><strong>Substantive logic</strong></td>
<td>Best practical line of reasoning on matters that are beyond absolute certainty</td>
</tr>
<tr>
<td><strong>Syllogism</strong></td>
<td>Argument comprising a major premise, a minor premise and a deduced conclusion</td>
</tr>
<tr>
<td><strong>Synecdoche</strong></td>
<td>Naming part for the whole thing intended</td>
</tr>
<tr>
<td><strong>Synonym</strong></td>
<td>Word with the same meaning as another</td>
</tr>
<tr>
<td><strong>Syntax</strong></td>
<td>Rules governing the grammatical arrangement of words in a sentence</td>
</tr>
<tr>
<td><strong>Tag question</strong></td>
<td>A short phrase in the form of question that is attached to the end of a statement</td>
</tr>
<tr>
<td><strong>Taxis</strong></td>
<td>The Greek term meaning arrangement (Kennedy 1991)</td>
</tr>
<tr>
<td><strong>Taxonomy</strong></td>
<td>A classification system</td>
</tr>
<tr>
<td><strong>Thinking orientation</strong></td>
<td>The styles of thinking, whether experiential, rational or both, preferred by individuals</td>
</tr>
<tr>
<td><strong>Topic</strong></td>
<td>A universal or specific subject or ‘commonplace’</td>
</tr>
<tr>
<td><strong>Topos</strong></td>
<td>The Greek term meaning topic—the place where an argument can be found (Kennedy 1991)</td>
</tr>
<tr>
<td><strong>Tricolon</strong></td>
<td>Use of a three-unit pattern in a sentence (e.g. three clauses, three reasons, three colons)</td>
</tr>
<tr>
<td><strong>Trope</strong></td>
<td>Figure of speech that involves an unexpected (non-literal) meaning</td>
</tr>
</tbody>
</table>
T-test  
Assessment of the statistical significance of the difference between two sample means for a single dependent variable—i.e. a special sort of ANOVA

Two-sided argument  
Appeal where a speaker presents both sides of an argument (i.e. for and against the position adopted)

Understatement  
Statement presenting something as less significant than it is

Univariate  
A single base variable reflecting a scale item from a questionnaire formed from its empirical weights

Value  
1. Guiding principle in a person’s life reflecting multiple attitudes on various issues
2. Scores assigned to measure an attribute

Variate  
Linear combination of variables formed from their empirical weights

Warrant  
Argument that justifies the relevance of a claim from data
Power of discourse ...

“... since we have the ability to persuade one another and to make dear to ourselves what we want, not only do we avoid living like animals, but we have come together, built cities, made laws, and invented arts. Speech is responsible for nearly all our inventions. It [is] legislated in matters of justice and injustice and beauty and baseness, and without these laws, we could not live with one another. By it we refute the bad and praise the good; through it, we educate the ignorant and recognise the intelligent. We regard speaking well to be the clearest sign of a good mind, which it requires; and truthful, lawful, and just speech we consider the image of a good and faithful soul. With speech we fight over contentious matters, and we investigate the unknown. We use the same arguments by which we persuade others in our own deliberations; we call those able to speak in a crowd ‘rhetorical’; we regard as sound advisers those who debate with themselves most skilfully about public affairs. If one must summarise the power of discourse, we will discover that nothing done prudently occurs without speech, that speech is the leader of all thoughts and actions, and that the most intelligent people use it most of all”  

(Isocrates 357 BCE – extract from his ‘Antidosis’) 

Gagarin 2000, p. 251-252)
Chapter 1

Introduction

1.1 Preface

Persuasion is part of the human condition (Isocrates 357 BCE; Perloff 2003). It is central to how we create community (Spence 2013), how we relate to each other in a free society and how we influence the world around us (Downey 1997). It determines not just what we think or buy or how we vote, but our allegiances and opinions, and whether good ideas get accepted and taken up by others (Gardner 2004; Huczynski 2004). Persuasion is also a mirror to fairness and equality within a society. It is as John Quincy Adams1 put it, grappled to the soul of liberty (Downey 1997). The need to persuade others goes to the very heart of the relationship each citizen has with one another and the community at large. No one in a truly fair, equal or free society can be forced to do anything against their will; they must all agree or at least acquiesce to the reasoning of others if they are to join forces for the common cause.

In bringing minds together, persuasion facilitates teamwork and enterprise; it is the key for getting the big things done and drawing the very best out of people and situations (Conger 1998a; Huczynski 2004). More than anything else, it shapes collective decisions and actions, frequently offering the only reason for individuals to see beyond their innate self-interest. It is the centrepiece of the social process that engenders the communal and political stability on which a strong, free and prosperous people are built (Downey 1997).

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1 John Quincy Adams was the first Boylston Professor of Rhetoric and Oratory at Harvard University, holding the post from 1806-1809. His legacy includes 36 lectures on rhetoric and oratory drawn from the Classical tradition, what he referred to as Grecian genius and Roman industry. Adams saw rhetoric as the theoretical science of speaking well and oratory its practical art. He trained as a lawyer and, with his mastery of persuasion, served as a diplomat, member of the Senate and House of Representatives and sixth President of the United States of America (1825-1829) (Whitney 1990, Nagel 1997, Downey 1997)
At a personal level too, persuasion is an important skill. Whether at job interview, as a guest speaker, or when simply trying to get a point across in competition with others, persuasion facilitates success (Huczynski 2004) and access to social resources (Guerin 2003). “… few skills in our society are more valuable and useful than those which involve communication” (Golden et al 2004, p. 135).

24 centuries ago, Classical Greek philosophers such as Isocrates and Plato observed that persuasion was the key to human advancement and what we have come to call ‘civilisation’. In his *Dialogues*, Plato even described the creation of the civilised world as the victory of persuasion over force (Whitehead 1933).

### 1.2 Persuasion in Management Communication

In the modern world, persuasion permeates our lives (Alvi and Baseer 2012; Perloff 2003; Petty and Cacioppo 1996), from advertising (Marsh 2007) to politics; from polite discussions to business negotiations (Fisher, Ury and Patton 1991); from promotion and marketing to entertainment (Espy 1983; Fautsch 2007); and from participative work structures to democratic institutions and global societies. Persuasion is power (Uhr 2011) and an increasingly critical skill in the workplace for leaders and managers to master. “All leaders talk. It is the power of their talk that determines whether they win or lose” (Harkins 1999, p. 3).

Conger (1998a, 1998b) observed the growing demise of the ‘command and control’ culture inside organisations—resulting not from a nouveau management trend but out of necessity. Persuasion, he noted, has been widely perceived historically as a skill-set reserved for selling products and negotiating deals, with many organisations misunderstanding its very nature and role, and making little use of it internally. “…many businesspeople misunderstand persuasion, and more still under-utilise it” (Conger 1998b, p. 86). But all this is on the cusp of change. The modern competitive economy, Conger (1998a) observed, requires leaders and managers to focus on merit as never before and to discuss and sell ideas rather than impose them. This persuasion-centred approach to organisational life is being relentlessly driven by powerful evolutionary forces such as:

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2 *Dialogues* – Philosophical compositions in conversational form which for Plato included such works as the *Apology, Crito*, *Gorgias, Laws, Phaedrus, Republic, Sophist, Symposium, Timeaus* and many others (Suzanne 2001)
• Generational change in leadership as Babyboomers and Generation X (both better educated and more egalitarian than their forebears) take control of organisations

• Growing reliance on cross-functional teams that bring different ranks together to work on critical projects

• Widespread application of electronic communication and desktop computing that democratise information and empower conversations across, as well as up and down, the formal chains of command

• Globalisation and the need to make decisions closer to markets, both of which see the freer flow of ideas and people around organisations

• The ever-pressing need for talent, creativity and ideas as crucial ingredients of competitive advantage (Conger 1998a, 1998b, 1999; Spears 2009)

Other authors make similar observations.

“Organisations are employing the most educated workforce in the history of the world. Employees have higher expectations as to the levels of meaning they can find in their work, the availability of opportunities to participate in organisational decision making, and needs [requirements] to be treated fairly and with respect …Organisations are also facing heightened competitive pressures as well, as business moves to a global footing… There is also a greater need for employees to work collaboratively, with more emphasis being placed on a variety of team-based structures. Organisations need greater commitment and engagement of staff in order to remain competitive” (Burke and Cooper 2006, p. 83).

Management scholar, the late Peter F. Drucker, also observed the growing importance of worker-based knowledge over capital as the modern ingredient for corporate success, which, in turn, is culminating in new power relationships inside organisations. With this change, Drucker sees the need to manage those knowledge workers, not as subordinates, but as colleagues and partners—even going so far as accepting their values organisationally

3 Babyboomers – People born between 1943 and 1960. Raised in the post-war economic boom, this generation enjoyed relative affluence, were generally better educated and more independent than their parents – the silent generation – and grew to be less trusting of authority and the use of power (Conger 1998a)

4 Generation X – People born between 1961 and 1981. Often the children of dual-income families, this generation is even better educated than the Babyboomers and keen to achieve more of a work/life balance. They are more independent and mobile in terms of their careers and even less trustful of authoritarianism (Conger 1998a)
and giving knowledge workers social recognition and social power inside organisations (Drucker 1998, 1999, 2003). “Implicit in this is that employees have to be managed as associates, partners—and not in name only … They have to be persuaded. Increasingly, therefore, the management of people is a marketing job” (Drucker 1998, p. 160). Spears (2009) holds a similar view suggesting that managers need to be open-minded and genuinely interested in the concerns and beliefs of others; not only understanding their views but why they believe them.

On top of all this, long-term skill shortages loom as Babyboomers approach retirement and the global economy booms with the rise of China and the services sector, with India not far behind (Burke and Cooper 2006; Burke and Ng 2006; Gordon 2005). Business needs people as never before and it needs a winning culture to attract, keep and engage them.

Persuasive communication is also critical for organisational success in other ways. Leading scholars such as Collins (1996, 2001), Collins and Porras (2000), Kotter (1995), Kouzes and Posner (1987, 2010) all highlight the critical role of strong persuasive communication in creating a shared vision, inspiring people, galvanising teams and getting the best out of organisations. The hard reality for leaders and managers is that they get more out of their staff and achieve more organisationally with committed thinking volunteers who understand and believe in the cause (i.e. they have been persuaded), than they ever do with loyal conscripts. Drucker (1998) observes the need to manage employees like volunteers. Harkins (1999) sees what he calls ‘powerful conversations’ as essential for leadership and organisational change, while Rafferty and Griffin (2004) highlight the continuing role of persuasive communication (in terms of inspirational appeals and emotional talk) in transformations. Loyal conscripts—synonymous with a ‘command and control’ culture—are simply not enough; nor are they sustainable or suitable for the future. The organisation of tomorrow needs committed thinking volunteers who give their whole self—their commitment, their passion and their creative ideas—to achieve victory. This requires leaders and managers to sell ideas and to influence others with powerful persuasive conversations in order to evoke real commitment and gain the sustained collaborative buy-in needed to realise success (Conger 1998a; Harkins 1999). Whether it is convincing staff to embrace an important change, selling a new vision or strategy, explaining a difficult issue, or galvanising support for an idea or objective, the modern leadership task is often

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5 Powerful conversations – verbal interactions that progress from shared feelings, beliefs and ideas to an exchange of wants and needs and then to clear actions and mutual commitments (Harkins 1999)
about persuading people to a line of thinking and taking them with you in order to build real (as opposed to tacit) commitment. “…the central task of leadership is to persuade others to do their jobs well” (Mayo and Jarvis 1992, p. 7).

In Conger’s words, all this is leading to the organisation of peers that manages not through the power of positions, but through the power of ideas and persuasion. “In a nutshell, we are leaving one age—the age of command—and moving into a new age—the age of persuasion” (Conger 1998a, p. 16).

1.3 Historical Roots

The forebears of persuasion and reasoning founded their craft in ancient Greece, reaching out to the modern world with names such as Corax⁶, Pericles⁷, Gorgias⁸, Protagoras⁹, Aspasia¹⁰, Isocrates¹¹, Demosthenes¹², and the better known Socrates¹³, Plato¹⁴ and

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⁶ Corax (5th Century BCE) – As one of the founders of Greek rhetoric (along with his pupil Tisias), Corax is said to have lived in Sicily in the fifth century BCE where he devised an art of rhetoric that permitted ordinary citizens to present their own cases in court. His chief contribution was in helping to develop the structure of judicial speeches into various parts (i.e. proem, narration, statement of arguments, refutation of opposing arguments and summary) which formed the basis for all later rhetorical theory (Espy 1983; Smith 1853; Worthington 2007)

⁷ Pericles (495-429 BCE) – A prominent statesman, orator and general of ancient Athens who was also a keen patron of learning and the arts. As the city’s democratically elected leader, he was renowned for his eloquent speeches before the Athenian Assembly which, amongst other things, resulted in the construction of most of the surviving structures on the Acropolis (including the Parthenon) and the disastrous Peloponnesian war with Sparta from 431-404 BCE. (Cartledge 2000; Halsall 1999; Smith 1853)

⁸ Gorgias (483-375 BCE) – A pre-socratic Sicilian philosopher, orator and rhetorician who subsequently settled in Athens, supporting himself as an orator and by teaching rhetoric. Gorgias is accredited with transplanting rhetoric to the Greek mainland and is considered to be one of the founders of sophism – a movement that emphasised the practical application of rhetoric to civic and political life (Golden et al 2004; Higgins 2006)

⁹ Protagoras (490-420 BCE) – An agnostic, pre-Socratic philosopher and sophist who taught virtue, rhetoric, debate and the correct use of words (Poster 2006)

¹⁰ Aspasia (of Miletus) (470-400 BCE) – An influential courtesan, teacher of sophist rhetoric and later de facto spouse and companion of Pericles. Aspasia was esteemed by Socrates for her philosophical opinions on many issues (Golden et al 2004); evidence of her ability to reason and persuade

¹¹ Isocrates (436-338 BCE) – A Classical Greek rhetorician and fierce opponent of Plato who founded the ‘School of Rhetoric’ in 390 BCE that competed with Plato’s Academy. Isocrates believed in a broad liberal education and prepared students for political life by teaching rhetorical skills (Gagarin 2000)

¹² Demosthenes (384-322 BCE) – A prominent Greek statesman and orator of ancient Athens who made a living as a professional speech-writer, lawyer and politician. As one of the ten ‘Attic Orators’, Demosthenes was viewed as an exceptional speaker, acclaimed by Cicero as ‘the perfect orator’ and by Quintilian as ‘standing alone among all the orators’. Demosthenes made eloquent appeals to his countrymen to oppose King Philip of Macedon, which were known as philippics, a term still in occasional use to describe an impassioned denunciation or tirade (Golden et al 2004; Smith 1853)

¹³ Socrates (4709-399 BCE) – The renowned Classical Greek philosopher who, through the development of critical reasoning and philosophical dialogue in search of universal truth, is widely accredited as the father of Western Philosophy. Socrates profoundly influenced Plato’s philosophical stance on rhetoric and sophism and through him Aristotle’s subsequent divergent work (Kemerling 2006; Smith 1853)
Aristotle\textsuperscript{15} (Golden et al 2004). These scholars nourished an age of reason and enquiry, drawing early \textit{homo civilis} from the shadow of ignorance and suspicion to grasp the first understandings of the persuasive art and what it could mean for human advancement. In doing so, they identified many of the basic precepts, uncovered insights that permeate our thinking today and framed much of the terminology we still use in the area (e.g. enthymeme, dialectic, hypothesis, rhetoric, syllogism, thesis, trope and so on). While not always right, their enquiring minds and a great deal of their conceptual understanding has resonated down the centuries, still enriching our lives and thinking today (McGuire 2000).

While the ancient Greeks viewed Homer\textsuperscript{16} as the father of oratory (Freese 1926, Gagarin 2007), it was no accident that this focus on persuasion should stir and flourish in a people nurturing a system of self-government. Only a free state could engender and sustain a need for persuasion (Downey 1997). The democratic tradition, given life in 508 BCE by Cleisthenes of Athens\textsuperscript{17}, required citizens to be able to speak in public (Kennedy 1991) and rested on what Isocrates called `the ability to persuade one another' (Isocrates 357 BCE).

For that, the Classical Greeks needed to understand the discursive process and how to use and improve it. Subsequent scholars from ancient Rome preserved and fanned the flame, amongst them the venerable statesman and Senator Cicero\textsuperscript{18} and the later rhetorician and teacher Quintilian\textsuperscript{19}, to name but two of the central figures. However, in this forest of

\textsuperscript{14} Plato (427-347 BCE) – A Classical Greek philosopher, mathematician, author of philosophical dialogues (e.g. \textit{Apology}, \textit{Gorgias}, \textit{Phaedrus}, \textit{Republic}) and founder of the Academy in Athens where Aristotle studied. Plato was a follower and student of Socrates and is believed to have been deeply influenced by his unfair trial and execution which he blamed on populist sophistic rhetoric (Brickhouse and Smith 2008)

\textsuperscript{15} Aristotle (384-322 BCE) – A Classical Greek philosopher, scholar, student of Plato and tutor of Alexander the Great. Aristotle wrote on diverse topics including physics, poetry, biology, zoology, logic, rhetoric, politics, government and ethics. Along with Socrates and Plato, Aristotle was one of the most influential of ancient Greek philosophers who established the foundations of Western Philosophy (Fieser and Dowden 2006; Golden et al 2004) and the intertwined adjacent art of persuasion

\textsuperscript{16} Homer – A legendary 8\textsuperscript{th} century BCE blind Greek poet, traditionally credited with composing the \textit{Iliad} and the \textit{Odyssey}, two ancient epic poems (Freese 1926)

\textsuperscript{17} Cleisthenes (570 BCE-unknown) – The man credited with reforming the constitution of ancient Athens which made possible the Golden Age of Athenian civilisation that followed in the 5th Century BCE. He did so by appealing to the \textit{demos} (i.e. the non-aristocratic mass of ordinary male citizens) offering a package of political reforms that gave them \textit{kratos} (i.e. the decisive say) in the government of Athens. As a result, the concept of \textit{demokratia} (democracy) was born (Cartledge 2000)

\textsuperscript{18} Marcus Tullius Cicero (106-43 BCE) – An orator, lawyer, statesman, philosopher and Senator of ancient Rome. A prolific writer and speech-maker, Cicero wrote approximately 20 philosophic texts and 900 letters, and made some eighty-eight formal speeches of which fifty-eight survive. He was an admirer of Greek culture, philosophy and rhetoric, and a champion of the Roman republic whose life coincided with its decline and eventual fall under the heel of Julius Caesar and the rise of imperial Rome (Clayton 2006)

\textsuperscript{19} Marcus Fabius Quintilianus (35-95) – A rhetorician, advocate, teacher and first imperial professor of rhetoric who operated a public school of rhetoric in ancient Rome. His major surviving work is his twelve-volume text on rhetoric entitled \textit{Institutio Oratoria} (i.e. Institutes of Oratory) (Morgan 2007)
classical giants there stood a true titan, a rhetorical scholar, thinker and philosopher whose name and ideas have echoed through the centuries—Aristotle.

Pictured at Figure 1, Aristotle stands out not just as one of the first significant thinkers and writers on persuasion, but also as a person who pioneered scientific analysis and brought classical traditions together (e.g. sophistry, philosophy, logical reasoning). He stands as a monument to his age and a blinding beacon to the modern world—a man whose work and central ideas on rhetoric and persuasion still provoke discussion and interest today (e.g. Alvi and Baseer 2012; Dillard 2010; Golden et al 2004; Kennedy 1991; Marsh 2007; Perloff 2003; Wood 2006).

It is fitting then that Aristotle’s perspective on persuasion should play a pivotal role in this thesis. It does so because:

- His formative theory is fundamental to the history and philosophical roots of persuasion (Golden et al 2004)
- His Classical work and ideas continue to influence current thinking and are cited by numerous contemporary scholars as an enduring contribution to the field (e.g. Alvi and Baseer 2012; Conger 1998a; DeRosia 2008; Golden et al 2004; Goleman 1995; Marsh 2007; McGuire 2000; Perloff 2003; Petty and Cacioppo 1996; Price 2012; Stathakopoulos, Theodorakis and Mastoridou 2008; Wood 2006)
- Each of the three separate tenets of his theory (i.e. credibility, emotion and logic) have individually—although not collectively—been confirmed by contemporary scholars (e.g. Bowell and Kemp 2002; Conger 1998a; DeSteno et al 2004; Leathers 1992; Murphy 2001; O’Keefe 2002)
- His thoughts and emphasis on style and language, particularly figurative language (Aristotle 350 BCE Ed Book III; Kennedy 1991), is especially relevant to the nature of this research and useful for assessing and contrasting ideas and final results.
1.4 Definition of Persuasion

Many contemporary authors have defined persuasion in different ways, as sampled in Table 1. More poetically though, in his dialogue *Phaedrus*, a sceptical Plato uncharacteristically cast persuasion in philosophical terms describing it (for the purpose of debate) as a way of “…enchanting the mind by arguments” (Jowett 1892, p. 468). With this and the other perspectives in mind, this thesis—named in celebration of Plato’s description—embraces the less lofty, more utilitarian definition offered by Conger (1998a), simply defining persuasion as:

*The ability to present a message in a way that leads others to support it* (Conger 1998a, p. 25).

<table>
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<th>TABLE 1 - DEFINITIONS OF PERSUASION</th>
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<tr>
<td><strong>Definition</strong></td>
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<tr>
<td>&quot;the ability to present a message in a way that leads others to support it&quot;</td>
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<tr>
<td>&quot;a communication process in which a source introduces claims, evidence and conclusions with the purpose of inducing a change in the receiver&quot;</td>
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<tr>
<td>&quot;a symbolic process in which communicators try to convince other people to change their attitudes or behaviour regarding an issue through the transmission of a message, in an atmosphere of free choice&quot;</td>
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<tr>
<td>&quot;the use of symbols (sometimes accompanied by images) by one social actor for the purpose of changing or maintaining another social actor’s opinion or behaviour&quot;</td>
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<tr>
<td>&quot;the process by which attitudes are changed&quot;</td>
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This pragmatic definition is used chiefly because it focuses on the message (i.e. the linguistic medium of persuasion), and in doing so, aptly mirrors the nature of the intended research into the comparative merits of different linguistic forms and strategies. In addition, Conger’s definition facilitates the desired Aristotelian perspective with the definition operationalised in a manner consistent with Conger’s approach but focused specifically on credibility, emotion and logic—the three central tenets of Aristotelian theory (discussed in Chapter 2). Whilst Conger prescribed four ingredients for effective persuasion—i.e. credibility, emotion, compelling positions and evidence (logic), and common ground—Aristotle saw the latter as an integral part of the other three in respect to aligning the arguments and evidence to suit the audience (Aristotle 350 BCEd). In effect, both approaches cover the same broad ground, with Aristotle’s formative perspective focusing more tightly on the core components.

1.5 Research Gap

Against this backdrop, this thesis explores persuasive communication, focusing-in on the unique role of language in that process. In particular, it researches the persuasiveness of
figurative language and its various forms (i.e. categories of figures of speech) in management communication. In doing so, it shows that much of the modern literature and research has concentrated on varying theories and aspects of the social psychology of persuasion, with little occurring in a dedicated business context directed towards identifying or understanding specific language strategies, as emphasised by Aristotle. To date, research into social psychology has tended to focus generally on cognitive processes centred on beliefs, attitudes and behaviour, and the related influence of the social setting. While exploring how information is processed, there has been little social psychology research into the power of rhetorical language to effect change and/or how the process might work. In addition, although management literature often includes heavy emphasis on transformational leadership (e.g. Ackerman-Anderson and Anderson 2010; Beach 2006; Kotter 1995; Kouzes and Posner 2010), few researchers have explored how leaders might use figurative language to inspire and motivate change.

This thesis also highlights the limited research that has occurred on specific figurative language techniques in a business setting, which to date has occurred largely in the advertising field. In general, these advertising studies have concentrated on assessing specific figures of speech against features such as attitude towards the ad, persistence, perceptions, evaluation, appreciation, ad recall and so on (e.g. Ahluwalia and BurnKrant 2004; Ang and Lim 2006; Jiang and Tao 2012; Lagerwerf and Meijers 2008; Roehm and Sterntthal 2001; van Mulken, van Enschoet-van Dijk and Hoeken 2005). They have not used a consistent concept of persuasion nor one based on Aristotelian theory. Moreover, Aristotle’s thoughts on style and the differing rhetorical qualities of language, as well as his general lines of argument, have largely gone ignored in modern empirical research into persuasion and figurative language. Some contemporary scholars have however focused on developing useful taxonomies to classify figures of speech based on the complexity and deviation of expressions from literal language, and speculating on how particular figurative categories affect perception and persuasion (e.g. McQuarrie and Mick 1996; McGuire 2000). These too, are examined in this thesis, as is interesting work on the thinking orientation of individuals (Epstein 1994; Epstein et al 1996; Pacini and Epstein 1999). As a relatively new perspective, Pacini and Epstein’s work in refining the initial concept and developing an ostensibly reliable short-form instrument to assess the orientation of individuals has only undergone limited (largely recent) use under field conditions (e.g. Aarnio and Lindeman 2005; Berger 2007; Berger and Lee 2007; Bjorklund and Backstrom 2008; Fletcher, Marks and Hine 2012; Freeman, Evans and Lister 2012; MacLaren et al
Also, as far as could be determined, this has not involved applying either to experimental studies of persuasion or figurative language.

1.6 Significance of the Research

Whilst often the key to success, the art of persuasion is not always recognised or practiced by leaders and managers stuck in the ‘command and control’ paradigm (Conger 1998a; Conger 1998b). Despite the evolutionary forces under way that are reshaping the nature of the workplace (e.g. generational change, ubiquitous access to information, globalisation), many leaders and managers still see persuasion only in terms of corporate advocacy, sales and marketing, and public relations (Conger 1998a), with the development and execution of strategy (and therefore the deeper skills and understanding) often outsourced, or at best supplemented with external expertise. Persuasion does have some recognition in management areas such as negotiation, networking and stakeholder relations, but is often focused on deal-making and compromise rather than true persuasion (Conger 1998a; Fisher, Ury and Patton 1991). In addition, few leaders and managers consciously understand the precepts or techniques to achieve the best result. Even fewer see a place for persuasion in everyday internal communications—in generating enthusiasm and commitment to daily tasks—or understand the valuable and value-adding role that figurative language can play. “The concept of persuasion, like that of power, often confuses and even mystifies businesspeople. It is [perceived as] so complex—and so dangerous when mishandled—that many would rather just avoid it altogether” (Conger 1998b, p. 95).

This reluctance to use persuasion inside organisations is borne of ignorance about what works and its organisational value and advantages in the quest for talent and performance, over the traditional but coercive ‘command and control’ approach. In turn, this mirrors the paucity of published research and emphasis on persuasion in the leadership and management area, coupled with a consequential lack of profile and guidance about the persuasiveness of particular strategies such as figurative language and its varying forms and categories.

The current research helped address this need by extending the understanding of figurative language in advertising to the general field of management communication. In doing so, it used persuasion constructs derived from Aristotelian theory (i.e. credibility, emotion and logic) to conduct an experiment with the results holding potential significance for
leadership style, followership, change management and organisational communication. When integrated into current literature, the results offer interesting speculations about a practical theory of persuasion for leaders and managers to follow.

1.7 Research Questions

In exploring the topic, the associated study addressed four specific research questions:

1. Is figurative language more persuasive than literal language in management communication?
2. Are particular categories of figurative language more persuasive than others in management communication?
3. Is there some order in the persuasiveness of figurative language categories in management communication?
4. Does the thinking orientation of the listener affect the perceived persuasiveness of a management message?
1.8 Conclusion

Persuasion is an intrinsic part of being human and civilised. It is central to how we achieve collective decisions and actions in a free society. It shapes and reflects our world and is an increasingly critical personal skill, especially in the workplace.

This chapter has explained the importance of persuasion in modern life. It has identified its growing significance for leadership and management, and its roots in antiquity, highlighting the many ancient practitioners including the central figure of Aristotle. It has defined the concept of persuasion reflected in this thesis and justified its use, highlighting the importance of language in the overall process. It also identified the research gap to be explored, centred on the persuasiveness of figurative language and its various categories of figures of speech in management communication. The chapter closed by identifying four research questions that have guided the research outlined in this thesis.

The next chapter explores the broad accumulated literature on persuasion, including Aristotle’s perspective and what it all means.
Chapter 2

Art of Persuasion

2.1 Preface

Chapter 1 explained the importance and history of persuasion, defining the concept and identifying the essential nature of the empirical research within this thesis. This chapter lays the essential groundwork for that research by exploring the broad accumulated literature on persuasion, commencing with a review of Aristotle’s seminal work 24 centuries ago. The chapter then considers modern developments and understanding in the field through the frame of the speaker, the message and the audience. This incorporates a speaker-centric journey into the core tenets of Aristotelian theory (i.e. credibility, emotion and logic), followed by a review of the key elements of a successful message. To understand the nature of audiences, a review of the social psychology of persuasion is then undertaken, highlighting the central role of beliefs and attitudes in that process. This is complemented with an examination of the differing ways people process information, leading to a discussion on the thinking orientation of individuals. Finally, the chapter closes with a précis about the overall art of persuasion.

In covering all this ground, the chapter aims to highlight the broader contextual art of persuasion through an Aristotelian lens, for a subsequent discussion in Chapter 3 on the specific role and power of figurative language. Both bodies of literature are then used to shape and inform the research undertaken within this thesis, with Chapter 3 also presenting the hypotheses and conceptual model involved.
2.2 Aristotle

Aristotle was one of the first researchers to theorise on the nature of persuasion. Standing in the footsteps of the Sophist20 tradition and influenced by his philosopher teacher Plato, Aristotle undertook the first scientific study of the persuasive art, completing a defining three-volume text (*On Rhetoric*)21 in the fourth century BCE (Aristotle 350 BCEa). This text complemented Aristotle’s other overlapping works on logic that his followers (the *Peripatetics*) subsequently came to view as a set they called the *Organon*22. “So comprehensive and fundamental were Aristotle’s views on rhetoric that it is no exaggeration to say that his treatise on the subject is the most important single work on persuasion ever written” (Golden et al 2004, p, 65).

Aristotle saw a broad dichotomy between rhetoric and dialectic, with rhetoric the art of persuasion and dialectic its counterpart, the art of reasoned discourse. The former was about presenting probable proof and arguments in popular terms for larger audiences, while the latter was about rigorous scientific exposition and teaching (generally for smaller audiences) (Golden et al 2004). Aristotle also recognised a formal separation between these two and demonstrative logic, evidenced by his separate writings on logic including such works as his *Analytics*23. He also wrote other texts on rhetoric and persuasion such as *Gryllus*, *Theodectea* and other ‘arts of rhetoric’ that have been lost to history (Freese 1926; Kennedy 1991). Across a broad range of subjects we now think of as separate disciplines

20 Sophists – Travelling educators who roamed through ancient Greece charging for lectures on topics including public speaking, debate and rhetorical eloquence. These early scholars focused on providing practical knowledge based on presentational style, persuasive tactics and oratory. By contrast, Plato saw true persuasive rhetoric as part of the deep philosophical pursuit of objective truth and justice through cogent rational thinking and argument. He denounced the Sophists’ pragmatic approach as eristic, superficial and dishonest – little more than ‘a form of flattery’ (Kennedy 1991) – essentially blaming them for the demagoguery whipped-up to persecute Socrates (469-399 BCE). Gorgias (483-378 BCE), Isocrates (436-338 BCE) and Protagoras (481-420 BCE) were three of the better-known Sophists who taught classes on oratory, placing considerable emphasis on style (Golden et al 2004; Perloff 2003; Toulmin 1982).

21 *On Rhetoric* – Aristotle’s treatise is not a well-organised textbook by modern standards but rather a collection of lecture notes he accumulated over a twelve-year period, with the surviving text suggesting only hasty revision. Different sections show signs of being addressed to different audiences, probably reflecting the differing contexts and times when the various notes and thoughts were compiled. Chapter 1 of Book 1, for example, appears to have been addressed originally to students who had completed a study of dialectic and is essentially inconsistent with what follows. The treatise also contains other inconsistencies, along with problems in terminology and interpretation. It is believed that Books I and II probably made up the whole treatise at one stage, with Book III a separate contemporaneous work (Golden et al 2004; Kennedy 1991).

22 *Organon* – The name (meaning ‘Instrument’) given by Aristotle’s followers, the *Peripatetics*, to the standard collection of six Aristotelian works on logic that included: *Categories*, *Prior Analytics*, *On Interpretation*, *Posterior Analytics*, *Topics* and *On Sophistical Refutations* (Smith 2007).

23 *Analytics* – Aristotle’s treatises on logical reasoning (i.e. *Prior and Posterior Analytics*) – refer Aristotle (350 BCEa and 350 BCEb).
and sciences, Aristotle wrote over 170 works, of which only 30 survive comprising some 2000 pages (Golden et al 2004).

For Aristotle, rhetoric was about finding the available means of persuasion and his early work—subsequently used and extended by other Classical rhetoricians such as Cicero and Quintilian—is still consistently cited today (e.g. Alexander, Buehl and Sperl 2001; Alvi and Baseer 2012; Chambliss and Garner 1996; Conger 1998a; Dillard 2010; Golden et al 2004; Hitchon 1997; McGuire 2000; Mason 2001; Murphy 2001; Perloff 2003; Petty and Cacioppo 1996; Price 2012; Toulmin 1982; Wood 2006).

At the centre of persuasion, Aristotle saw three essential pillars as shown in Figure 2. These involved: (1) ethos—the perceived character and therefore credibility of the speaker, (2) pathos—the power to arouse emotions and put the audience in the right frame of mind, and (3) logos—logical reasoning; the ability to prove the truth of the statements made through the quality and logic of the arguments (Aristotle 350 BCE, Book I). To do this, Aristotle saw the need to provide compelling proof (pistis) in each of the three areas and to match this with engaging language and expression (lexis), and a sensible orderly arrangement of the overall presentation (taxis).

He also identified three kinds of rhetoric for different situations, each requiring a different emphasis and approach—political rhetoric (deliberative discourse), forensic rhetoric (legal argument) and epideictic rhetoric (ceremonial oratory). He saw that persuasion involved a speaker, a message and an audience, and—consistent with Plato’s perspective—ought to serve the ethical interests of the listener in terms of their happiness and moral self-interest (i.e. goodness, utility and/or virtue).

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24 Epideictic rhetoric – Speeches that were essentially exhibition works intended to display what a writer was capable of; even with an unpromising topic. “They often functioned as advertisements for their author’s talents. The more unusual the position supported, and the better it was, the better the advertisement” Nehamas and Woodruff 1995, p. xvii
Aristotle argued that character (ethos) was comprised of three central elements: virtue (i.e. good ‘moral’ character and/or trustworthiness), practical wisdom (i.e. good sense, intelligence or expertise) and goodwill (Aristotle 350 BCE Book II; Fortenbaugh 2007, Golden et al 2004; Kennedy 1991). To be seen as credible a speaker needed to demonstrate all three during a presentation since, as Aristotle contended, prior standing, reputation or authority were essentially insufficient and irrelevant. In respect to virtue or ‘moral’ character, the concept did not carry the modern pseudo-religious connotation of righteousness. Rather, it referred to the speaker being fair-minded, able to be trusted and worthy of credence on matters where there was (or is) no absolute certainty (Kennedy 1991). Since all these character judgments needed to occur in the eyes of the audience, Aristotle also saw the need to tailor the arguments and ethos to suit the essential character of the audience. To do this he drew attention to the stereotypical character of different audiences, classified by age, birth, wealth, power and fortune.

Aristotle also recognised the significance of understanding the various emotions in detail as a way of understanding the audience more fully and knowing how to promote the right mood or response (pathos). He saw emotions as the essential conditioners of judgment and, as such, recognised that they were tied to rational evaluations and judgments of situations (Konstan 2007). He therefore recognised the need to shape ‘pathetic’ (i.e. pathos-imbued) arguments to achieve the necessary emotional state of mind to be successful.

In proving the truth of an argument, Aristotle invented two exclusive modes of logical reasoning (logos) still used today, which involve:

1. **Induction**—giving examples (i.e. historical or invented cases, pointed stories such as Aesop’s fables, or illustrative parallels and analogies), and
2. **Deduction**—using enthymemes

While enthymemes are now seen as arguments with missing premises, missing conclusions or both (Baronett 2012), Aristotle used the term to mean a syllogism in which the premises were only generally or probably true, rather than absolutely true—i.e. a rhetorical or probable syllogism (Golden et al 2004; Lanham 1991).

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25 Syllogism – An argument comprising a major premise, a minor premise and a deduced conclusion. In practice however, both enthymemes and syllogisms do not always need to explicitly state all the premises if some can be implied or easily assumed or inferred by an audience (Kennedy 1991)
“Everyone who effects persuasion through proof does in fact use either enthymemes or examples: there is no other way” (Aristotle 350 BCE, Book I, Part 2). Aristotle identified that inductive reasoning was more convincing and clear, and better suited to mass audiences and younger minds (i.e. those that are less mature, focused or critical), while deductive reasoning was more forceful and effective against experts and those prone to debate or challenge ideas and arguments (Aristotle 350 BCE). For this reason, he also viewed inductive reasoning as ‘highly suited’ to deliberative discourse, while deductive reasoning was better suited to forensic legal argument (Aristotle 350 BCE, Book III).

In addition, Aristotle identified two types of enthymeme (i.e. demonstrative and refutative), recognising that audiences like refutative enthymemes better since the required contrast in explanation made the argument briefer and clearer to grasp. He also identified the benefit of following an enthymeme with a single good example as additional supplementary evidence—in effect using deduction and induction collaboratively. Enthymemes are essentially formed from premises based on probabilities or signs (Aristotle 350 BCE; Golden et al 2004). Probabilities are propositions containing an indication of cause (i.e. factors that support their likelihood) while signs are propositions with physical evidence or reasons for a particular fact. Enthymemes can also involve premises that are indirectly drawn from examples. “…enthymemes taken from examples are those which proceed by induction from one or more cases until the speaker abstracts a general rule, after which he argues to the case in point” (Golden et al 2004, p. 67). In other words, general rules drawn from examples by inductive reasoning can then be used as premises in enthymemes for further deductive reasoning. Aristotle also identified standard lines of argument (i.e. reasoning strategies) of which he identified 28 valid and 9 invalid types (see Appendix 1). One of these lines of argument is (or was) combined with a premise on a topic to form an enthymeme (Golden et al 2004).

In furnishing proof (pistis) to support a claim, Aristotle distinguished between two different archetypal forms: artistic and non-artistic proofs. Artistic (or artificial) proof involved rhetorical evidence (i.e. compelling reasons) or arguments created by the speaker, while non-artistic (or inartificial) proof involved laws, witnesses or contracts that existed separately, prior to the speaker saying a word. For Aristotle, only artistic proof was associated with

26 Topic (topos) – Refers to either a specific or universal subject or ‘commonplace’. A commonplace is a useful set-piece argument or dissertation on a general theme that a speaker can memorise and insert into differing speeches for a variety of occasions (Lanham 1991). An example would be a short rehearsed talk on a universal theme such as honour, justice or family which can then be interwoven into a variety of speeches on broader topics as particular occasions require.
true rhetorical persuasion, although it was apparently common at the time for non-artistic proof to be used to punctuate a speech or make vicarious points concerning the character of an opponent (de Brauw 2007), rather than constitute compelling evidence in its own right.

On the issue of engaging language (lexis)—what John Quincy Adams later called eloquence and López Eire (2007) might perceive as ‘rhetoricity’—Aristotle recognised the critical importance of style and expression in successfully conveying ideas; identifying that the speaker needed to focus on how facts could be used persuasively and then to express them in an effective enchanting manner (Aristotle 350 BCEd, Book III). He extolled the virtue of epigrams, maxims and proverbs—all of which are shortened enthymemes (Kennedy 1991)—as well as varying techniques of language and vocal delivery to express emotion (e.g. volume, modulation and rhythm). He emphasised the use of clear everyday words presented with an unfamiliar air or framing and saw the usefulness of occasional ‘stately’ words to surprise and delight the listener. The goal was always to achieve a ‘naturalness of language’ that was also interesting and distinctive. Above all, Aristotle saw the immense power of figurative language, forms such as actuality, analogies, anaphora, antitheses, epithets, homoioteleuton, hyperbole, irony, jokes, parison, paromoeosis, riddles and importantly, metaphors and synonyms. “Metaphor, moreover, gives style clearness, charm and distinction as nothing else can” (Aristotle 350 BCEd, Book III, Part 2). But to be effective, a metaphor must be appropriate, subtle and pleasing. “The materials of metaphor must be beautiful to the ear, to the understanding, to the eye or some other physical sense” (Aristotle 350 BCEd, Book III, Part 2). To pay a compliment, Aristotle advocated taking a metaphor from something better in the same line or class of words; to disparage, from something worse (e.g. begs becomes prays and prays becomes begs).

27 Epigram – A witty saying  
28 Stately words – Known but unusual words free from meanness and adornment  
29 Actuality – Words and language that paint a vivid mental picture  
30 Anaphora – Repetition of the same opening word or phrase in successive clauses  
31 Antithesis – Conjoined opposites (i.e. contrasting/opposite ideas or concepts) in a sentence or phrase  
32 Epithet – Adjective that expresses a transforming quality or attribute to a term  
33 Homoioteleuton – Use of similar endings to words, phrases or sentences  
34 Parison – Clauses or phrases of approximately the same length  
35 Paromoeosis – Parallelism of sound in the words of two parisons
To make language more impressive and engaging, Aristotle suggested describing a thing instead of naming it outright, carefully using metaphors and epithets, deploying plurality for singularity, expanding or contracting phrases for effect, controlling the use of connecting words (eliminating them for conciseness) and attributing grand or hypothetical qualities to people or situations, without going over the top. To bring language alive he advocated the use of proportional metaphors with vivid language (i.e. actuality) that described things in a state of activity or movement (energeia). Above all, he advocated that language must be appropriate to the situation and emotional tone being conveyed and have a sense of rhythm. Importantly, he observed the virtue of concise, easy sentences and noted that an inappropriately placed short clause or short sentence within a paragraph upsets the tempo of delivery and can make the listener stumble mentally.

In addition, he recognised the merit of presenting arguments in rhetorical periods. Periods concentrate thoughts and facilitate repetition, while suspending their meaning until the overall passage is complete. They offer a good structure for presenting antitheses or, through a series of ascending clauses, for building to a climax within a single sentence. They are also particularly effective when containing metaphors and allow interest and pleasure to be piqued by the presentation, harmony and rhythm achieved (Downey 1997).

While linguistic success depends on bringing it all together, Aristotle identified four common mistakes to avoid—all reflecting what he called ‘bad taste in language’:

1. The use of awkward compound words (that jar the senses or sound artificial)
2. The use of strange words that distract or confuse the listener
3. The overuse of epithets
4. The use of poor, far-fetched or ridiculous metaphors

In respect to taxis—the overall arrangement of a message—Aristotle identified four distinct parts: the proem, statement, argument and epilogue (Aristotle 350 BCEd, Book III), of which he saw the middle two as the core requirements. The proem (or introduction) presents the topic and aim of the speech; the statement narrates what happened or the facts or matter at question; the argument presents the compelling proofs (i.e. evidence, reasoning

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36 Rhetorical period – Effectively a long structured sentence involving a series of clauses – often offset or antithetical to one another – which are separated into subdivisions by commas or semi-colons. Each rhetorical period offers multiple lines of reasoning to present a complete thought on a topic. The overall arrangement creates a mild suspense until the whole sentence is presented and, with others in a speech, builds into larger patterns of reasoning with hierarchical or antithetical balance (Kennedy 1991; Lanham 1991)
or examples)—as well as refuting the opponent’s case—and the epilogue (or conclusion) tenders the closing summary. The latter, for Aristotle, should always be aimed at:

- Making the audience feel well disposed towards the speaker and ill disposed towards any opponent
- Magnifying or minimising the leading facts to suit the speaker’s position
- Exciting the required emotional state in the audience
- Refreshing listeners’ memories of what was said

Modern scholars (e.g. Freese 1926; Golden et al 2004; Kennedy 1991; Perloff 2003) credit Aristotle as the creator of the first systematic and scientific art of persuasion, while John Quincy Adams dubbed him the ‘great father of the science’ (Downey 1997) and López Eire (2007) saw him as ‘the zenith’ of Greek rhetoric. Perloff observes that Aristotle’s forensic treatment of the topic mirrored his earlier training and work in biology, with his detailed observational approach to enquiry and taxonomic treatment of the subject. This is evident in the clear categorical style and method Aristotle used to capture the key elements of the art, with various classifications and divisions that included such things as the types of rhetoric; modes of persuasion; topics for deliberation; types of enthymemes; constituents of happiness, utility and goodness; analysis of virtues; forms of government; kinds of emotion; types of proof and so on. Despite this structured scientific approach, and notwithstanding how insightful it is, Aristotle’s seminal work harbours an important limitation—it was not developed with the goal of experimental verification in mind (Hawking and Mlodinow 2010) or supported by documented research or evidence to substantiate his thinking. This however is faint criticism—his foundational contribution to the birth of the scientific method, his original enduring ideas on persuasion, the fragmented nature of his surviving work and the consistent citation of his views all stand testament to Aristotle’s immense contribution to the field and the abiding legacy he bequeathed the modern world. As Golden et al (2004) points out, Aristotle covered the field so broadly that modern writers inevitably become constant borrowers. Or as

Kennedy (1991) records other limitations evident in On Rhetoric that included such things as: • its narrow focus on public address, • the failure to accept the impact of a speaker’s prior character or reputation in the concept of ethos, • the poorer discussion of ethos and pathos (as opposed to logos) and the lack of illustrations of both concepts, • the absence of a method for determining the question at issue (as subsequently supplied by stasis theory), • the inconsistent use of key terms such as pithis and topas, • the failure to take a strong stand against the then common preference for circumstantial evidence over direct evidence provided through documents and witnesses, • the treatment of style (i.e. language) as secondary to content, • the unnecessarily sharp distinction between rhetoric and poetics, • the higher status given to dialectic over rhetoric, and • the failure to more fully discuss the role of rhetoric in society as a means of securing a good life and human happiness.
McGuire (2000) puts it, the Ancients (including Aristotle), asked interesting questions and suggested interesting answers, leaving us with dissertations that provide rich insights into the persuasive art.

But what about more recent research? What has the work since Aristotle’s time told us about the art of persuasion? Both of these questions are now explored within the frame of the speaker, the message and the audience.

2.3 Characteristics of the Speaker

Aristotle recognised that persuasion inherently involved a speaker, a message and an audience, with credibility, emotion and logic the essential ingredients and goals of the speaker. Since being formulated in the fourth century BCE, subsequent scholars have confirmed the individual importance of each element and the critical role of the speaker in pursuing them.

2.3.1 Credibility

“…credibility is the cornerstone of effective persuading; without it, a persuader won’t be given the time of day” (Conger 1999, p.20).

Aristotle argued that credibility was derived exclusively by what a speaker said, rather than by what people thought of his or her character beforehand. Character, he said, needed to emerge within a presentation. Despite this, and notwithstanding how critical derived credibility is, most modern scholars (reminiscent of Roman forebears\(^\text{38}\)) now see the importance of prior credibility in establishing the preconditions needed to get a hearing and make a positive impression (Conger 1998b; Conger 1998c; Leathers 1992; Mayo and Jarvis 1992; O’Keefe 2002; Petty and Cacioppo 1986; Wood 2006). “…without [initial] integrity, even the most articulate people are unable to establish the conditions needed to influence and persuade” (Mayo and Jarvis 1992, p. 5). O’Keefe (2002) also highlights empirical studies showing that qualifications and education enhance prior credibility by raising perceptions of trustworthiness and, in particular, competence.

Levine (2003) argues that more than any other quality, listeners trust people they like—they respect them, they identify with them and they want to please them by agreeing with their

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\(^{38}\) Roman scholars such as Quintillian emphasised the importance of a speaker’s general standing and prior reputation as a ‘good man’ (i.e. a person free from vice, a lover of wisdom, a sincere believer in the cause advocated and a servant of the state and people) (Golden et al 2004)
expectations and requests. Above all, they find it convenient to do so. Perceived
communicator attractiveness and similarity are two of the key attributes or cues that lead to
increased likeability, although when the issue concerns deeply held attitudes or factual
matters that evoke deep thinking, attractiveness and similarity may not be as persuasive as
expert knowledge (Perloff 2003). Similarly, O’Keefe (2002) notes research showing that
the persuasive effect of likeability is reduced as involvement (i.e. deep thinking) increases
and that, where a conflict exists between likeability and credibility (competence), the
credibility judgement prevails.

Conger (1998a, 1998b) and Wood (2006) all see the importance of building credibility by
establishing common ground, showing how what a speaker says benefits an audience,
presenting examples, identifying sources of support and demonstrating care for listeners.
Wood argues that credibility is built around four key dimensions: goodwill, expertise,
trustworthiness (i.e. the Aristotelian trilogy) and dynamism.

Other authors collectively take a wider view on the range of variables that contribute to
perceived credibility—qualities such as commitment, character, enthusiasm, expertise,
dynamism, integrity, likeability, goodwill, relationships, subject knowledge, trust and
expectations (e.g. Conger 1998b; Levine 2003; Mills 1999; O’Keefe 2002; Petty and
Cacioppo 1996). However, Leathers (1992) and O’Keefe (2002) both highlight studies that
consistently show most of these factors loading onto two clear dimensions: trustworthiness
and competence; mirroring the seminal work by McCroskey (1966), McCroskey and
Dunham (1966) and, of course, Aristotle.

In an attempt to substantiate the third Aristotelian concept of goodwill (i.e. perceived
caring for the interests of listeners), McCroskey and Teven (1999) undertook a
confirmatory study using oblique factor analysis that did show trustworthiness, competence
and goodwill as core inter-related ingredients in the persuasion process. However, the study
also showed that the three factors were highly correlated (particularly goodwill and
trustworthiness) and avoided the orthogonal rotation used by other researchers to
determine uncorrelated factors. In addition, the authors did not assess appropriate
statistics to confirm convergent and discriminant validity—for example, the average
variance extracted compared with accepted minimums or the squared correlation between
the constructs, as advocated by Fornell and Larcker (1981). Consequently, the usefulness
of the finding was limited.
2.3.2 Emotion

“When you express a feeling, you run a risk—you might be rejected. If you do not communicate any emotion, you avoid the risk of rejection, but you run a different type of risk—you might not be trusted” (Leathers 1992, p. 252).

Aristotle recognised the importance of emotions as conditioners of judgment (Konstan 2007) and therefore the need to get listeners in the right emotional frame of mind, what John Quincy Adams called stirring ‘the tempests of the soul’ (Downey 1997). To do that, Aristotle saw the need to understand the different emotions in detail—their essential qualities and characteristics, as well as how, when and where they occur—devoting a large part of Book II of his Rhetoric trilogy to the subject. He also emphasised the need to provide dedicated ‘pathetic proofs’ and evidence aimed at convincing an audience emotionally. Quintilian later complemented this by observing that the best way to stir the emotions in others was for the speaker to first feel those emotions themselves (by mentally empathising with the situation) and then project them in the course of his or her delivery (Quintilian circa 95, Book V).

Modern scholars have confirmed that people tend to be led by their emotions and feelings (e.g. Conger 1998b; DeSteno et al 2004; Epstein 1994; Goleman 1995; Murphy 2001). This occurs in large part because emotions facilitate quick judgements and because behaviour is influenced by learned beliefs and attitudes which themselves commonly have emotional underpinnings (O’Keefe 2002; Perloff 2003). Importantly, emotions bias how well or poorly information is processed. “… when it comes to shaping our decisions and our actions, feelings count every bit as much—and often more—than thought.” (Goleman 1995, p. 4). Moreover, the more intense the feelings, the more dominant the emotional mind becomes in forming judgements and the less reliance there is on rational thinking. At its extreme, during emotional emergencies, humans are hard-wired through the amygdalae\(^{39}\) to defer to the emotional mind (Goleman 1995).

Conger (1998a) observes that emotions provide evidence of a speaker’s own level of commitment to an advocated position. Moreover, this emotional evidence (or ‘pathetic proof’ to use the Aristotelian term) occurs in a way and with intuitive resonance that logical arguments find hard to replicate. In stirring the emotions, “The power of imagination

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\(^{39}\) Amygdalae—the almond-shaped clusters of interconnected neurons within the limbic system of the brain (one on each hemisphere) that are involved in many of a person’s emotions and motivations, particularly those related to survival (Goleman 1995)
furnishes a substitute for the evidence of all the senses … [and enforces belief]” (Downey 1997, Vol. I, p. 383). Emotions also play to the natural predisposition of people to think experientially (Epstein 1994) and are difficult to challenge (Guerin 2003).

Visual cues (e.g. facial expressions, gestures and postures) provide the primary source of emotional meaning in a conversation for both the speaker and the audience, and are preferentially used to judge an argument whenever there is conflict between them and the verbal message (Leathers 1992). Moreover, people trust others more when they show their emotions through their faces (Huczynski 2004) and they (recipients of a message) use their own feelings as cues to guide their judgements and decisions (Slovic et al 2002).

Good persuaders are aware of the emotional state of an audience and adjust the tone of their arguments accordingly (Conger 1998b; DeSteno et al 2004). Moreover, they actively develop their own emotional intelligence (Goleman 1995), honing their capacity to pick up on and process emotional information and feedback to enhance reasoning (Brackett and Salovey 2007). Emotional intelligence refers to the processes involved in recognising, understanding, using and managing one’s own emotions and the emotional states of others to regulate behaviour and optimise inter-personal encounters and situations (Goleman 1995).

A broader emotional connection with an audience can be enhanced by personalising the issue, appealing to listeners’ needs and values, and bringing material alive with vivid language and aids (Wood 2006). The latter can also involve deploying engaging figurative language, which is the subject of this thesis.

In addition, stories and well-chosen allegories (also forms of figurative language) can play a useful part in bringing material alive and personalising issues. They allow listeners to associate with the characters or issues in a situation and, in doing so, to ‘experience’ the events by proxy, along with the associated emotional responses (Bruner 1986; Conger 1998a). This is analogous to the ‘imagined contact proposition’ (Crisp and Turner 2009) and the positive perceptions and emotions those mental experiences evoke. Moreover, since people have a higher regard for information they generate themselves through experience, than they do for information that originates externally (Petty and Cacioppo 1996), virtual or vicarious ‘experience’ achieved through relevant stories or imagery is intrinsically more appealing than lectures and technical evidence (Epstein 1994). For maximum sustained effect, however, emotional appeals always need to be supported with
logical reasoning. “Relying on emotions alone to convince others will cause your listener to feel manipulated or give him [or her] the impression you act without thinking. You must always have a foundation of good reasons and evidence underpinning your emotional appeals” (Conger 1998a, p. 148).

2.3.3 Logic

Aristotle’s concept of *logos* reflected two exclusive modes of reasoning: induction based on examples and deduction based on enthymemes. This approach, founded by Aristotle in his *Prior Analytics* (Kennedy 1963), was subsequently enriched by Roman orators, the calibre of Cicero and Quintilian, who recognised and embraced a further critical element termed *stasis* (Golden et al 2004)—the invention of which is attributed to the Greek rhetorician Hermagoras of Temnos (Braet 1999; Kennedy 1991; Marsh 2006). In essence, *stasis* refers to the crux of an issue or turning point on which a logical argument would hinge. It is what John Quincy Adams referred to as the state or cause of the controversy. “It is the mark at which all the speaker’s discourse aims; the focus towards which all the rays of his eloquence should converge …” (Downey 1997, Vol. I, p. 187). Identifying the turning point in an argument or proposition basically requires a critical analysis of the situation in terms of factors such as cause, place, time, manner, means and motive (Clark 1957, Quintilian circa 95). Establishing the *stasis* issue(s) carefully, allows a speaker to determine and shape the reasoning and contents of a speech for maximum convergent impact.

Modern logicians (e.g. Baronett 2012; Bowell and Kemp 2002; Govier 2005; Pfäeander 2009; Salmon 1984) continue to recognise the central importance of induction and deduction to logic and critical reasoning. In doing so, they emphasise the significance of crucial elements such as the validity and reliability of concepts and ideas, conditional qualifiers, probability, language, standards of proof, fallacies and the proper construction and evaluation of arguments. Other scholars focus more on the allied fields of deductive mathematical logic (e.g. Keisler et al 1977) and philosophical logic (Sider 2010).

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40 *Prior Analytics* – Aristotle’s treatise on syllogistic logic, as opposed to *Posterior Analytics* which is his treatise on the structure and rules of a science, or body of scientific knowledge, as a deductive system (Aristotle 350 BCEb, 350 BCEa)

41 Hermagoras of Temnos – Greek rhetorician of the Rhodian school and teacher of oratory in Rome during the first half of the first century BCE. Hermagoras devoted himself to the *inventio* branch of rhetoric (i.e. the *invention* of artistic proofs or arguments) and is said to have created the doctrine of the four *staseis* based on questioning the fact, definition, quality and jurisdiction (Golden et al 2004, Smith 1853; Worthington 2007)
While recognising the traditional Aristotelian options of inductive and deductive reasoning, modern rhetorical authors (e.g. Golden et al 2004; Wood 2006) also highlight other approaches such as Toulmin Structural Model of Practical Reasoning (Toulmin, Rieke and Janik 1984). For them, the Toulmin framework and approach offers extra scope for enhancing rhetorical logic consistent with the Aristotelian concept of *logos*, albeit Golden et al see Toulmin’s perspective as primarily a way of knowing (i.e. developing knowledge) rather than persuading. The Toulmin Structural Model of Practical Reasoning essentially tests each aspect of an argument against six key elements:

1. **Data**—the empirical evidence from which claims are drawn
2. **Claims**—assertions or conclusions believed to be supported by the data
3. **Warrants**—arguments that justify the relevance of claims from the data
4. **Backing**—additional information or credentials that certify or confirm the warrants
5. **Rebuttals**—refutations, specified conditions or arguments on which possible or anticipated objections concerning the data, claims or warrants can be challenged
6. **Qualifiers**—the degree of confidence or limitations attached to claims, given the substance of the backing and rebuttals

Dunn (1990) notes that the first three elements (*data, claims and warrants*) parallel those of Classical syllogism in that they involve a major premise, a minor premise and a consequent conclusion. However, since Toulmin’s model is essentially aimed at exploring arguments that fall short of deductive or inductive certainty—a practice reminiscent of Aristotle’s concept of ‘enthymeme’ and something Toulmin termed ‘substantive logic’) —it includes three additional elements (*backing, rebuttals and qualifiers*) to test other arguments and evidence that might help prove or disprove an uncertain premise. Brockriede and Ehninger (2004) highlight that any or all of these additional elements may, but need not necessarily, be present in an overall argument, depending on the situation.

Perelman (1970) also offered enduring complementary thoughts on practical reasoning, emphasising the need to *create presence* and *structure arguments* effectively. *Creating presence* involves highlighting the key (*stasis*) issues or aspects and increasing the significance and immediacy of these in the minds of listeners. *Effectively structuring arguments* involves adapting the reasoning to the audience, both in terms of the audience’s initial character, as well as how its temperament might evolve during a speech. It also requires a speaker to start from common ground and draw the audience link-by-link to the desired conclusions through the association or dissociation of ideas. In practice, this can mean the reinterpretation of facts or using definitions, distinctions or examples to advance a
particular perspective or identify an underlying reality. Significantly, figurative language is often a key strategy for creating presence and structuring arguments effectively.

In arguing a case, Toulmin, Rieke and Janik (1984) identify five archetypal fallacies to avoid—i.e. those that result from (1) missing grounds, (2) irrelevant grounds, (3) defective grounds, (4) unwarranted assumptions and (5) ambiguities in argument. Wood (2006) expands these, highlighting eight common mistakes for speakers to avoid in presentations, as shown in Table 2.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ad Hominem arguments</td>
<td>Playing the man not the ball (e.g. character assassination)</td>
</tr>
<tr>
<td>2. Post hoc, ergo propter hoc</td>
<td>“after this, therefore because of this”</td>
</tr>
<tr>
<td>3. Bandwagon appeal</td>
<td>Asking listeners to suspend reason and follow the crowd</td>
</tr>
<tr>
<td>4. Reduction to absurdity</td>
<td>Pushing an idea too far, until it becomes ridiculous</td>
</tr>
<tr>
<td>5. Hasty generalisation</td>
<td>Broad claim based on insufficient examples or evidence</td>
</tr>
<tr>
<td>6. Red herring argument</td>
<td>Irrelevant argument distracting from the main point</td>
</tr>
<tr>
<td>7. ‘Either/or’ logic (i.e. false dilemma)</td>
<td>Restricting consideration to two ‘black and white’ options</td>
</tr>
<tr>
<td>8. Reliance on the halo effect</td>
<td>Generalising a person’s authority or expertise in one field to a completely unrelated field</td>
</tr>
</tbody>
</table>


Moreover, in scrutinising each aspect of an argument against a robust framework, Toulmin’s approach offers two important benefits for the rhetorician:

1. A relevant structural model for laying-open rhetorical arguments for analysis and criticism
2. A suggested system for classifying underlying proofs (evidence) that employs argument as a central and unifying construct (Brockriede and Ehninger 2004)

It also offers a deeper, more extensive approach to reasoning than that based solely on syllogisms or enthymemes.

Other scholars of logic (e.g. Bowell and Kemp 2002; Govier 2005; Salmon 1984) offer further detail, identifying additional specific fallacies that include using anecdotal arguments, offering majority opinion as proof, citing common practice, making ‘you too’ appeals, conflating differing concepts, appealing to authority as proof, using weak analogies, mistaking correlation with cause, arguing ‘guilt by association’, confusing cause and effect, appealing to ignorance, using equivocation or vagueness, citing the ‘slippery slope’ as argument, using circular logic that ‘begs the question’, exploiting stereotypes, misusing statistics and so on. Baronett (2012) cites 27 individual ‘informal fallacies’ of relevance, unwarranted assumptions and ambiguity or diversion.
Echoing Plato’s condemnation of rhetorical technique over the pursuit of truth, Campbell (1982), Conger (1991), Kelly (1980) and MacRae (1987) all highlight the capacity for the truth (or proximate truth) to be overtaken by mere persuasive arguments under Toulmin’s model. Guerin (2003) goes further, seeing the rhetorical use of logic per se as a contrived consistency strategy where truth is only as good as the premises of the argument. “… if the listener is made to concentrate on the form [and consistency] of the logic, then attention is drawn away from the truth of the premises. The use of logic distracts us from the truth of the (often dubious) premises given” (Guerin, 2003, p. 258).

In the end, as Aristotle believed, rhetorical persuasion is morally neutral; it can be used for good or bad (Espy 1983; Kennedy 1991). Since all good things other than virtue can be misused, the best defence is to study both sides of a question, not only to know the whole picture, but also to be better able to refute dishonest arguments should they arise (Aristotle 350 BCEd).

Within the varying perspectives of logic examined here, this study adopts a general approach based on critical thinking around the perceived core stasis issues, festooned with rhetorical language. Doing so means embracing Aristotle’s structure of examples and enthymemes as vehicles for argument, along with modern standards about the nature of valid reasoning, and the need to avoid common fallacies. Toulmin’s (six-element) Structural Model of Practical Reasoning is also considered in Chapter 4 as a potential framework for the test material deployed within this study.

2.4 Message Qualities

Effective persuasion inevitably involves the quality of the message and how effectively the arguments and evidence are marshalled and conveyed (Perloff 2003). Aristotle emphasised that the fundamental persuasiveness of a message lay with the three aspects of pittis, lexis and taxis (proof, expression and arrangement). It is now known that a variety of tactical considerations beyond the quality of the arguments and evidence also affect how a message is received and processed, and its overall persuasiveness. These include core message qualities such as language, comprehensibility, framing, information types, source, one versus two-sided arguments, delivery styles and response to resistance, as discussed below (Chaiken and Trope 1999; Conger 1988a; Hosman 2002; Knowles, Nolan and Riner 2007; Leathers 1992; O’Keefe 2002; Perloff 2003; Petty and Cacioppo 1986, 1996; Wood 2006).
Language

Consistent with Aristotle’s perspective of *lexis*, the words and language used to express ideas and arguments, and the relative eloquence achieved, remains one of the key elements of a persuasive message (Hosman 2002; Perloff 2003; Spence 2013). It affects judgements of the speaker, the comprehension and recall of a message and general listener attitudes towards that message (Hosman 2002). While simple syntax is generally better than complex syntax, active voice is better than passive voice and positively worded statements are better than negatively worded statements (Jacoby, Nelson and Hoyer 1982; Lowrey 1998; Motes, Hilton and Fielden 1992), the choice of words is important as a frame for how listeners perceive and process a message (Chomsky 2002; Herman and Chomsky 1988; Pearson et al 2011; Perloff 2003; Sullivan 2013).

The richness of the vocabulary also enhances perceptions of a speaker’s credibility provided it matches the vernacular of the audience and the requirements of the situation (Conger 1998a). Language intensity (i.e. the use of emotionally charged words, metaphors and strong vivid language) can be persuasive as well (Conger 1991; Perloff 2003) by enhancing perceived dynamism through increased perceptions of source competence and trustworthiness (Hamilton and Hunter 1998). This can encourage listeners to pay more attention to a speaker’s message and thereby enhance persuasiveness, provided the speaker is seen as credible and not advocating an extreme position relative to that of listeners, and provided the listeners are not too ego-involved (i.e. committed) with their own position.

Powerless speech (i.e. speech involving hesitations, hedges, tags and disclaimers) is generally seen as less persuasive and less credible than powerful speech (Erikson et al 1978; Gibbons, Busch and Bradac 1991; Perloff 2003; Sparks, Areni and Cox 1998). Delivery speed too, can on its own influence perceptions and attitudes depending on the context. Fast and/or moderately fast speakers can be seen as intelligent, confident and more effective, particularly in low involvement situations (Miller et al 1976), while a slower rate of speech can help convey concern, empathy and goodwill where the message involves sensitive issues (Giles and Street 1985; Ray, Ray and Zahn 1991). Otherwise, a slower than normal rate of speech can make a speaker seem anxious (Leathers 1992) or boring.

Finally, effective language can also involve the use of rich figurative expressions which is the subject of the next chapter.
**Comprehensibility of the Message**

To be effective, a message also needs to be shaped and communicated in a way where the audience can easily understand its meaning and personal relevance (Alexander and Jetton 1996; Dole and Sinatra 1994; Murphy 2001; Petty and Cacioppo 1996). Since comprehensibility depends on the background knowledge and ability of the listener, it is critical to know the audience and adjust the information in the message accordingly.

**Framing**

How a proposal is framed also affects its persuasiveness (Conger 1998a; Elsbach and Elofson 2000; Fairhurst and Sarr 1996; Gibbs 2006; Levine 2003; Mills 1999 and Perloff 2003). Framing is a technique that affects the perspective from which an issue is seen and/or judged by others; it is used to emphasise particular aspects and de-emphasise or ignore others (Templeton 2011). Conger views framing as an inherent search for common ground and shared advantage based on understanding the audience and establishing joint positions in respect to shared goals and rewards, shared values and beliefs and shared language. Doing so, for Conger, enhances a speaker’s credibility by demonstrating that he or she is not the prisoner of their own perspective since the advocated position is shown to fulfil common interests and objectives. “Effective persuaders use framing to talk about the audience’s interests and create common ground” (Spears 2009).

Fairhurst and Sarr (1996), Gibbs (2006), Mills (1999) and Perloff (2003) and Sullivan (2013) all see the specific value of metaphors as frames for how speakers choose to present ideas and/or tailor a message. Fairhurst and Sarr see stories, spin and jargon as forms of framing too. Fisher, Ury and Patton (1991) argue the importance of sequencing, placing interests and reasoning ahead of conclusions or proposals when communicating a message, which in its own way is a form of interest-based or positive framing. Elsbach and Elofson (2000) see framing as helping to shape perceptual cues while Levine (2003) highlights the importance of positive framing generally.

Importantly, strategic issue framing can repackage an existing issue so that new aspects and considerations can be given primacy over previous ones, without challenging a listener’s original preference or beliefs (Templeton 2011).
**Information Type and Consistency**

Quantitative information in a message is easier to encode, recall and use in making judgements than verbal information (Viswanathan and Childers 1996). In addition, consistency between the source of a message, information type (quantitative versus qualitative) and the reference point that listeners use to decode information, helps to maximise the persuasiveness of a message (Ruth and York 2004).

**Source of the Message**

The credibility of a message is greatly enhanced when statements or information emanate from, or are attributable to, a highly credible source (Chaiken and Trope 1999; Hovland, Janis and Kelly 1953; Petty and Cacioppo 1986). In addition, the credibility of a message is improved when it is seen as unbiased and the author or speaker is perceived as an expert (Hovland, Janis and Kelly 1953). Consistent with Aristotle’s view, the authors also found that a message needed to stimulate the emotions of the listener to be successful, while Dole and Sinatra (1994) confirmed that the level of interest a receiver perceived in a message was a significant predictor of persuasion. Petty and Cacioppo (1996) also point out that using dissimilar sources to apparently cross-verify facts helps make an argument more credible and persuasive.

**One Versus Two-sided Arguments**

Prior knowledge also affects persuasion and the more prior knowledge an audience has, the more likely that presenting both sides of an argument will prove more persuasive than simply advocating the one side (Alexander et al 1998; Allen 1991; O’Keefe 2002; Petty and Cacioppo 1986, 1996; Wood 2006). Presenting both sides of an argument is useful for inoculating listeners to the ideas and reasoning of opponents, particularly where the alternate position may have appealing aspects or dimensions that need to be countered (McGuire 1964; Petty and Cacioppo 1996). Inoculation in this manner can also help sure-up attitudes while equipping listeners with the information, ability and motivation needed to resist and counter-argue alternative positions (Barden and Petty 2012). Levine (2003) notes that speakers who present both sides of an argument are generally perceived as less partial and more trustworthy, especially if they give the impression they are arguing against their own self-interest. In the dialectic tradition, exploring all arguments can also help strengthen a speaker’s reasoning and position (Bowell and Kemp 2002; Salmon 1984).
**Delivery**

The general tone, stance and delivery of a message, including the nature and extent of non-verbal cues, all affect how it is perceived and processed. DeGroot et al (2011) highlights the role of vocal attractiveness (pitch, pitch variability, amplitude variability, pauses and speech rate) on perceptions of leadership effectiveness while Mino (1996) observes the role that vocal delivery (i.e. clarity and articulation) plays in influencing perceptions. Hall (1980) identifies the impact of perceived ‘expressiveness’ on persuasion. In addition, numerous researchers (e.g. Burgoon, Dunbar and Segrin 2002; Fox and Spector 2000; Gabbott and Hogg 2000; Leathers 1992) have confirmed the enduring importance of non-verbal cues (body language) as powerful forms of communication. They are complex and multi channelled (Leathers 1992, Wood 2006), incorporating such things as eye movements (e.g. eye contact, blink rate, mutual gaze), facial movements (e.g. smiles, expressions, lip-moistening), gestures (e.g. hand movements, hand-to-face gestures, fidgeting, hand-wringing, head-nodding), posture (e.g. stance, changes in position, body movements, orientation) and vocal qualities (e.g. speech rate, pitch, tone, volume, range, modulation, fluency, resonance). Of all non-verbal cues, Leathers (1992) identifies the primacy of eye behaviours in the development of personal credibility and trust, while Burgoon, Dunbar and Segrin (2002) confirm their pre-eminence as cues of liking and attractiveness. Eyes essentially reflect brain activity and move around as people think (Huczynski 2004), with more eye contact being associated with increasing perceptions of a speaker as alert, dependable, confident and responsible (Glaser and Smalley 1992). However, it is important not to stare or overdo eye contact.

“If you want to convey your interest, intensity, seriousness and self-confidence, you should fix your gaze in the triangle bounded by the person’s eyes and nose. Maintain eye contact for about 60 per cent of your total interaction time with them. Less than that and you will be interpreted as shifty, uneasy and lacking in confidence; longer than that, and you will be seen as aggressive (Huczynski 2004, p. 24).

Non-verbal cues also convey perceptions about a speaker’s confidence, likeability, trustworthiness and dynamism, which all affect perceptions of credibility. So much so that when a conflict exists between a speaker’s verbal message and his or her body language, the audience will invariably believe the body language (Huczynski 2004; Leathers 1992; Wood 2006). In essence, “… non-verbal communication is perceived as more honest” (Wood 2006, p. 149).
Overcoming Resistance

Being persuasive in a message is as much about dealing with resistance, as it is crafting cleaver language. Knowles, Nolan and Riner (2007) identify three typical areas of resistance: scepticism, reactance and inertia. Scepticism refers to doubts about the message and associated logic and arguments presented while reactance refers to resentment at being told what to do or think, often accompanied by feelings of undue pressure or manipulation. Inertia on the other hand refers to entrenched resistance to change. The authors note that a common response by speakers when encountering resistance is to indulge in quarrelsome debate which rarely works and generally creates reactance. Instead, they suggest a number of more positive strategies that include:

- **Scepticism**—providing a guarantee to address any adverse outcome; asking that the matter be considered for the future, or framing and/or reframing a proposal
- **Reactance**—minimising any pushiness by using polite language and/or making a smaller request, or putting the message in story form to exemplify the issues
- **Inertia**—Help the listener tune in to the message with sensory stimuli, humour or intriguing elements within a message

Perloff (2003) suggests an additional strategy of acknowledging and confronting the resistance and then engaging in collaborative discussion, while Barden and Petty (2012) suggest forewarning of upcoming persuasion events by others and inoculating listeners with early counter-arguments.

In terms of this study, many of the message qualities mentioned above were actively incorporated into the test material and experiment conducted as part of the research. For example, the message and speaker’s delivery incorporated figurative expressions, eloquent language, simple syntax, powerful speech (i.e. without tags or hesitations), comprehensibility, framing, credible message source, rhythmic vocal tone and use of non-verbal cues. The deployment of quantitative information, two-sided inoculation and counter-responses to (real-time) resistance were not incorporated due to the nature of the scenario and monological circumstances involved.

2.5 Nature of the Audience

Aristotle saw the need to tailor the arguments and emotion to the audience, drawing attention to stereotypical characteristics of different audiences. In addition, he noted that different strategies were better suited to different audiences—inductive reasoning (with
examples) for mass audiences and less-mature minds, and deductive reasoning (with enthymemes) for experts and others prone to debate ideas and arguments. While these and other insights have survived the test of time, we now know so much more about the social psychology of persuasion and how the process works\textsuperscript{42}. For example, we now know that persuasion is often about understanding and changing beliefs and attitudes as a precursor to changing behaviour (O'Keefe 2002; Perloff 2003; Petty and Cacioppo 1996).

2.5.1 Beliefs and Attitudes

Perloff (2003) identifies that attitudes are learned summary evaluations, typically emotional ones. These influence a person’s thoughts and actions, and reflect their perceptions of the world. Multiple beliefs coupled with associated affective responses comprise an attitude, with multiple attitudes on various issues comprising a deeper value (i.e. a guiding principle in a person’s life). In addition, beliefs, attitudes and related assumptions often comprise convenient mental models—internalised pre-representations of the external world. These underpin a person’s reasoning, behaviour and responses (Ellis, Margalit and Segev 2012; Maani and Cavana 2007; Senge et al 1999) and are used in both inductive and deductive reasoning (Johnson-Laird 1999; 2001).

Beliefs and attitudes, and the collective values (and mental models) they spawn, are all learned phenomena, acquired either through direct teaching and social conditioning, or through experiential discovery. Collectively, they form a set of cognitive shortcuts for how people view the world and make decisions. They help organise the social world, allowing a person to quickly categorise people, places and events and judge situations (Perloff 2003). Notwithstanding how strongly beliefs are held, they are however subjective by nature and prone to being biased and wrong. “People often hold beliefs that are fundamental to them but for which they have no conclusive evidence (Petty and Cacioppo 1996, p. 139). Moreover, emotional memories and patterns of behaviour stored physiologically in the amygdalae\textsuperscript{43} often command people to react instinctively to current situations in ways that

\begin{flushright}
\textsuperscript{42}It should be noted that Kennedy (1963, 1991) observes that Aristotle also incorporated psychology into his recipe for persuasion in terms of ethos and pathos. “Aristotle was able subsequently to make psychology, in the form of [the] study of ethos and pathos, into two significant parts of rhetorical persuasion” (Kennedy, 1963, p. 79). Kennedy (1991) also regarded Book II of Aristotle’s On Rhetoric as a comprehensive account of human psychology. In that sense, the social psychology of persuasion may not be altogether new, although the term remained to be invented and the field more fully explored

\textsuperscript{43}Amygdalae—the almond-shaped clusters of interconnected neurons within the limbic system of the brain (one on each hemisphere) that are involved in many of a person’s emotions and motivations, particularly those related to survival (Goleman 1995)
\end{flushright}
were imprinted long ago, with thoughts, emotions and actions learned in response to events perhaps only dimly similar (Goleman 1995).

In addition, people can often harbour multiple attitudes that conflict with one another in certain situations. “… attitudes do not exist in grand isolation … [they] exist within a system, so there are likely to be competing attitudes and hence alternative behaviours that may be expressed in a given situation” (Erwin 2014, p. 70).

Social judgement theory (Sherif and Sherif 1967) emphasises that people do not evaluate a message based exclusively on the arguments presented, but compare the advocated position with relevant attitudes they hold and then decide what to do. Whether or not they change their minds, depends on:

- Internal perceptions about tolerable latitudes of acceptance, rejection and non-commitment surrounding an attitude
- Whether the message is assimilated or contrasted (i.e. accepted or rejected based on consistency with an attitude, in whole or in part)
- The extent of ego involvement (perception that an issue touches on core values or self-concepts), making it harder to deviate from the established position

The ready accessibility (recall) of attitudes also affects how messages are processed and consequently their persuasiveness. Attitude accessibility theory (Fazio 1995, 2000) sees the role of attitudes in terms of their automatic activation from memory and the number and strength of rehearsed associations amongst the belief components. The more mental rehearsal of the associations through life experiences, the stronger the connection (i.e. ego involvement) and therefore the more readily the attitude comes to mind and the greater the influence (Perloff 2003).

Apart from the role that attitudes play in influencing thoughts and actions, they also fulfil a variety of needs unrelated to message arguments, with the same attitude in different people meeting different needs. Building on a seminal study by Katz (1960), a number of authors (e.g. Erwin 2014; O'Keefe 2002; Perloff 2003; Petty and Cacioppo 1996) identify that attitudes can help the holder:

- Make cognitive sense of the world
- Obtain rewards and/or avoid punishments
- Portray socially acceptable positions
• Communicate a social identity
• Express core values or beliefs
• Defend their ego, shielding them from unpleasant emotions or internal contradictions

In addition, attitudes can support self-interest or the self-interest of important others (Darke and Chaiken 2005) that, in turn, can lead to motivated reasoning (Kunda 1990). “Motivated reasoning is a form of reasoning in which people access, construct and evaluate arguments in a biased fashion to arrive at or endorse a preferred conclusion.” (Pandelaere 2007). This phenomenon can also be associated with fulfilling other needs such as avoiding punishments or affirming an existing attitude.

As a result, persuaders need to know and understand the particular audience attitudes to focus on while being sensitive to the underlying, often subliminal, needs those attitudes serve, many of which can relate to self-perceptions, accommodations to the social environment, messages that listeners want to transmit about themselves or self-interest. Also, attitudes based on feelings or emotions tend to be more influenced by affect-based messages, while those based on thoughts and cognitions tend to be more influenced by cognitively-based messages (McCaslin and Petty 2007).

Persuaders also need to recognise that attitudes are based on beliefs that might be right or wrong; they often involve emotional responses to past experiences and can serve needs which are superficial and not directly related to message arguments or any desire for order or consistency (Perloff 2003). Critically, attitudes are not always adopted to help make cognitive sense of the world and because a person holds an attitude doesn’t mean their actions are always consistent. People can and do act in ways that are inconsistent with an attitude they hold if to do so serves a deeper need (Perloff 2003). Whether or not this occurs depends on the characteristics of the attitude (e.g. its strength and nature) along with the characteristics of the listener (e.g. high or low self-monitor). Earlier work by Snyder (1987) identified that high self-monitoring people are skilled at reading situational cues and, perceiving social expectations, adjusting their behaviour accordingly. Low self-monitoring individuals are less self-censoring and less concerned with outward impressions. They tend to rely more on inner feelings and attitudes to determine behaviour, and develop their social skills accordingly.
In summary, attitudes guide and influence behaviour, they don’t direct it. For effective persuaders, understanding relevant attitudes and the beliefs, needs and emotional experiences that underpin them—along with their likely strength, accessibility and recall—are often useful for changing people’s minds and influencing their actions. “…examining and understanding the other person’s perceptions is at the core of successful persuasion” (Spears 2009, p.1281).

But that said, is there more? Attitudes aside, are there differences in how people process information?

2.5.2 Processing Modes

Aristotle identified an effective communication model but had little to say on how people process information. Subsequent research in social psychology has addressed this gap with explanations that have included functional theories, discrepancy models, cognitive models, computational theories and hot process/motivational theories (Dillard 2010)—to name a few. Of these, two dual-processing models have emerged as stand-out theories in the field, namely:

2. Heuristic-Systematic Model (Eagly and Chaiken 1993)

Reflecting binary systems of explicit and implicit cognition, both models identify two modes for processing information—an in-depth, effortful, step-by-step mode based on systematic reasoning, and a relatively fast, superficial, spontaneous mode based on intuitive associations (Chaiken and Ledgerwood 2007).

**Elaboration Likelihood Model (ELM)**

Petty and Cacioppo (1981, 1984, 1986, 1996) identified that people absorb and process information in two distinct ways (i.e. via *central* and *peripheral* routes), based on situational circumstance and preference. Central information processing(where cognitive involvement and elaboration (deep thinking) are high)—occurs where a listener focuses directly on the message and information provided, consciously weighing-up the arguments and drawing considered conclusions. “…when processing centrally, individuals are akin to Plato’s ideal students—seeking truth and dutifully considering logical arguments—or to Aristotelian thinkers, persuaded only by cogent arguments (logos)” (Perloff 2003, p.129).
In peripheral processing, listeners tend to absorb contextual cues and take mental shortcuts rather than analyse the message itself. In essence their cognitive involvement is low. This occurs where they are not motivated or able to think deeply, do not have sufficient opportunity (Hallahan 2000) or are distracted. Typically it involves complex matters or issues not seen as personally relevant, interesting or important, or where consequences are perceived as low. It is also used by subjects low in the ‘need for cognition’ (i.e. the intrinsic need to think through and understand issues) (Cacioppo et al 1986), or where there are constraints on available cognitive resources (e.g. limited time, situational factors, complexity of the message). Importantly though, peripheral processing can lead to central processing when cues are used to draw an audience in and subsequently encourage deeper thinking. Recognising this, Hallahan (2000) argues that a speaker has two essential responsibilities: (1) to match the message content to an audience’s level of processing and then (2) to sprinkle sufficient cues to encourage deeper elaboration.

Petty and Cacioppo (1984) demonstrated that the number of arguments alone (rather than their content) can act as a cue for mental misers, while Pierro et al’s (2005) study showed that people high in the need for cognitive closure simply use whatever comes first (message arguments or cues). Pierro et al also showed that message length mimicked (and was a cue for) complexity, in terms of requiring higher motivation to process. Other cues can be the expert status of advocates, their physical appearance or speaking style, the comprehensibility of the message, attractiveness and/or credibility of the source, pleasantness of the context or association created, or whether particular views come across as extreme or not (Mason 2001; Perloff 2003; Petty and Cacioppo 1984, 1996). Yalch and Elmore-Yalch (1984) even found that the level of advertising and media a product receives (rather than the information it contains) acts as a peripheral cue for consumers to value a brand highly and that quantitative information stimulated listeners to use the character of the speaker as a peripheral cue for making judgements. Similarly, Perloff (2003) highlighted that repeated exposure, celebrity endorsements and explicit associations also acted as peripheral cues in the advertising of low ego-involvement products.

The ELM proposes that each variable can influence attitudinal change in four potentially overlapping ways by:

1. Effecting the degree of elaboration
2. Serving as an argument
3. Serving as a cue
4. Biasing message processing
While both central and peripheral processing can lead to persuasion, enduring attitudinal change depends on the likelihood of an issue or argument being more deeply thought about and elaborated upon (Petty and Cacioppo 1996). Initial judgements formed with heuristic cues through peripheral processing are likely to be less enduring (Petty and Cacioppo 1996; Mason 2001) and held with lower levels of certainty about their accuracy (Eagly and Chaiken 1993). On the other hand, deliberative central processing produces more robust enduring judgements (Hallahan 2000, Petty and Cacioppo 1996; Mason 2001) but individuals high in prior knowledge—who are also more likely to engage in central processing—are less likely to be persuaded by a thought provoking message (Alexander et al 1998; Petty and Cacioppo 1986, 1996). High cognitive involvement (reflecting the extent of personal relevance, interest or subjective feeling about the importance of an issue) does not on its own lead to persuasion; it needs to be matched with high levels of elaboration (thinking) about what is said. Without sufficient motivation to do that, even listeners with high cognitive involvement will revert to peripheral cues to draw conclusions (Chaiken, Liberman and Eagly 1989; Hallahan 2000; Meyers-Levy and Peracchio 1996; Petty and Cacioppo 1981, 1984, 1986, 1996), while those with no motivation are likely to switch-off and ignore the message.

**Heuristic-Systematic Model**

Eagly and Chaiken (1993) proposed a different but related heuristic-systematic model also comprising two processing modes:

1. A **systematic mode** that mirrors Petty and Cacioppo’s central processing with its deep deliberate analysis and consideration of facts to form judgements
2. A **heuristic mode** that relies on contextual cues to trigger cognitive decision rules (heuristics) that are then used as shortcuts to process information quickly and efficiently (although superficially) to come to judgements

Heuristic processing leverages the link between easily recognised cues (such as communicator credentials, number of arguments etc.) and well-known ‘rules of thumb’ (such as ‘experts know best’ and ‘argument length equals argument strength’) to make decisions (Chaiken and Ledgerwood 2007). As such, heuristic processing differs from Petty and Cacioppo’s construct of peripheral processing where cues alone are used to directly replace deliberate reasoning. In addition, unlike exclusive central versus peripheral processing under ELM, the systematic and heuristic modes can both be used or occur concurrently. Moreover, when arguments are ambiguous, heuristics can bias the nature of
systematic processing while, at the same time, their impact on judgement can be attenuated by systematic processing (Eagly and Chaiken 1993).

Heuristic processing can also exert an independent effect in circumstances where systematic processing does not provide information to contradict the interpretation of heuristic cues. While ELM proposes that the primary (perhaps only) reason for processing is to form an accurate attitude (Dillard 2010), the heuristic-systematic model identifies three categories of motivation where listeners seek to:

1. Ascertain the most valid position to adopt based on understanding all the facts (i.e. accuracy motivation)
2. Form or defend particular positions or protect valued opinions and beliefs (i.e. defence motivation)
3. Form or hold socially acceptable positions or make a good impression on another person (i.e. impression motivation) (Eagly and Chaiken 1993; Chaiken and Ledgerwood 2007)

Chaiken, Liberman and Eagly (1989) and Eagly and Chaiken (1993) found that people were essentially mental misers who did the minimum necessary to reach a confident conclusion. Information is processed in a deliberate effortful way only to the extent that a cue and associated heuristics are not available or sufficient. When a cue is available and triggers heuristic rules sufficient to provide a desired level of confidence, people are unlikely to exert any additional effort to process the substantial arguments in a message in a more deliberate way. However, Tanaka (1992, 1994) and Yus (2003) highlighted exceptions showing that people will put in extra effort for extra reward, notably humour, when processing figurative expressions (e.g. puns). “Humorous effects such as the enjoyment in the resolution of incongruity are worth this extra cognitive effort” (Yus 2003, p. 1300).

In respect to both the Elaboration Likelihood and Heuristic-Systematic Models, Dole and Sinatra (1998) emphasise the iterative nature of information processing and change, suggesting that individuals are able to participate anywhere along a ‘continuum of engagement’ rather than being restricted to two polar extremes. Meyers-Levy and Malaviya (1999) also observed that people often think iteratively, based on experiential learning. Consequently, the authors argue that both dual-processing models should incorporate a third experiential processing element along with a judgement correction loop to create a more comprehensive model of how people process information.
2.5.3 Thinking Orientation


Separate from the information processing modes and routes postulated by others, Epstein suggested that people actually think in two psychologically different ways—one through an experiential (intuitive emotional) cognitive system and the other though a rational (analytical logical) cognitive system. Both orientations, he argued, reflect stable, enduring predispositions that prompt people to see and analyse information in different ways (Berger 2007; Berger and Lee 2007). Goleman sees this too. “In a very real sense we have two minds, one that thinks and one that feels” (Goleman 1995, p. 8).

For Epstein, behaviour is the blended product of both systems and the outcome of seeking to jointly satisfy four needs:

1. To maximise pleasure and/or minimise pain
2. To maintain a relatively stable and coherent conceptual system
3. To satisfy a need for relatedness
4. To overcome feelings of inferiority and/or to enhance self-esteem

Table 3 summarises the various characteristics and differences between the two modes of thinking. Ironically, this contemporary dichotomy also mirrors the ancient philosophical difference between Plato and Aristotle. Plato saw things as knowable purely through ideas and reason, whereas Aristotle also used experiential learning and observation as a basis for understanding reality—albeit inconsistently applied and often as retrofits to his theories (Hawking and Mlodinow 2010).

Epstein (1994, 2003) argues that the experiential system encodes experiences into exemplars and narratives that form a set of inferential rules differing from those of the rational system. “At its lower levels of operation, it [the experiential system] is a crude system that automatically, rapidly, effortlessly and efficiently processes information. At its higher reaches, and particularly in interaction with the rational system, it is a source of intuitive wisdom and creativity” (Epstein 1994, p. 715). By contrast, the rational system is more deliberative, effortful and abstract.
Nevertheless, since each system has equally important advantages and disadvantages, neither can be considered superior to the other (Norris and Epstein 2011).

Epstein contends that the two systems operate in an independent, parallel, yet interactive manner, with their relative contribution at any time ranging from none at all to complete supremacy of one system over the other (Pacini and Epstein 1999). Moreover, a person can be high on both, either or neither sets of attributes that underpin each style. The relative dominance of either system (at any one time) is largely determined by individual differences in thinking style or orientation and related situational factors that influence the choice. Situational factors include such things as motivation, emotional involvement, alignment with previous experience, personal relevance or consequences, interest or stimulation, time constraints, relative complexity of the message and so on. However, in most situations, the easy automatic processing of the experiential system makes it dominant over the rational system because it is more efficient and takes less effort (Epstein 1994, 2003). Emotional arousal and related experience shift the balance of power further in favour of the experiential approach and, because it involves emotions, receptive arguments are experienced as more compelling than dispassionate logical thinking. This experiential processing “…leads to the ‘thoughtless’ application of judgment and decision heuristics … [where] surface-level task characteristics activate stereotypes, personal ‘theories’ (e.g. of the self), strong beliefs and vivid memories” (Klaczynski and Lavallee 2005, p. 18). Experiential thinking can also deal with higher complexity since it is more intuitive while the rational system, although coming at the

<table>
<thead>
<tr>
<th>Experiential System</th>
<th>Rational System</th>
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<tbody>
<tr>
<td>1. Holistic</td>
<td>1. Analytic</td>
</tr>
<tr>
<td>2. Emotional: pleasure-pain oriented (what feels good)</td>
<td>2. Logical: reason oriented (what is sensible)</td>
</tr>
<tr>
<td>3. Associationistic connections</td>
<td>3. Cause-and-effect connections</td>
</tr>
<tr>
<td>5. Behaviour mediated by ‘vibes’ from past experiences</td>
<td>5. Behaviour mediated by conscious appraisal of events</td>
</tr>
<tr>
<td>7. More rapid processing; oriented toward immediate action</td>
<td>7. Slower processing; oriented toward delayed action</td>
</tr>
<tr>
<td>8. Slower to change; changes with repetitive or intense experience</td>
<td>8. Changes more rapidly; changes with speed of thought</td>
</tr>
<tr>
<td>9. More crudely differentiated; broad generalisation gradient; stereotypical thinking</td>
<td>9. More highly differentiated; dimensional thinking</td>
</tr>
<tr>
<td>10. More crudely integrated; dissociative, organised in part by emotional complexes (cognitive affective modules);</td>
<td>10. More highly integrated</td>
</tr>
<tr>
<td>11. Experienced passively and pre-consciously; seized by our emotions</td>
<td>11. Experienced actively and consciously; in control of our thoughts</td>
</tr>
<tr>
<td>12. Self-evidently valid: “Seeing is believing”</td>
<td>12. Requires justification via logic and evidence</td>
</tr>
</tbody>
</table>

**SOURCE:** Epstein (2003, p. 160)
expense of greater cognitive effort, is capable of higher levels of abstraction and useful for delaying gratification (Silva, Bridges and Metzger 2005).

However, this tendency towards experiential thinking can be overridden by the disposition of the individual and context, or suppressed where there is analytical-experiential conflict (Stanovich and West 2000). The latter occurs often as a result of evidence that challenges underlying beliefs buried in the experiential system, causing ‘metacognitive intercession’—a momentary case of cognitive dissonance (Festinger 1957) that causes a message recipient to pause and switch thinking styles. This occurs when peripheral cues indicate a conflict with experiential tendencies or learnings that suggest analytical thinking would be better (Klaczynski 2004). But metacognitive intercession requires reflection on peripheral cues and responses, which only occurs infrequently, thereby reinforcing the predominance of experiential over rational thinking (Klaczynski and Lavallee 2005). As a result, thinking with the heart—not the head—is more automatic and prevalent, especially where the subject or argument is emotionally arousing or complex and peripheral cues do not overly challenge underlying beliefs buried in the experiential system.

Overall, according to Pacini and Epstein (1999), the profile of an experiential thinker is one who relates well with others, readily communicates emotions and is tolerant, trusting, spontaneous and open-minded. A rational thinker, on the other hand, is emotionally well-adjusted, has a positive view of the self and the world, is able to exert self-control as well as control over events, can delay gratification and assume responsibility, and is an overall flexible thinker with liberal values. In essence, the two are not polar opposites; rather they are laterally different—meaning that individuals are able to harbour both independent styles and sets of characteristics.

Epstein (1994) advances six lines of conceptual reasoning to support his theory:

1. The convergence of a wide variety of theoretical positions reflecting dual-processing modes (e.g. Bruner 1986; Chaiken 1980; Freud 1953, 1959; Petty and Cacioppo 1981, 1986)
2. Real-life phenomena such as conflicts between the heart and the head
3. The abiding appeal of concrete, imagistic and narrative representations (e.g. Bruner 1986)
4. The existence of superstitious thinking that challenges rational facts
5. The ubiquity of religion throughout recorded history, providing evidence for an intuitive experiential system that responds to spiritual teaching more than analytical thinking


Epstein’s work builds on the thinking and evidence of other researchers to create an overall theory of personality. “Although researchers from various persuasions have provided evidence for two similar ways of processing information … only CEST [Cognitive–Experiential Self-Theory] places them within the context of a global theory of personality” (Pacini and Epstein 1999, p. 972). 
2.6 Conclusion

So what does all this mean?

Persuasion is a complex social art involving elements from philosophy, social psychology, logic, linguistics and oratory. As a topic the literature is vast stretching back to antiquity. In the fourth century BCE, Aristotle prescribed a remarkably timeless recipe, identifying that persuasion was founded on three essential ingredients—demonstrating credibility, arousing emotions and presenting sound logic. To do this, he advised that a speaker needed to provide compelling proof in each area, convey that proof in an effective manner (in terms of style and quality of expression) and present the overall message in a sensible, well-arranged and orderly sequence from beginning to end. Since then, subsequent researchers have explored the broad array of factors that influence persuasion including the individual role that credibility, emotion, logic and other elements and issues play in compelling argument (e.g. Chaiken and Trope 1999; Conger 1999; Guerin 2003; Levine 2003; Mills 1999; Murphy 2001; O’Keefe 2002; Petty and Cacioppo 1996; Toulmin, Rieke and Janik 1984). In doing so, however, they have not assessed or confirmed the collective role of credibility, emotion and logic as a primary integrated recipe for persuasion in the same way Aristotle envisaged. This is evidenced in large part by the segregated nature of the research and findings, culminating in the separate (piecemeal) measures developed for different variables as subsequently explored in Chapter 4.

Just as important though is the nature and quality of the language deployed and how the arguments and evidence are assembled and conveyed (Perloff 2003). Doing this well includes the tactical choice of words, speaking styles, framing options, information types (and sources), one versus two sides of an argument and delivery strategies (including body language). Whether a message is ultimately persuasive also depends on recognising and dealing effectively with resistance (Chaiken and Trope 1999; Conger 1998a; Hosman 2002; Knowles, Nolan and Riner 2007; Leathers 1992; O’Keefe 2002; Perloff 2003; Petty and Cacioppo 1986, 1996; Wood 2006).

In addition, tailoring the arguments and evidence to the audience is also important. While Aristotle recognised this, relatively recent work in social psychology has also shown that persuasion is often about changing or influencing listener attitudes, as a precursor to changing behaviour—and that means understanding the often subliminal needs those
attitudes serve. Importantly though, attitudes only guide and influence behaviour; people can and do act in ways inconsistent with an attitude they hold where to do so serves a deeper need (O’Keefe 2002; Perloff 2003; Petty and Cacioppo 1996). In addition, individual and situational factors affect how deeply people process information, with some using a conscious, effortful, step-by-step approach based on systematic reasoning, and others a relatively fast, superficial, spontaneous approach based on cues, heuristics and intuitive associations (Eagly and Chaiken 1993; Petty and Cacioppo 1981, 1984, 1986, 1996). Often these two modes are used separately, iteratively or together. However, processing modes aside, Epstein (1994, 2003) has suggested that people actually think in two psychologically different ways—one through an experiential (intuitive emotional) cognitive system and the other through a rational (analytical logical) cognitive system. While a person can be high on both, either or neither sets of attributes underpinning each style, the relative dominance (at any one time) of one over the other is largely determined by individual differences and situational factors that influence the choice.

This chapter has explored the broad accumulated literature on persuasion, commencing with a review of Aristotle’s seminal work 24 centuries ago. It then considered modern developments and understanding in the field through the frame of the speaker, the message and the audience. This involved a speaker-centric journey into the core tenets of Aristotelian theory (i.e. credibility, emotion and logic), followed by a review of the key elements of a successful message. To understand the nature of audiences, a review of the social psychology of persuasion was then undertaken highlighting the central role of beliefs and attitudes in the process. This was complemented with an examination of the differing ways people process information, leading to a discussion on the thinking orientation of individuals. Finally, the chapter closed with a précis about the overall art of persuasion which, together with the next chapter, is used to shape and inform the research undertaken in this thesis.

Against this broad backdrop, the next chapter specifically explores figurative language and its potential role in the persuasion process. It revisits Epstein’s (1994, 2003) work on how people think and presents four hypotheses and a conceptual model that form the centrepiece of this thesis.
Chapter 3

Persuasiveness of Figurative Language

3.1 Preface

Chapter 2 explored the accumulated literature on persuasion and how people process information and think. This chapter builds on that foundation. It explores the nature and potential role of figurative language in the persuasion process, starting with a discussion of what figurative language is, leading on to a review of recent research and then converging on relevant work in the business context. After this it revisits Epstein’s (1994, 2003) work on how people think, and explores the possible role of thinking orientation in the persuasion process. All this work culminates in four hypotheses that form the centrepiece of this thesis, which are then presented in a conceptual model depicting the proposed relationships between them and their overall suggested role in the persuasion process.

3.2 Figurative Language

The basic merit and characteristics of argument (e.g. conceptual content, reasoning, emotional evidence, general proof) and the effectiveness of the structure of language (e.g. phonics, syntax, vocabulary, intensity, power, framing), all help shape a persuasive message (Bowell and Kemp 2002; Toulmin, Rieke and Janik 1984; Hosman 2002). In addition, and consistent with Aristotle’s perspective, the very quality and nature of the linguistic style and the associated choice of words and images can themselves add to, or detract from, the persuasiveness of a message. For example, the use of purely rational (i.e. literal) language often mirrors rational thought with the result that the concepts and language are limited to those that are objective and dry (Grassi 1980). Moreover, purely rational language is not imaginative and therefore is constrained in evoking vivid images that reveal novel lateral
relationships and similarities, and in exposing creative perspectives that leverage the emotions and fire the imagination. As such, Grassi argues, rational language is non-rhetorical and non-persuasive. It is reasoning at best, not enchanting argument or oratory. On the other hand, linguistic style can incorporate the use of figurative language—rich expressions that stimulate interest in the message, spark the emotions, trigger vivid images and engender conceptual insights that engross the listener and enhance processing and understanding (Den Hartog and Verburg 1997; Downey 1997; Grassi 1980; Lakoff and Johnson 1980; Sullivan 2013). “Figurative speech is lively and playful: it enhances persuasion by making an argument appealing” (Spence 2013, p. 18). Aristotle explicitly recognised this. He extolled the virtue of using rich engaging language and style (lexi) in the persuasion process. As discussed in Chapter 2, he saw the need for language to be interesting and distinctive, while at the same time appropriate to the situation and the emotional tone being conveyed. Importantly, he recognised the immense power of figurative language to convey ideas through means such as actuality, analogy, anaphora, antithesis, epithets, homoioteleuton, hyperbole, irony, jokes, parison, paromoeosis, riddles and importantly, metaphors and synonyms. “… the greatest thing by far is to have a command of metaphor. This alone cannot be imparted by another; it is the mark of genius, for to make good metaphors implies an eye for resemblances” (Aristotle 350 BCEc, Part XXII). John Quincy Adams noted that metaphors are the most frequent and beautiful of all the tropes and, for effect, suggested they ought to be used sparingly to season rather than soak language (Downey 1997).

But there are many other forms of figurative language as well, for example: adage, allegory, alliteration, anastrophe, antithesis, asyndeton, colon, conclusion, polysyndeton, rhetorical question, and tricolon, to name just a few of the more

44 Trope – A figure of speech that involves an unexpected non-literal meaning
45 Adage – A proverb
46 Allegory – Narrative description of something under the guise of another that has similarities to it (i.e. symbolical representation within a passage)
47 Alliteration – Repetition of initial consonant sounds or vowel sounds within a phrase
48 Anastrophe – Unusual arrangement of words in a sentence that are out of the normal order
49 Antithesis – Conjoined opposites (i.e. contrasting/opposite ideas or concepts) in a sentence or phrase
50 Asyndeton – Omission of conjunctions between words, phrases or clauses
51 Colon – An independent clause or segment within a sentence
52 Conclusion – A brief summary
53 Polysyndeton – Use of a conjunction between each word, phrase or clause (opposite of asyndeton)

Figurative language, in all its forms, essentially enriches thought, communication and action, while enhancing the conceptual clarity, eloquence and impact of a message (Downey 1997; Lakoff and Johnson 1980; Leech 1969, Shen 2006). It adds power and impact to ideas and grammar. So much so in fact, that certain figurative expressions, especially metaphors—what Perelman (1970) characterised as ‘condensed analogies’—become so successful in presenting a new perspective that they get entrenched in the literal language; ‘frozen’ in their new meaning as the alternate usage gathers momentum and acceptance as a normal part of the idiom (Leech 1969; McQuarrie and Mick 1996; Sopory and Dillard 2002). In effect, they become conventionalised as their figurative meaning becomes so commonly used and useful that it takes on the mantle of a literal meaning in the new context. When this happens, metaphorical terms, for example, are transformed from being a means of novel comparison to a means of mere categorisation (Bowdle and Gentner 2005). This conventionalisation of figurative language is a very old organic process, even observed in Classical times. “…when we compare the language of our ancestors with our own, we find that practically everything we say nowadays is figurative” (Quintilian circa 95, Book IX, p. 443). Leech (1969) also emphasised the importance of this reality and the countless ‘dead metaphors’ instilled in the multiple literal meanings of the dictionary. Recognising this fundamental drift within the development of language and being able to differentiate effectively between live and conventionalised figurative expressions will be critical when subsequently researching and assessing the persuasiveness of contemporary ‘figurative language’ against any so-called ‘literal’ alternative. That aside, active figurative language remains an inherent ubiquitous part of spoken and written discourse (Roberts and Kreuz 1994).

So what does figurative language comprise and are there particular types or categories? Simply defined, figurative language is language that uses figures of speech—‘artful

54 Rhetorical question – Nominal question asked purely for effect not information and not intended to be answered
55 Tricolon – Use of a three-unit pattern in a sentence (e.g. three clauses, three reasons, three colons)
deviations’ that involve the non-traditional use or arrangement of words, often incorporating word play or the allegorical substitution of one thing for another (Quinn 1993; Mothersbaugh, Huhmann and Franke 2002; Shen 2006). Drawing on traditional distinctions (à la the Stoic Philosophers and Quintilian), Leech (1969) divided figures of speech into categories called schemes and tropes, associating each as a form of linguistic ‘foregrounding’ (i.e. the deviations involved are contrasted against the background of linguistic norms). Leech sees schemes as foregrounded repetitions of expression and tropes as foregrounded irregularities of content. Put more simply, schemes reflect a non-standard style or arrangement of literal language that is excessively regular and orderly, while tropes involve an unexpected non-literal meaning (McQuarrie and Mick 1996; Toncar and Munch 2003). Typical examples of schemes include rhymes, chimes, alliterations, antitheses, anaphora and parison. Typical examples of tropes include metaphors, synonyms, rhetorical questions, ellipses, metonyms, synecdoches, irony, puns and paradoxes.

McQuarrie and Mick (1996) noted that schemes and tropes differ on three key levels, specifically: (1) combination and selection constraints (i.e. limitations on how each type can be combined or used in sentences), (2) extent of coding involved (i.e. under-coding versus over-coding) and (3) the depth of processing requirements needed to interpret them. In addition, the authors identified that both forms vary with complexity leading to four subtypes: simple schemes, complex schemes, simple tropes and complex tropes.

Table 4 provides an explicit illustration of each subtype, with the examples cited (i.e. alliteration, antithesis, rhetorical question and metaphor) reflecting the common devises examined in more detail later in this thesis.

56 The study of style by the Stoic Philosophers in the second century BCE included the development of the theory of tropes and figures of speech (Kennedy 1991)
57 Quintilian also referred to tropes, figures and ‘schema’ in his treatise Institutio Oratoria (Quintilian circa 95)
58 Chime – Key words in a phrase beginning with identical sounds or letters
59 Alliteration – Repetition of initial consonant sounds or vowel sounds within a phrase
60 Ellipses – Expression where one or more words are omitted and intended to be supplied by the listener or reader
61 Metonym – Substitution of an attribute for the whole thing meant
62 Synecdoche – Naming part for the whole thing intended
Both figurative forms (i.e. *schemes* and *tropes*) make language interesting and memorable (Den Hartog and Verburg 1997; Lindstromberg and Boers 2008; Rubin 1995), giving rise to processing pleasure—the reward that comes from processing a clever use of language form, interpretation or arrangement (Barthes 1985; van Mulken, van Enschoot-van Dijk and Hoeken 2005). The resolution process prompts deeper information processing and involvement, setting in motion a rich array of associations that can lead to multiple encodings (interpretations) and the strengthening of existing conceptual linkages in the mind of the receiver (McQuarrie and Mick 1996). Grice (1989) and Leech (1969) see this process as essentially involving two stages:

1. The consideration and rejection of a literal but (in the context) unacceptable interpretation
2. The discovery of an alternative unorthodox interpretation that is sensible in the context

Both stages involve deeper creative processing than normal language. However, Gibbs (2006) highlights growing contemporary research amongst cognitive linguists and cognitive psychologists that show people may not necessarily need to reject a defective literal meaning before reaching for a figurative one. This suggests that figurative processing via metaphors for example, may be a more fundamental part of the way people speak and think rather than an inherent translation process. For a deeper discussion on understanding metaphors see Cooper (1986), Gibbs (1994, 2006) or Lakoff and Johnson (1980, 1999).

<table>
<thead>
<tr>
<th>Category (subtypes)</th>
<th>Example</th>
<th>Description</th>
<th>Illustration (from advertising text)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Scheme</td>
<td>Alliteration</td>
<td>Repetition of initial consonant sounds or vowel sounds within a phrase</td>
<td>No one knows the land like a Navajo (Mazda four-wheel drive)</td>
</tr>
<tr>
<td>Complex Scheme</td>
<td>Antithesis</td>
<td>Conjoined opposites (i.e. contrasting/opposite ideas or concepts) in a sentence or phrase</td>
<td>We got hot prices on cool stuff (Musicland Stores)</td>
</tr>
<tr>
<td>Simple Trope</td>
<td>Rhetorical Question</td>
<td>Nominal question asked purely for effect not information and not intended to be answered</td>
<td>Are you protecting only half your dog from worms? (Interceptor pet medicine)</td>
</tr>
<tr>
<td>Complex Trope</td>
<td>Metaphor</td>
<td>Allegorical substitution of one thing for another where it is not literally applicable</td>
<td>Science you can touch (Jergens skin care)</td>
</tr>
</tbody>
</table>

*SOURCE: Adapted from McQuarrie and Mick (1996)*

**Table 4 - Illustration of Schemes and Tropes and Their Subtypes**
3.3 Recent Studies and Research

The early study by Roberts and Kreuz (1994) explored the discourse goals inherent in using eight different figures of speech, namely: hyperbole, idiom, indirect request, irony, understatement, metaphor, rhetorical question and simile. When viewed through the prism of McQuarrie and Mick’s (1996) classification system, these figures of speech reflect five simple and three complex *tropes*. While this formative study was not directly focused on understanding persuasiveness, it nonetheless provided valuable insights into the underlying purpose(s) that *tropes* serve and how they can be used to facilitate an engaging, if not persuasive appeal. In summary, the research identified 19 different discourse goals as shown in Table 5, with many being used in combination. The findings demonstrated that *tropes* serve a multitude of purposes in communication, suggesting they have an additional psychosocial dimension beyond the hidden contextual information and non-literal meaning they contain. They are used not just to convey coded information but also to fulfil such purposes as charming the listener, grabbing attention, cutting through ‘noise’, protecting the ego, expressing emotion and managing a relationship. They also help add interest and impact, provoke deeper thinking, offer conceptual insights and clarity, and (with a tailored message) lead the listener to easily accepted conclusions. Overall, the discourse goals identified show that *tropes* are sophisticated braided mechanisms. However, Roberts and Kreuz’s work reflected a sample of only 134 valid responses across the eight conditions. In addition, it did not involve any *schemes* or consider differences in thinking style that may have influenced perceptions. Nevertheless the findings demonstrated the interesting layers of meaning that can be conveyed with non-literal language and highlighted the usefulness of *tropes* as an interpersonal strategy for enhancing communication and rapport, and setting the scene for a persuasive appeal.

McQuarrie and Mick’s (1996) research provided a wider taxonomy that distinguished between figurative and literal text, between the two types of figures (i.e. *schemes* and *tropes*) and between four rhetorical operations of varying complexity and deviation (i.e. repetition,
reversal, substitution and de-stabilisation). The latter (i.e. rhetorical operations) defined the authors' distinction mentioned earlier between simple schemes and tropes and their complex forms. Figure 3 portrays McQuarrie and Mick’s full taxonomy.

![Figure 3 - Taxonomy of Rhetorical Figures in Advertising](image)

In testing their framework, the authors assessed each of the four rhetorical operations as independent variables against changes in complexity and deviation from literal language as dependent variables. While confirming an ascending order in complexity and deviation (i.e. from simple schemes, to complex schemes, to simple tropes, to complex tropes), the authors did not examine whether this might equate to an ascending order in persuasiveness, leaving this area for future researchers. Arguably though, language forms that are more complex and deviate from literal language contain more encoded information, interest and pleasure for listeners, while also improving the retention and impact of a message (Den Hartog and Verburg 1997; Lindstromberg and Boers 2008; Rubin 1995; van Enschoet-van Dijk and Hoeken 2005). Figurative expressions also add to eloquence (Downey 1997; Lakoff and Johnson 1980) and on that collective basis ought to be more persuasive.

In addition, McQuarrie and Mick’s experiment did not consider the impact of other possible variables (such as thinking orientation) and was compiled exclusively from advertising material (i.e. headlines and tag lines) rather than block text or prose found in general communication.

Further theoretical work undertaken by McGuire (2000) categorised the use of tropes more broadly, beyond both discourse goals and levels of complexity and deviation. His
categorisation involved three functional types: namely (1) attention provoking *tropes*, (2) comprehension enhancing *tropes*, and (3) agreement evoking *tropes*. In addition, McGuire offered four speculations (but no empirical evidence) about how *tropes* affect perception and persuasion. Firstly, he theorised, that *tropes* were eye-catching and made a message more appealing. This focuses attention, encourages effective encoding and increases the likelihood of central processing. However in doing so, they can also distract from other more salient arguments. Next, McGuire theorised that *tropes* can affect how an audience perceives the source, both positively and negatively. Thirdly, he argued that some *tropes*, like metaphors, intensify the encoding process to connect with base values or archetypes at a deeper more visceral level, while others may have the opposite effect and decrease cognitive penetration. Finally, McGuire postulated that the effect of *tropes* may relate to the mood and emotions they evoke in the audience—both positively and negatively—and the congruence they achieve between the emotional state they induce and the essential argument in the message. The latter accords with Ortony’s (1975) vividness thesis where he argued that the imagery within metaphors, as examples of *tropes*, generated greater emotive, sensory and cognitive responses than equivalent literal language. It is also consistent with observations by other authors (e.g. Downey 1997; Fussell and Moss 1998; Hartog and Verburg 1997; Roberts and Kreuz 1994) that figures of speech are often deployed to express or incite emotion. McGuire’s work, while offering an interesting theoretical contribution, provided no evidence or insights into the persuasiveness of particular forms or categories, again leaving that work for future researchers.

Sopory and Dillard (2002) subsequently re-examined accumulated evidence on the persuasive effect of metaphors, which the authors defined as ‘all *tropes* of comparison’ including analogy, metaphor, personification and simile. This work involved a meta-analysis of 29 prior experimental studies with attitude as the dependent variable. The operational context of the original studies was not disclosed however the meta-analysis encompassed approximately 4000 respondents in total, with the results disclosing that:

- Messages with metaphors (a complex *tropes*) showed a small increase in persuasiveness over literal messages (i.e. \( r = 0.7 \)), similar to the advantage achieved by delivering two-sided, as opposed to one-sided, messages
- Use of a single metaphor (as opposed to multiple metaphors) was associated with the largest attitude change
• Extended metaphors\textsuperscript{63} were more persuasive in terms of attitude change than non-extended metaphors

• Metaphors were more persuasive when placed in the introduction of an argument, rather than in the body or conclusion. Where multiple metaphors were used, the first appearance of one in the introduction proved more persuasive than the first appearance of one in the body or conclusion

• Metaphors were more persuasive when there was high familiarity with the target object “…metaphor increases or decreases intrinsic interest in a persuasive communication depending on the degree to which it resonates with the listener’s chronic interests and attachments” (Ottati, Rhoads and Graesser 1999, p. 695)

• Novel metaphors (i.e. those that create new similarities between entities) were more persuasive than non-novel ones

• Metaphors presented in an auditory mode (i.e. those that are heard aloud) are more persuasive than those that are presented in writing

• Communicators with low credibility proved more persuasive when using metaphors, than those with high credibility

• Of the three dimensions of credibility (i.e. competence, character and dynamism), metaphors improved the perceived dynamism of communicators with both high and low credibility, but had no effect on the competence and character dimensions

In addition, this meta-analysis showed that the \textit{tropes} involved helped to better structure and organise arguments than literal language. They do this by evoking a greater number of associations, connecting the different arguments more coherently with a greater number of semantic pathways and helping to highlight the most salient arguments. The authors also found that metaphors were most persuasive when extended and/or deployed in the introduction to a message. “This suggests that persuasion occurred due to the organising potential of the metaphor as a theme, which facilitated selection and integration of information from the message and prior knowledge” (Sopory and Dillard 2002, p. 418). These findings offer a measure of support for McGuire’s (2000) ideas about the meaning and comprehension-enhancing function of \textit{tropes} based on their superior organising and penetration ability.

\textsuperscript{63} Extended metaphor – Refers to a line of metaphors that are all drawn as extensions of the first one and share the same developing theme (Sopory and Dillard 2002)
The current understanding of *tropes* has also been extended by empirical research conducted by Toncar and Munch (2003) where the authors observed differing effects between simple and complex *tropes* in terms of the believability of claims, arousal of emotion and memory retention. In testing specific *tropes* from McQuarrie and Mick’s (1996) taxonomy (i.e. an ellipsis, hyperbole, metaphor and paradox), Toncar and Munch found that complex *tropes* influence ‘persuasion’ without enduring memory effects, while simple *tropes* are more memorable but without apparent ‘persuasive’ effect. Moreover:

- Complex *tropes* increased the believability of advertisement claims and the perceived importance of features in advertisement claims, while simple *tropes* did not
- Complex *tropes* elicited more emotion-oriented responses but less cognitive (thought-oriented) responses
- Simple *tropes* were remembered better than complex *tropes*

While the study offered some insights into the ‘persuasiveness’ of figurative language in an advertising context, it did not involve any *schemes* or consider the impact of other possible variables such as the thinking orientation of the listener.

McQuarrie and Mick (2003) followed-up their 1996 work with another study to see if the persuasive impact of figures of speech held up under conditions of incidental, rather than directed exposure. In this respect, the subjects were not told to focus on advertising material *per se* but rather to read a test magazine, with the experiment assessing what they vicariously absorbed about the impact of particular adverts. This research addressed a gap previously identified in McQuarrie and Mick (1996). The experiment used both verbal and visual rhymes (*schemes*) and metaphors (*tropes*) as independent variables, with the results showing that figures of speech improved respondents’ attitude towards an advertisement and related recall. The study also found that *tropes* were more effective in terms of higher levels of positive attitude and recall than *schemes*, with visual figures more effective than verbal counterparts. However, the experiment only used a single example of a *scheme* and a single example of a *trope*, without considering the impact of other potential variables such as the thinking orientation of the listener.

In addition to the specific research into figurative language cited so far, there have also been a number of generally small sample studies in therapeutic contexts typically exploring largely metaphorical language used in clinical situations (e.g. Cardin 2004; Imbolter, Cohen and Farnia 2013; Karp 1996; McMullen and Conway 1996) and others involving speech and literary work (e.g. Acheson 2004; Kreuz et al 1996; Kreuz and Roberts 1993;
Lindstromberg and Boers 2008; Nezami 2012; Williams-Whitney, Mio and Whitney 1992). Figurative language in organisational science has also received some attention (e.g. Oswick, Keenoy and Grant 2002; Putnam and Fairhurst 2001), as it has to a limited extent in areas such as negotiation (e.g. Putnam 2003). Still other researchers have studied particular figures of speech mostly in the advertising setting such as: analogies (Gregan-Paxton et al 2002; Roehm and Sternthal 2001), idiom (Lim et al 2009), irony (Lagerwerf 2007), metonymy (Lowder and Gordon 2013); metaphors (Ang and Lim 2006; DeRosia 2008; Lagerwerf and Meijers 2008; McQuarrie and Phillips 2005; Morgan and Reichert 1999), puns (Djafarova 2008; van Mulken, van Enschot-van Dijk and Hoeken 2005), resonance (Stathakopoulos, Theodorakis and Mastoridou 2008), rhetorical questions (Ahluwalia and BurnKrant 2004) and sarcasm (Lagerwerf 2007). Jiang and Tao (2012) studied attitude formation and persistence associated with figurative advertising headlines. Despite this work, there has been limited empirical research into figurative language in a mainstream business or management setting, and in particular, within the context of leadership communication. Moreover, the expansive advertising studies that have taken place focused mostly on tropes as opposed to schemes, and used a range of varying approaches and persuasion constructs unrelated to Aristotle’s trilogy. For example:

- Ahluwalia and BurnKrant (2004) used recall and message quality perceptions as measures of message persuasion
- Ang and Lim (2006) used brand personality perceptions, attitude towards the advertisement, attitude towards the brand and purchase intention to assess the effect of comparative adverts on perceptions of product utilitarianism and symbolism
- Lagerwerf (2007) used a single-item agreement/disagreement scale to assess whether an advert was ‘convincing’
- Lagerwerf and Meijers (2008) used adjusted ‘attitude towards the ad’ and perceived comprehension scales to assess the appreciation of open versus closed metaphors.
- Lim et all (2009) used aggregated ‘attitudinal responses’ measured against six-point semantic differential scales anchored by bad/good, boring/interesting, annoying/pleasing, negative/positive, and overall disliking/overall liking
- McQuarrie and Phillips (2005) used ‘yes/no’ responses and reaction times to implication statements about an advertised brand to assess the indirect persuasion of metaphors
- Morgan and Reichert (1999) used a comprehension assessment to rate the validity of respondents’ interpretation of adverts
• Roehm and Sternthal (2001) used semantic differential scale-items to measure comprehension and persuasion in relation to brand evaluations (i.e. like/dislike, useful/not useful, high-tech/not high-tech, good/bad, high/low quality, practical/impractical, worth owning/ not worth owning, impressive/unimpressive, valuable/not valuable and advanced/not advanced)

• van Enscho-van Dijk and Hoeken (2005) asked respondents to rate varying slogans in terms of being ‘badly/well chosen’ and ‘not pleasing/pleasing’ to assess their appreciation levels

Almost all advertising studies used students to assess experimental stimuli against controls, while another study of metonymy by Musson and Tietze (2004) used respondent observation of university faculty members. In doing so, both sets of test subjects (i.e. students and faculty members) reflected a special, arguably atypical sub-group of normal society in respect to demographic factors such as age, life and workplace experience, education and lifestyles. Also, none of the studies examined the possible influence of thinking orientation and did not provide insights into the comparative persuasiveness of particular forms or categories based on Aristotelian theory.

While not involving figurative language, another study by Alexander et al (2001) did test the persuasiveness of experimental texts outside the advertising area, using topic beliefs, knowledge, and interest—measured before and after a reading task—as differential measures of ‘persuasion’. While accounting for educational background as a moderating variable, this study did not examine the possible influence of thinking orientation or offer any insights into the persuasiveness of figurative language. A further study by Kruglanski, Webster and Klem (1993), with a single-item confidence measure, assessed a concept of ‘motivated persuasion’ with a Likert measurement scale ranging from extremely confident that the defendant is not guilty to extremely confident that the defendant is guilty.

3.4 Language Hypotheses

Overall, there have been relatively few rigorous studies of figurative language and none of those reviewed nor enquiries made through available academic databases have uncovered equivalent research in a mainstream business or management area. Moreover, of those that have been conducted, the most relevant have occurred in the advertising field but these consistently harbour two shortcomings:

1. No clear insights into the persuasiveness of particular forms or categories.
2. No consideration of other possible variables such as the thinking orientation of the listener.

In common with other non-advertising studies, they also share a third distinction: they have all used varying constructs, sub-elements and approaches to measuring ‘persuasion’ that are more about measuring the effectiveness of particular treatments or aspects, than the true persuasiveness of a message in line with Aristotelian theory involving credibility, emotion and logic.

Nevertheless, these studies all suggest that figurative language may have a greater effect on the perception and impact of a message than literal language (e.g. Ahluwalia and BurnKrant 2004; Ang and Lim 2006; Lagerwerf and Meijers 2008; Sopory and Dillard 2002). This is particularly clear and relevant in the various advertising studies which use scale items such as not appealing/very appealing, not interesting/very interesting, like/dislike, good/bad and impressive/unimpressive (Ang and Lim 2006; Roehm and Sternthal 2001), agree/disagree that an advert was convincing (Lagerwerf 2007), yes/no responses to implication statements (McQuarrie and Phillips 2005), and badly/well chosen and not pleasing/pleasing (van Enschot-van Dijk and Hoeken 2005). In addition, Roberts and Kreuz’s (1994) work on discourse goals also suggests that tropes, as a category of figurative language, should be more persuasive than literal language given the array of positive perception-building purposes they serve. The challenge is to confirm that these positive signals equate to actual persuasion assessed through an Aristotelian perspective and that they can be replicated in the field of management communication. This leads to the following initial hypothesis:

**Hypothesis 1:** *Figurative language is more persuasive than literal language in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic); and (b) their support for the speaker.*

Drawing on Classical distinctions, Leech (1969) identified schemes and tropes as the two primary categories of figures of speech in literary use. In doing so, he did not discuss which was the more persuasive. McQuarrie and Mick (2003) have shown that tropes are more effective than schemes in terms of eliciting positive attitudes and recall, but this assessment did not involve prose-like management communication and the results were not extrapolated to determine explicit persuasiveness based on an Aristotelian concept.
Moreover, this assessment was based solely on one scheme and one trope. Consequently, in understanding the persuasiveness of figures of speech, it is useful to determine which of the two base categories is more persuasive and in particular whether tropes (which are more complex and deviant from literal language in that they involve the non-literal or allegorical use of words, and therefore arguably contain more information and appeal for listeners) are more or less persuasive than schemes (which simply involve the literal but non-traditional use and arrangement of words). For this thesis it is also meaningful to do so in the context of management communication. Consequently, it is proposed that:

**Hypothesis 2:** Tropes are more persuasive than schemes in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.

McQuarrie and Mick’s (1996) taxonomy offers a useful, theoretically robust way of categorising schemes and tropes into simple and complex forms based on degrees of deviation and complexity. While identifying an ascending order in deviation and complexity from simple schemes, to complex schemes, to simple tropes, to complex tropes the authors did not explore whether this reflected a similar ascending order in persuasiveness. Other studies (focused on the effectiveness of advertising material) have shown that tropes are more effective than schemes in eliciting positive attitudes and recall (e.g. McQuarrie and Mick 2003) and that differences exist between simple and complex tropes in respect to the believability of claims, emotional arousal and memory retention (Toncar and Munch 2003). But the explicit issue of whether there is some overall ascending order in the persuasiveness of simple and complex schemes and tropes (as opposed to their effectiveness) remains unresolved. Exploring this question in a management context would also add to the overall understanding of schemes and tropes as agents of persuasion and potentially help identify a hierarchy of language strategies for leaders and managers to use in the workplace. Therefore, it is proposed that:

**Hypothesis 3:** There is an ascending order in the persuasiveness of schemes and tropes in management communication in line with their ascending complexity (i.e. from simple schemes, to complex schemes, to simple tropes, to complex tropes), as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.
3.5 Thinking Orientation Hypothesis

Chapter 2 reviewed the work of Seymour Epstein on the nature of thinking (i.e. Epstein 1994, 2003; Epstein et al 1994; Epstein et al 1996; Pacini and Epstein 1999). Epstein’s Cognitive–Experiential Self-Theory (Epstein 1994, 2003) proposed that people think in two psychologically different ways: (1) through an experiential (intuitive emotional) cognitive system and (2) though a rational (analytical logical) cognitive system. Epstein concluded that each person has and uses both thinking styles but he did not consider or assess their role in the persuasion process. While a person can be high on both, either or neither sets of attributes that underpin each style, the relative contribution and dominance of one system over the other on a particular occasion is largely determined by individual differences in natural (preferred) thinking style and situational factors that influence a deliberate choice (e.g. motivation, emotional involvement, alignment with previous experience, personal relevance or consequences, interest or stimulation, time constraints, complexity of the message and so on). Moreover, the relatively easy processing of the experiential system tends to make it the automatic choice when nothing in the situation (e.g. what a speaker says) challenges underlying beliefs that cause ‘metacognitive intercession’. Emotional arousal and complexity also reinforce the disposition towards experiential thinking, as does the degree of listener involvement inherent in the situation.

Both thinking styles rely on accumulated inferential rules. Perloff (2003) documented that beliefs and attitudes influence behaviour by forming cognitive shortcuts for how people view the world and make decisions, allowing them to quickly categorise people, places and events, and judge situations. The inferential rules and shortcuts buried in the experiential system are holistic, affective, image-based, intuitive and broad, while those in the rational system—reflecting a person’s understanding of culturally transmitted rules of reasoning—are analytical, logical, abstract, reasoned and finely differentiated (Epstein 1994; Pacini and Epstein 1999). This means that the inferential rules and shortcuts in the two systems are qualitatively different leading to qualitatively different message processing and analysis, and potentially qualitatively different cognitive outcomes. As a consequence—and notwithstanding that some people can be high on both or neither sets of attributes—the thinking orientation of a person in a given situation could be expected to influence message processing and therefore persuasion by virtue of the qualitatively different cognitive systems that may be deployed. It is arguable too that this influence has already been observed. In this respect, if the general population inevitably contains dominant experiential and rational thinkers at any one time—in line with Cognitive–Experiential Self-
Theory (Epstein 1994, 2003)—then both thinking orientations have already featured in the positive effect observed, for example, in past empirical studies of figurative language in advertising (e.g. Ahluwalia and BurnKrant 2004; Ang and Lim 2006; Djafarova 2008; Lagerwerf 2007; Lagerwerf and Meijers 2008; McQuarrie and Mick 2003; McQuarrie and Phillips 2005; Roehm and Sternthal 2001; Toncar and Munch 2003; van Mulken, van Enschot-van Dijk and Hoeken 2005). This result could well suggest that both experiential and rational thinking orientations have individually played a positive role in the favourable results achieved when subjects process different expressions. This interpretation would be consistent with Sopory and Dillard’s (2002) finding about the organising quality of *tropes* in that it highlighted a trait that would arguably appeal to the rational mind, while the figures themselves, in inciting emotions, images and holistic thinking (Downey 1997; Grassi 1980; Lakoff and Johnson 1980) would be expected to appeal to the experiential mind (Epstein 1994, 2003). Roberts and Kreuz (1994) also showed that some of the reasons for using *tropes* reflected logical discourse goals (e.g. to clarify arguments, compare similarities, contrast differences) while others reflected more experiential discourse goals (e.g. to show emotions, be unconventional, add interest). The processing of *schemes*, reflecting the literal and therefore logical organised meaning and use of words, would arguably appeal to the rational mind, just as any processing pleasure or emotion derived from a creative arrangement might simultaneously appeal to the experiential mind.

All this reinforces the suggestion that both experiential and rational thinkers respond differently but positively to language, which in turn, affects their impression of the message and enhances their reaction to it. However, since some language styles also incite the emotions (Den Hartog and Verburg 1997; Downey 1997; Wood 2006), it is arguable too that the effect would be more pronounced amongst experiential thinkers primarily because emotional experiential thinking is more automatic and intuitively powerful than logical rational thinking (Epstein 1994, 2003). In addition, experiential thinkers would still retain at least some (albeit subordinate) rational thinking tendency that would resonate with the logical, organising dimensions of the language while simultaneously being used to process the meaning and consistency of cues (Petty and Cacioppo 1986, 1996; Eagly and Chaiken 1993) and to think through any hint or likelihood of emotional manipulation (Conger 1998a). Consequently, in understanding different engaging language forms, experiential thinkers would arguably enjoy a complementary—although not even—dual effect (involving emotion and logic), while rational thinkers would be limited to the logical, organising dimensions and meaning of the language (i.e. the arguments), with likely scant or at least lesser appreciation of any emotional subtext.
For this reason and given the emotional arousal associated with experiential thinking, it is proposed that experiential thinkers would be more affected by varying language forms than rational thinkers. This leads to the final hypothesis:

**Hypothesis 4:** The thinking orientation of listeners affects the perceived persuasiveness of management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker, such that listeners who rate high as experiential thinkers are more persuaded than those who rate high as rational thinkers.

Testing this proposition should also offer some understanding about the distribution of the two thinking styles in the general population and the extent to which people may be high on both or neither sets of attributes that underpin each style. The latter will help address a research gap specifically identified by Pacini and Epstein (1999) about whether this circumstance prevails in groups other than college students.

### 3.6 Conceptual Framework

**Figure 4** brings the hypotheses together within an overall conceptual model that shows pictorially what is proposed and the underlying relationships between the hypotheses and the various constructs and variables.

The persuasion construct used reflects an Aristotelian approach involving credibility, emotion and logic and the next chapter discusses how this was measured. The next chapter also discusses the variables and the nature of the experiment used to test the hypotheses.
Where:

H₁: Figurative language is more persuasive than literal language in verbal management communication, as measured by (a) listeners' assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.

H₂: Tropes are more persuasive than schemes in verbal management communication, as measured by (a) listeners' assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.

H₃: There is an ascending order in the persuasiveness of schemes and tropes in management communication in line with their ascending complexity (i.e., from simple schemes, to complex schemes, to simple tropes, to complex tropes), as measured by (a) listeners' assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.

H₄: The thinking orientation of listeners affects the perceived persuasiveness of management communication, as measured by (a) listeners' assessments of speaker credibility, emotion and logic; and (b) their support for the speaker, such that listeners who rate high as experiential thinkers are more persuaded than those who rate high as rational thinkers.
3.7 Conclusion

Figurative language with its varying expressions and categories makes communication interesting, engaging and memorable; it carries subtle extra meaning, draws thoughtful connections, evokes emotional responses and often cuts through complexity in a way that literal language can’t (Lakoff and Johnson 1980; Den Hartog and Verburg 1997). It can amuse, elucidate and charm an audience while offering powerful insights (Roberts and Kreuz 1994; Sopory and Dillard 2002; Spence 2013). These qualities suggest that figurative language could well enhance the credibility of a speaker, improve the emotional rapport achieved with an audience and clarify, if not improve, the logic and arguments presented, in line with Aristotelian theory. In doing so, it could also be expected to be more persuasive than literal language in a general management setting, although that remains to be tested.

A number of generally small studies have occurred in therapeutic contexts (e.g. Cardin 2004; Im-bolter, Cohen and Farnia 2013; Karp 1996; McMullen and Conway 1996), speech and literary work (e.g. Acheson 2004; Kreuz et al 1996; Kreuz and Roberts 1993; Lindstromberg and Boers 2008; Nezami 2012; Williams-Whitney, Mio and Whitney 1992), organisational science (e.g. Oswick, Keenoy and Grant 2002; Putnam and Fairhurst 2001) and negotiation (e.g. Putnam 2003). In the business context, research has tended to focus on exploring the use and impact of particular figures of speech in advertising (e.g. Ahluwalia and BurnKrant 2004; Ang and Lim 2006; DeRosia 2008; Djafarova 2008; Gregan-Paxton et al 2002; Lagerwerf 2007; Lagerwerf and Meijers 2008; McQuarrie and Mick 2003; Morgan and Reichert 1999; Roehm and Sternthal 2001; Toncar and Munch 2003; Stathakopoulos, Theodorakis and Mastoridou 2008; and van Mulken, van Enschoth-van Dijk and Hoeken 2005). By comparison, these studies have illustrated the absence of equivalent research in the management area.

Contemporary scholars have however made important theoretical contributions to the field in terms of developing taxonomies to classify various types of figurative language and speculating on how tropes, in particular, affect perception and persuasion (e.g. McQuarrie and Mick 1996; McGuire 2000). Nonetheless, the relative persuasiveness within and between schemes and tropes has not been definitively explored or determined.

Separate to this, Epstein (1994, 2003) showed that people think in two psychologically different ways—through an experiential (intuitive emotional) cognitive system and through
a rational (analytical logical) cognitive system. When the situation is constant and notwithstanding that some people can be high on both, either or neither sets of attributes underpinning each style, a person’s dominant thinking orientation, with its qualitatively different inferential rules and shortcuts (Perloff 2003), can be expected to affect how she or he perceives and processes a message and therefore its persuasiveness.

To test these suppositions, four hypotheses have been proposed:

**Hypothesis 1:** Figurative language is more persuasive than literal language in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker

**Hypothesis 2:** Tropes are more persuasive than schemes in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker

**Hypothesis 3:** There is an ascending order in the persuasiveness of schemes and tropes in management communication in line with their ascending complexity (i.e. from simple schemes, to complex schemes, to simple tropes, to complex tropes), as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.

**Hypothesis 4:** The thinking orientation of listeners affects the perceived persuasiveness of management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker, such that listeners who rate high as experiential thinkers are more persuaded than those who rate high as rational thinkers.

This chapter has explored the nature and potential role of figurative language in the persuasion process, starting with a discussion of what figurative language is, leading to a review of recent research and then converging on relevant work in the business context. After that it revisited Epstein’s (1994, 2003) work on how people think and considered the possible role of thinking orientation in persuasion.
That examination culminated in four hypotheses that form the centrepiece of this thesis, closing with an overall conceptual model depicting graphically the proposed relationships between the hypotheses and the various constructs and variables, and their overall suggested role in the persuasion process.

The next chapter documents the methodology and experiment used to explore the hypotheses and analyse the results.
Chapter 4

Research Methodology

4.1 Preface

Chapter 3 explored figurative language and its role in the persuasion process. It revisited Epstein’s (1994, 2003) work on how people think and presented the four hypotheses and conceptual model that form the centrepiece of this thesis. This chapter documents the methodology and nature of the experiment used to explore the hypotheses about the relative persuasiveness of figurative language (and associated categories and forms) in management communication. It commences with a presentation of the conceptual and operational definitions used, followed by a detailed description of the experiment—its basic design, sample, procedure, test material and pre-tests. It then identifies the variables, measures and techniques used to analyse the results. Finally, it documents the steps taken to ensure that high ethical standards and confidentiality were maintained.

4.2 Definitions

For the purposes of this study, the following conceptual and operationalised definitions were used, as shown in Table 6.
4.3 Positioning of the Researcher

In undertaking the research, the position adopted by the researcher was essentially positivist, reflecting a belief that knowledge is best acquired through direct observation and experimentation. This was complemented with a view that:

- Results are potentially deeper and more robust when assessed using both quantitative and qualitative techniques
- The study would benefit by being conducted (as far as possible) under everyday conditions.
For these reasons, the research was conducted using a mixed-methods approach involving a cross section of the working population, rather than being limited to specific subgroups or atypical cohorts such as university students.

In addition, the researcher took a favourable view of the formative theories (and prior work) used as foundations for the study and determined that the hypotheses should be framed in favour of the views and propositions of prior researchers such as Aristotle and Epstein.

Beyond that, the researcher’s sole interest and positioning was aimed at conducting an impartial study under objective conditions. For this reason, contact with respondents was conducted at arm’s length using a third-party market research company to liaise with respondents and independently gather the required data from appropriate individuals on a panel of registered subscribers. This panel reflected parties who had indicated their willingness to participate in research. To facilitate this approach, the researcher provided the experimental package (i.e. information sheet, instructions, audio-visual test material, questionnaires and sampling criteria), and the research company provided the online logistical capacity and facility to run the experiment over the Internet drawing on their subscriber base. The researcher had no hands-on role in selecting the respondents, no direct contact with any party other than the market research company and no knowledge of the background or ethos of the audience (individually or collectively), beyond the sampling criteria.

4.4 Research Design

4.4.1 Design of the Experiment

Most research into figurative language in a business context has occurred as experiments within the advertising field (e.g. Ahluwalia and BurnKrant 2004; Ang and Lim 2006; DeRosia 2008; Gregan-Paxton et al 2002; Lagerwerf 2007; Lagerwerf and Meijers 2008; Lindstromberg and Boers 2008; McQuarrie and Mick’s 2003; McQuarrie and Phillips 2005; Morgan and Reichert 1999; Roehm and Sternthal 2001; Stathakopoulos, Theodorakis and Mastoridou 2008; Toncar and Munch 2003; van Mulken, van Enschot-van Dijk and Hoeken 2005). Consequently, and consistent with the aims and benefits of an experimental method as outlined in Hammond and Wellington (2013), a similar research design was seen as appropriate for this study since it would allow individual predictor variables (i.e. language types) to be manipulated in an experiment, with the corresponding
effect on dependent variables (i.e. credibility, emotion, logic and support for the speaker) being assessed empirically. This experimental design was supplemented with a mixed-methods approach to the capture and analysis of feedback, with the integration of both quantitative and qualitative data intended to lead to a better understanding of the results and their implications.

The experimental study undertaken involved an independent-groups design that incorporated six language types (i.e. literal language, simple \textit{schemes}, complex \textit{schemes}, simple \textit{tropes}, complex \textit{tropes} and a consolidated example of all the other five) and two styles of thinking orientation (i.e. experiential and rational). The experiment was constructed to assess and compare the persuasiveness of six primary editions of the test material (one for each language type), which took the form of recorded speeches delivered by an actor and viewed online by respondents over the Internet. As such, the experiment tested monological as opposed to dyadic or multi-party persuasion (i.e. one-way oratory versus multi-party interactive communication).

Aristotle recognised the benefits that come from understanding the audience and tailoring the approach, arguments and emotion accordingly. Other authors such as O'Keefe (2002), Perloff (2003) and Petty and Cacioppo (1996) all stress the social psychology of persuasion and the advantage that comes from knowing the needs, attitudes and values of the audience. Conger (1998a) and Wood (2006) also see persuasion as a primary search for common ground, again based on a solid understanding of the audience. Without challenging that view, which itself reflects the findings of prior research, this study was different in that it was deliberately designed to avoid any upfront knowledge of the audience. As a result, the speeches embedded in the test material were not specifically tailored to the audience; the background of respondents remained entirely unknown including in specific areas such as the underlying psychology of respondents (i.e. needs, attitudes and values), whether or not they were high or low self-monitors (Snyder 1987) and any prior knowledge, experience and/or expectations they may have had. This approach was taken in order to test the inherent persuasiveness of particular figures of speech under standard everyday conditions.

\subsection*{4.4.2 Sample}

The final sample (after removal of aberrant cases) involved 420 adult Australian respondents aged between 20-65 years—all from English speaking backgrounds. All respondents were in some form of full or part-time employment with at least three years
prior full-time work experience. In specifying the sampling criteria, the aim was to support the intended assessment of the test material (containing a management message) under everyday conditions. As such, it was important that the sample not only reflect respondents of general working age but that those respondents were currently in paid employment, with a minimum of three years’ experience of the situation. The latter was intended to increase the likelihood of prior exposure to management communications and therefore some understanding by respondents of the experience and normal context involved. The requirement for respondents to have English speaking backgrounds was specified for ease of analysis given the Australian context of the study and the fact that English is the national language of Australia.

Six broad groups with a minimum of 68 respondents each viewed the different types of speech, with each group reflecting roughly equal numbers of men and women. Table 7 shows the precise gender mix achieved for each type of speech while Table 8 records the detailed demographics of the overall sample. The higher-than-minimum base sample for each speech was chosen with Pacini and Epstein’s (1999) finding in mind that the two cognitive systems were not mutually exclusive. Some people were likely to be high on both sets of attributes that underpin each thinking style. Consequently, a sample size in excess of the recommended minimum of 30 responses per condition was seen as prudent for the experiment (Cavana, Delahaye and Sekaran, 2001; Levine et al 2004).

<table>
<thead>
<tr>
<th>Speech Type</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literal</td>
<td>36</td>
<td>36</td>
<td>72</td>
</tr>
<tr>
<td>Alliteration</td>
<td>35</td>
<td>36</td>
<td>71</td>
</tr>
<tr>
<td>Antithesis</td>
<td>31</td>
<td>37</td>
<td>68</td>
</tr>
<tr>
<td>Rhetorical Question</td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
<tr>
<td>Metaphor</td>
<td>36</td>
<td>35</td>
<td>71</td>
</tr>
<tr>
<td>Consolidated</td>
<td>36</td>
<td>32</td>
<td>68</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>209</td>
<td>211</td>
<td>420</td>
</tr>
<tr>
<td><strong>Percentage:</strong></td>
<td>49.8</td>
<td>50.2</td>
<td>100</td>
</tr>
</tbody>
</table>
4.4.3 Procedure

Prior to commencing the experiment, respondents read an Information Sheet to advise them about the research, offer a point of contact for further information and seek their informed consent. Continuing respondents were then asked to complete an initial demographics questionnaire that sought some basic information about each person and confirmed on a case-by-case basis that they met the requirements specified for the sample. Copies of the Information Sheet and Initial Demographics Questionnaire are shown at Appendices 2 and 3 respectively. Continuing respondents then read the Respondent Instructions shown at Appendix 4 which outlined the ensuing process and context for the experiment. This included information about the imaginary setting within which the communication occurred, the nature of the fictional company involved, the products it produces, and how long respondents had hypothetically been with the organisation.

Respondents were then asked to complete a questionnaire to assess their thinking orientation as shown at Appendix 5. Following this they were allocated in equal numbers of experiential and rational thinkers to one of six groups until the quota for each male and female subgroup was satisfied. Respondents then viewed a version of the test material (speech) simulating a management communication about a hypothetical change management initiative. A control group viewed test material with normally arranged literal
language while four other test groups each viewed separate equivalent material incorporating one of four figures of speech under test; namely, alliteration (a simple scheme), antithesis (a complex scheme), rhetorical question (a simple trope) and metaphor (a complex trope). The figures of speech chosen (i.e. alliteration, antithesis, rhetorical question and metaphor) were all specifically drawn from the cited examples shown in the taxonomy developed by McQuarrie and Mick (1996). A separate test group viewed a final consolidated edition incorporating all forms of test material (figures of speech). All respondents then completed a final questionnaire to assess their reaction to the speech they viewed in terms of its perceived persuasiveness—see Appendix 6.

The experiment was conducted online through a commercial market research company using respondents drawn from an established panel of registered subscribers who each received points they could redeem for a small gift for participating in the exercise. The market research company matched respondents with the sampling criteria provided. This included requirements such as the need for equal numbers of men and women, equal numbers of experiential and rational thinkers to each group, English speaking backgrounds, involvement in some form of current employment (with at least three years full-time prior work experience) and an age demographic between 20-65 years. The minimum age of 20 was chosen in recognition of the requirement for each respondent to have at least three years full time prior work experience, while 65 was chosen as the accepted notional retirement age. The company’s sampling system ensured that representative quota samples were obtained for each edition of the test material while meeting the required specifications. The test material was displayed by means of digital audio-visual files where respondents saw and heard an actor deliver a particular rendition of the test material. Dedicated control measures within the website software required respondents to complete all questions in the questionnaires before proceeding to the next step. When a question remained unanswered, an appropriate warning appeared drawing attention to the particular question(s) that needed to be addressed before they could continue.

4.4.4 Test Material

The test material was based around a standard speech, simulating a change management communication by the General Manager of a hypothetical company to its 80 employees. Each of the six primary versions of the speech was based on an equivalent script averaging 420 words in length. To facilitate consistency and standardisation, each script was written using the five-point framework (i.e. bait, problem, solution, benefits and call to action) as
advocated by Thompson (1998) in his ‘five-point plan of persuasion’. The use of Toulmin’s alternative framework of data, claims, warrants, backing, rebuttals and qualifiers (Toulmin, Rieke and Janik 1984) was also considered but ultimately discounted for the following reasons:

- Toulmin’s framework reflects a structure for practical reasoning and analysis rather than a dedicated template for preparing an everyday message or speech
- Toulmin’s perspective has been characterised by some authors primarily as a way of developing knowledge rather than persuading (e.g. Golden et al 2004). It was therefore seen as an appropriate precaution to use another model for developing the required persuasive speeches
- Toulmin’s approach focuses on substantive logic rather than the full Aristotelian trilogy of credibility, emotion and logic. As such, the framework arguably reflects a bias which would likely lead to a less well-rounded set of speeches that might not appeal equally to rational and experiential thinkers
- In the Aristotelian typology, Toulmin’s model (as a form of reasoning) is, in isolation, more attuned and suited to forensic legal argument than deliberative discourse, when the speeches and experiment were intended to reflect the latter

By contrast, Thompson’s pragmatic framework “…is a classic five-point plan for making a business presentation aimed at persuading an audience” (Thompson 1998, p.18). It draws on the framework and elements used in Classical orations (i.e. exordium, narratio, confirmatio and peroratio), translated for use in the modern business and media setting (Lanham 1991; Thompson 1998), and in doing so, provides a vehicle for deploying the pista (compelling proof), lexis (engaging language and expression) and taxis (orderly arrangement) advocated by Aristotle. In addition, it facilitates the presentation of an appropriate enthymeme and associated stasis issues. The bait represents the major premise, the problem the minor premise and the solution the conclusion. The benefits represent the arguments framed around the stasis issues while the call to action extends those arguments into an emotional plea to incite enthusiasm. The choice of words and language structure across all versions provide the style and quality of expression, while the figurative language instils the actuality and mental examples needed to support and supplement the reasoning.

Each script, other than the literal and consolidated editions, incorporated eight instances of the specific figure of speech under test—with at least one in each of the five sections of the Thompson (1998) framework and an additional one in the ‘call to action’ section, as a
closing appeal statement. The consolidated edition included the eight instances of all four figures of speech under test (i.e. 32 figurative expressions). The number of figures within each base script was limited to eight in order to ensure that the aggregate number of expressions in the consolidated edition did not make the language appear awkward or come across as artificial or contrived. The literal version did not contain any figures of speech but used equivalent literal language. The final six scripts are shown at Appendix 7. All were written in a natural conversational style that allowed sentences to start with conjunctions where to do so improved the fluency of the spoken language. The alliteration script contained alliterations with three repetitions of the initial consonant sounds while the antithesis script used only simple examples with explicit polar opposites. The rhetorical question script avoided the use of tag questions\(^{64}\) due to the mixed results of prior research. In this respect, Hosman (1989) found that tag questions negatively affect perceptions of a speaker’s sociability, credibility and trustworthiness, with Ng and Bradac (1993) asserting that they were one of the three most commonly used markers of powerless speech and Holgraves and Lasky (1999) found they decrease persuasion. Alternately, Harres (1998) identified that tag questions could heighten credibility by conveying empathy and feedback, while Blankenship and Craig (2007) showed that under conditions of high credibility, tag questions increased message processing and, when coupled with strong arguments, resulted in more favourable attitudes towards a proposal. Although the scenario within the experiment conformed to that used in prior research showing a positive effect with the use of tag questions (i.e. high-credibility source, with elements of feedback and empathy, and use of the collective ‘we’ pronoun), it was ultimately decided to avoid the use of tag questions as a precautionary measure, given the mixed results.

For uniformity, the metaphor script was also constructed around an extended metaphor (Sopory and Dillard 2002) with a consistent and chronologically synchronised nautical theme, which was pre-tested for cross-gender ‘motivational resonance’ (Ottati, Rhoads and Graesser 1999). The ‘motivational resonance’ of the nautical theme was also assessed in the substantive study with use of a control variable. The concept of ‘motivational resonance’ refers to the extent to which material (such as the theme in a metaphor) resonates with an individual’s preferences and interests. This phenomenon has proved important for encouraging extended processing of message arguments largely under conditions of incidental exposure. While the experiment involved ‘directed’ rather than

\(^{64}\) Tag question – A short phrase in the form of question that is attached to the end of a statement e.g. ‘don’t you think?’ (Areni 2003)
‘incidental’ exposure, cross-gender ‘motivational resonance’ was still seen as desirable in order to remove unnecessary variability that may harbour unforeseen consequences or otherwise affect the results. The individual metaphors used in the metaphor script also reflected simple straightforward nominative examples (Spears 2003), with relational, complicated, rich or mixed metaphors being deliberately avoided.

Overall, care was also taken to ensure that all scripts reflected only pure (i.e. unmixed) forms of each figure of speech under test, notwithstanding Aristotle’s advice that the better expressions often combined differing figures of speech in the one phrase65. This austere approach was taken in order to facilitate clarity in the experiment and allow the individual impact of specific archetypal figures of speech to be assessed.

In recording the speeches, each script was similarly annotated and underlined to identify places for the actor to deliver consistent inflexion, gestures and body language. An autocue was also used to facilitate consistent fluency and pace of delivery across all renditions of the speech. Each speech was filmed showing a consistent long shot of the actor at a lectern, seen from the waist up. This perspective was specifically chosen to allow scripted gestures and body language to be captured on camera and to simulate the likely perspective a relatively large audience (such as the hypothetical 80 employees) might have of the speaker in the scenario suggested. In addition, to highlight facial movements and expressions (Leathers 1992), three close-up ‘head and shoulder’ shots were inserted into each performance at set places within the editing process. This was done to capture important facial cues, particularly eye movements (Burgoon, Dunbar and Segrin 2002; Huczynski 2004; Leathers 1992), while adding interest and facilitating a degree of naturalness and entertainment value in the final product. Entertainment value was seen as important so as to encourage involvement and hedonic processing (Slater 2002). These close-up shots took place at the same point in all the speeches where no competing hand movements occurred that might otherwise affect the overall flow of the visual performance.

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65 Although Aristotle had no formal concept of figures of thought or speech, he nonetheless taught that mixed figurative expressions were more effective, observing that the more there was in a thought or expression (i.e. multiple figures of speech) the more urbane and appealing it would seem. For example, he noted that metaphors incorporating analogy or antithesis were seen as more elegant and better-liked by audiences, and that other figures of speech incorporating activity (energesia), personification or parison were also more intriguing (Kennedy 1991)
4.4.5 **Encouraging Central Processing**

Much of the previous research into figurative language has occurred in the advertising field where information is often processed by participants in low-involvement peripheral mode (Jiang and Tao 2012). However, in this instance, the experiment, procedure and test material were all designed to support and encourage deeper thinking about the arguments and language though central processing (Petty and Cacioppo 1996), while at the same time minimising differing cues between the various renditions of the speech that might otherwise affect the consistency of any peripheral processing, should that occur (Eagly and Chaiken 1993). The design features used to encourage central processing included:

- Use of registered subscribers (by the market research company) who were required to log into the company’s website to participate in the exercise. This approach effectively screened-out disinterested parties or those with only a vicarious or marginal interest in participating

- Clear up-front instructions to focus attention and prepare respondents mentally for the exercise

- Use of digital audio-visual files to deliver the various speeches online, thereby making the exercise potentially more enjoyable in terms of processing pleasure (Barthes 1985; van Mulken, van Enschot-van Dijk, and Hoeken 2005) and increasing the likelihood of hedonic processing and involvement (Slater 2002)

- Provision of a points-based rewards program for respondents by the market research company as a means of increasing motivation and involvement

- Inclusion of control measures to inhibit mental wandering during the exercise such as reversed-scored questions, the clustering of the 40 thinking orientation questions into four groups of ten, a visible Progress Indicator within the website (to tell respondents how far they had come and had to go to finish the exercise) and real-time crosschecking of the completion of questions before respondents were allowed to proceed from one step to another

The specific design features used to minimise differing cues between editions of the speech included: (1) use of the same actor, setting, camera angles (including long shots and close-ups), edits, equipment and production contractor for all the speeches, (2) consistent and controlled (i.e. scripted) delivery of inflexion, gestures and body language by the actor, and (3) use of an autocue to facilitate consistent fluency and pace of delivery.
4.4.6 Pre-tests

Before being used in the study, all early forms of the base scripts (see Appendix 8) were subjected to three pre-tests. A fourth pre-test was conducted to assess other components of the test material (namely the preamble and the questionnaires), and to double-check the cross-gender ‘motivational resonance’ of nautical metaphors used in the metaphor version of the script. The first Threshold Pre-test involved a subject-matter expert, a Professor of Linguistics at the University of Western Australia, who reviewed early scripts to:

- Ensure the literal language version did not contain any live (i.e. active) figurative expressions. Recognising that literal language inherently contains conventionalised or ‘frozen’ metaphors (Downey 1997; Leech 1969; McQuarrie and Mick 1996; Sopory and Dillard 2002), the Professor was asked to identify all expressions he felt still had a figurative source. While also identifying those words or phrases he saw as conventionalised or ‘frozen’, the Professor specifically asked to focus on any inappropriate figurative elements within the intended literal script. Only one borderline example was discovered which was appropriately adjusted.
- Confirm that the alliterations, antitheses, rhetorical questions and live metaphors used in the figurative scripts all satisfied relevant linguistic definitions and were acceptable examples of the figures of speech under test. Those expressions that failed this test were adjusted as necessary.
- Ensure there was no cross-contamination within the expressions used and that each reflected a pure example of the intended figure of speech under test. Those that were found to contain mixed figurative elements were amended.
Apart from suggested wording changes and clarifications for readability, this initial pre-test resulted in ten significant adjustments as shown in Table 9.

<table>
<thead>
<tr>
<th>Section of Speech</th>
<th>Problem</th>
<th>Old Phrase</th>
<th>New Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bait</td>
<td>Unintended metaphor within an imperfect alliteration</td>
<td>‘crest of a clearly colossal challenge’</td>
<td>‘cap of a clearly colossal calling’ (i.e. adjusted to reflect a pure alliteration)</td>
</tr>
<tr>
<td>Bait</td>
<td>Use of a tag question (subsequently reconsidered)</td>
<td>‘We stand together on the verge of a great challenge calling, don’t we?’</td>
<td>‘Do we not stand together on the verge of a great calling?’</td>
</tr>
<tr>
<td>Bait</td>
<td>Non nautical metaphor</td>
<td>‘not to be slaves to hard work’</td>
<td>‘not to be galley slaves to hard work’</td>
</tr>
<tr>
<td>Problem</td>
<td>Imperfect equivalence with alliterative script</td>
<td>‘successfully launch the new suite of products’</td>
<td>‘launch the profitable new suite of products’ (see footnote)</td>
</tr>
<tr>
<td>Solution</td>
<td>Imperfect alliteration</td>
<td>‘there are three tactical things to do’</td>
<td>‘there are three thrilling things to do’</td>
</tr>
<tr>
<td>Solution</td>
<td>Unintended alliteration</td>
<td>‘saving the ship’</td>
<td>‘rescuing the ship’</td>
</tr>
<tr>
<td>Solution</td>
<td>Semi-live metaphor</td>
<td>‘entrenched problems’</td>
<td>‘problems that arise’</td>
</tr>
<tr>
<td>Benefits</td>
<td>Unintended alliteration/imperfect antithesis</td>
<td>‘from decline and decay to a new era of growth and renewal’</td>
<td>‘from decline and likely failure to a new era of growth and opportunity’</td>
</tr>
<tr>
<td>Benefits</td>
<td>Use of a tag question (subsequently reconsidered)</td>
<td>‘But earning money is only part of why we come to work, right?’</td>
<td>‘But do we come to work just to earn money? No!’</td>
</tr>
<tr>
<td>Close</td>
<td>Unintended alliteration</td>
<td>‘force for the future’</td>
<td>‘force in the years ahead’</td>
</tr>
</tbody>
</table>

The second broader Expert Pre-test involved exposing the adjusted scripts to a formal assessment by a panel of subject-matter experts involving lecturers and doctoral students in the linguistics field at the University of Western Australia. In this assessment, respondents were asked to:

- Underline any ‘frozen’ or conventionalised metaphors in the literal script as a way of double-checking the findings of the initial review by the Professor of Linguistics. This resulted in an agreed set of conventionalised metaphorical expressions underlined in the literal script included in Appendix 7
- Underline the alliterations, antitheses, rhetorical questions and live metaphors included in the remaining (non-literal) scripts and assign relevant identifying codes to distinguish them—i.e. ‘A’ for Alliteration, ‘AT’ for Antithesis, ‘RQ’ for Rhetorical Question and ‘LM’ for Live Metaphor. This exercise was also intended...
to ensure that each figurative script only contained the intended figure of speech under test and that other forms were not inadvertently present.

- Offer any additional comments they had on the first two tasks or what they thought of the scripts or exercise generally. In particular, feedback was sought on whether any of the figures of speech were seen as odd or confusing, or could be improved.

This pre-test resulted in five additional script adjustments as shown in Table 10.

<table>
<thead>
<tr>
<th>Section of Speech</th>
<th>Problem</th>
<th>Old Phrase</th>
<th>New Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bait</td>
<td>Unintended alliteration</td>
<td>‘the future we face’</td>
<td>‘the future before us’</td>
</tr>
<tr>
<td>Problem</td>
<td>Unintended alliteration</td>
<td>‘rebuild the relationship’</td>
<td>‘improve the relationship’</td>
</tr>
<tr>
<td>Solution</td>
<td>Unintended alliteration</td>
<td>‘celebrate our successes’</td>
<td>‘celebrate our achievements’</td>
</tr>
<tr>
<td>Benefits</td>
<td>Imperfect antithesis</td>
<td>‘maximise our impact on reducing pollution while minimising the cost’</td>
<td>‘maximise our impact on pollution while we minimise the cost’</td>
</tr>
<tr>
<td>Close</td>
<td>Unclear antithesis with poor equivalence to other statements</td>
<td>‘We need not look to others for the courage, but to ourselves and the part we are prepared to take on’</td>
<td>‘We need not look to others but to ourselves for the courage to do our duty’</td>
</tr>
</tbody>
</table>

The package given to the expert panel (which records the detailed pre-test procedure used) is shown at Appendix 9. In addition, the feedback indicated difficulty with two phrases, “spectacularly unsuccessful” and “back to the future”, in that they went unrecognised as intended antitheses in that edition of the script. This matter was further explored in the following (Equivalence Comprehension) pre-test.

The third Equivalence Comprehension Pre-test involved exposing the adjusted scripts to a wider formal assessment by a pilot group of 48 respondents (with eight assigned to rate each of the six different scripts), none of whom participated in the substantive study. Appendix 10 shows the pre-test package used. This pre-test was aimed at confirming the equivalence of each script by assessing respondents’ comprehension of a range of underlying statements, while taking account of varying levels of cognitive effort.
Table 11 summarises the type and number of statements used in this pre-test. NOTE: the metaphor script contained 2 extra questions aimed at assessing the cross-gender ‘motivational resonance’ of the extended nautical metaphor (Ottati, Rhoads and Graesser 1999). Respondents assessing the metaphor script reflected equal numbers of men and women who were asked to rate how they felt about ships and/or the ocean, while identifying their gender. This control variable allowed the cross-gender comparison of results to test the degree of ‘motivational resonance’ of the nautical theme.

The approach taken in the Equivalence Comprehension Pre-test was generally adapted from that used by Peracchio and Meyers-Levy (1997) and, to a lesser extent, Brennan and Bahn (2006). Both of these earlier studies successfully tested the equivalence of differing linguistic treatments by assessing the comprehension of underlying messages that were intended to be consistent, despite differences in the language used. In addition, both studies reflected experiments analogous with the current study in that they involved comparisons between literal and figurative language in a business context, albeit advertising. In both studies the scale items were purposely drawn from the test material involved, which in those cases reflected statements related to product features. For the current study, a similar approach was adopted for the development of equivalence and factual scale items, in that they involved statements sourced from the test material (i.e. the scripts). This was complemented with a similar format and Likert scaling to that used by Peracchio and Meyers-Levy (1997).

Consistent with a comprehension test, respondents were allowed to read the script any number of times throughout the pre-test, with potential variances in comprehension associated with extra effort being crosschecked with a cognitive effort test. Overall, respondents were asked to rate 32 randomly arranged66 comprehension statements based

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equivalence statements</td>
<td>24</td>
</tr>
<tr>
<td>Factual statements</td>
<td>5</td>
</tr>
<tr>
<td>Foil statements</td>
<td>3</td>
</tr>
<tr>
<td>Total comprehension</td>
<td>32</td>
</tr>
<tr>
<td>statements:</td>
<td></td>
</tr>
<tr>
<td>Cognitive effort test</td>
<td>7</td>
</tr>
<tr>
<td>Manipulation check</td>
<td>1</td>
</tr>
<tr>
<td>Overall Total:</td>
<td>40</td>
</tr>
</tbody>
</table>

NOTE: The metaphor script contained two extra questions to assess the cross-gender ‘motivational resonance’ of the extended nautical metaphor used.

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66 The 32 comprehension statements (containing 29 drawn from the consolidated script and the 3 untrue foil statements) were first assembled in the order in which the points appeared in the script (starting from the top), with the foil statements placed last. Each statement was then assigned a number from 1 to 32. The order of the statements was then randomised to reflect the sequence obtained from the random sequence generator at www.random.org/sequences/. The sequence generated was 5, 18, 4, 30, 10, 26, 16, 7, 14, 17, 8,
on the extent to which they agreed that the script contained the message incorporated in each statement. A 7-point Likert measurement scale was used, ranging from *Strongly agree* (7) to *Strongly disagree* (1). Of the 32 statements, 24 specifically targeted points of difference between the scripts—i.e. areas where the language had been altered to incorporate figurative expressions. **Appendix 11** identifies these statements cross-referenced to the various scripts. The focus on points of difference was aimed at assessing the level of underlying consistency and comparability in the perceived meaning of each passage. While the four base figurative scripts involved 32 discrete figures of speech (with eight per script), there were also eight areas of overlap in total. Half of these overlap-areas occurred in the final Call to Action section, while the remainder were interspersed elsewhere in the text. This overlap reduced the base points of difference in the four figurative scripts to 24, with half of these being presented in reversed-scored format within the pre-test scale to encourage deeper thinking and analysis by respondents. In addition to these 24 statements, a further five statements targeted points of similarity—i.e. factual statements that were consistent and identically expressed across the various scripts, with one statement being drawn from each of the five sections of the speech framework (i.e. bait, problem, solution, benefits and call to action). Another three foil statements were also included within the pre-test scale. These comprised statements that appeared plausible in the context but were not actually contained in or answerable from the scripts. The concept of using foil statements was also drawn from Peracchio and Meyers-Levy (1997).

The potential for variance in the cognitive effort of individual respondents was controlled and assessed in the pre-test through four discrete mechanisms that involved:

- Advising respondents in the initial instructions that they were the only person to review that version of the speech and asking them to answer the questions carefully and do their best. This subterfuge was intended to address the propensity for ‘social loafing’ identified by Petty, Harkins and Williams (1980) and endorsed by Petty and Cacioppo (1996) in their discussion of cognitive effort. Petty, Harkins and Williams showed that individuals reduce their cognitive effort when performing a cognitive task as part of a group, as opposed to when they believe they are on their own.
- Requiring respondents to record the current time before and after answering the first 32 questions. This followed an instruction to read the speech and answer all

31, 19, 6, 20, 28, 9, 23, 2, 32, 27, 24, 21, 11, 3, 15, 13, 25, 12, 22, 1 and 29. After the statements were placed in the order of the random sequence, they were then renumbered from 1 to 32 so that the randomising procedure itself would not be discernible in the pre-test or distracting for respondents.
the questions in one go, without taking a break. From this information, the time taken to perform the evaluation was determined and used as a surrogate measure of each respondent’s cognitive effort. This approach was based on that used by McQuarrie and Phillips (2005) where the authors used response times to assess the latency of responses (i.e. whether judgements were recalled from memory or prior associations, or whether more effortful, fresh cognitive analysis was required). In effect, McQuarrie and Phillips used elapsed time as a surrogate measure of cognitive effort, as did Cooper-Martin (1994) with her ‘decision time’ assessment.

- Directly assessing cognitive effort with a 7-item self-assessment scale. This increased the number of questions in the pre-test questionnaire from 32 to 39, excluding the manipulation check discussed in the next point. The 7-item cognitive effort scale reflected a self-report measure adapted from Cooper-Martin (1994), which achieved an alpha reliability of 0.82 in that study. Since the context of the Cooper-Martin research differed from that of the pre-test, the wording of the items was adjusted (but only minimally) to adapt the instrument for the new setting. The Cooper-Martin study assessed the cognitive effort in terms of the time and stress involved in making a choice, so it was seen as well-suited for adaptation to this pre-test which effectively involved choosing between differing response options.

- Including, as a final question, a manipulation check where respondents were asked to record their understanding of how many people had been asked to review that script. This provided a cross-check on the effectiveness of the initial instruction that they were the only person to review that version of the speech.

Overall, the Equivalence Comprehension Pre-test confirmed the comparative equivalence of the differing expressions used within the various scripts, with correlations between cognitive effort, elapsed time and the accuracy of responses. Cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor script, was also confirmed. The analysis, as detailed at Appendix 12, did however uncover one anomaly—there was a noticeable variation in the standard deviation associated with one alliterative expression in comparison with the equivalent expression in other speeches. On exploring the matter it was found that the bulk of the variation related to the fact that the same equivalence statement was simultaneously used to mirror and test a rhetorical expression within the Rhetorical Question script. This situation occurred in an area of overlap (mentioned earlier) where the same base phrase was adjusted to accommodate multiple figures of speech across the different types of script. Since the particular rhetorical question was more directly aligned with the equivalence statement, it attracted less-variable responses.
that were reflected in the overall non-alliterative comparison. Consequently, an adjustment to the alliteration script was not required to correct the matter since the anomaly was caused by the inadequacy of one equivalence statement to evenly represent two figurative expressions.

However, scripts adjustments were made as a result of verbal feedback from three respondents who reviewed either the alliteration or consolidated examples of the script. These respondents all indicated that a number of the alliterative expressions came across as contrived and ‘a little too obvious’ which they felt was due to the apparent unnaturalness of some of the expressions caused, in large part, by the number of consonant sound repetitions within each phrase. As a result, all alliterations were reviewed with the number of sound repetitions generally reduced from four to three—the only exception being the phrase “So be brave, brilliant and bold …” where it proved difficult to replace the innocuous verb with a viable alternative. An additional chance remark also highlighted an unintended pun in the metaphoric phrase “…achieving only mediocre results, which have seen sales (think sails) fall by 25% and 50 jobs go as we battled the waves”. Consequently, the word “sales” was replaced in all editions of the speech with the word “orders”. Earlier feedback that signalled difficulty in identifying the phrases “spectacularly unsuccessful” and “back to the future” as antitheses was also explored with relevant respondents. This culminated in the observation that both expressions took a different form from other antitheses in the script (in that they did not reflect explicit polar opposites), either going unrecognised or being seen as other forms of figurative expression, for example: paradoxes or oxymorons. Consequently, it was decided to adjust both phrases as a precautionary measure.

Overall, Table 12 records the ten adjustments made to the scripts as a result of analysis and feedback from the pre-test.
Table 13 records seven further editorial refinements that emanated from an additional quality check of the final wording of the scripts.
Finally, a fourth Focus Group Pre-test was conducted to critically review other test material such as the Respondent Instructions and the various Demographics, Thinking Orientation and Final Persuasion Questionnaires. An additional exercise was also incorporated to double-check the cross-gender ‘motivational resonance’ of the nautical metaphors and theme used in the metaphor script. The focus group reflected a convenience sample of 6 respondents comprising equal numbers of men and women. With the exception of the ‘motivational resonance’ exercise, the process required respondents to progressively read the material and complete each questionnaire, before taking part in a series of structured group discussions on each item. By contrast, the ‘motivational resonance’ exercise involved a silent self-assessment of the underlying meaning of the metaphor, followed by a request to name the collective theme. Appendix 13 records the discussion questions used to facilitate proceedings, along with the ‘motivational resonance’ exercise, while Appendix 14 documents the results.

Overall, the pre-test confirmed the suitability of the test material with three adjustments, as follows:

1. Correcting the misspelling of the word “Imagine” in the second paragraph of the Respondent Instructions
2. Stressing the employees’ future role in the company within the Respondent Instructions. This adjustment was included in order to play-down any negative personal consequences that might otherwise be vicariously perceived from the change scenario (e.g. possible lay-offs)
3. Labelling the intermediate points on Pacini and Epstein’s (1999) measurement scale used in the Thinking Orientation Questionnaire

In respect to the latter, Pacini and Epstein (1999) only identified the polar extremes of definitely not true of myself (1) and definitely true of myself (5) to anchor their 5-point scale. The pre-test confirmed that the polar extremes were reasonably clear but were seen as wordy and therefore difficult to retain in memory when proceeding through the questionnaire. The focus group felt that this slowed-down their response times, indicating they would have preferred easier ‘agree/disagree’ descriptors on the measurement scale, with some intermediate ‘sometimes/somewhat’ response points. However, since Pacini and Epstein’s measurement scale has been statistically validated in its current form in previous research

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67 Each respondent independently reviewed eight sentences that contained the embedded nautical metaphors and recorded their interpretation of what they believed each metaphor was saying – see Attachment 1 to Appendix 13.
and a slower response time could arguably lead to more-thoughtful responses, it was decided not to adjust the scale names but instead include clear labels on the intermediate points as follows: somewhat untrue (2), neither true or untrue (3) and somewhat true (4).

In respect to the ‘motivational resonance’ task, female respondents were arguably better at decoding the intended meaning behind individual metaphors while male respondents were demonstrably better at naming the collective theme. These results, although mixed, added to previous evidence in the Equivalence Comprehension Pre-test that the nautical metaphors did not favour one gender over the other. As a result, it was decided to proceed with the nautical metaphors in the substantive study while at the same time include an final check on cross-gender ‘motivational resonance’ within the experiment through use of a control variable. This check would reflect the question used in the metaphor example of the Equivalence Comprehension Pre-test and add to the overall depth of potential findings from the research.

The Focus Group Pre-test also resulted in another observation: the belated realisation that the scale items within the thinking orientation scale had not been randomised. The order used to this point in the Thinking Orientation Questionnaire inadvertently reflected that shown in Appendix 15, with the Rational and Experiential items clustered together. To remove the unintended pattern and make the individual Rational and Experiential constituent scales indiscernible within the experiment, it was resolved to randomise all items across the full set68 in the substantive study.

4.5 Measures

The independent variables comprised the six primary language types (i.e. literal language, simple schemes, complex schemes, simple tropes, complex tropes and the consolidated speech) and thinking orientation styles, with persuasion as the dependent variable. The varying editions of test material operationalised the independent variables, while thinking orientation was operationalised and measured using the revised short-form Rational–Experiential Inventory (Pacini and Epstein 1999). This 40-item inventory comprised two

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68 Starting with the order used in the left hand side of Appendix 15, the scale items were first assigned a number from 1 to 40. The order of the statements was then randomised to reflect the sequence obtained from the random sequence generator at www.random.org/sequences/. The sequence generated was 26, 19, 20, 14, 12, 2, 24, 38, 40, 29, 4, 25, 39, 22, 28, 9, 6, 37, 17, 13, 1, 16, 35, 5, 11, 36, 34, 30, 33, 8, 21, 32, 27, 7, 15, 18, 23, 31, 10 and 3. After the statements were placed in the order of the random sequence, they were then renumbered from 1 to 40 so that the randomising procedure itself would not be discernible within the experiment or distracting to respondents.
semantic scales (a ‘Rationality’ scale and an ‘Experientiality’ scale), each comprising 20 items, with previously recorded alpha reliabilities of 0.90 and 0.87 respectively. The Rationality Scale was based on a shorter adapted version of the long-established Need for Cognition scale (Cacioppo, Petty and Kao 1984), while the Experientiality Scale reflected a shorter adapted version of the Faith in Intuition scale (Epstein et al 1994; Pacini and Epstein 1999). Both scales contained separate ability and engagement subscales, that Pacini and Epstein argued, made independent contributions to the prediction of other variables such as openness to experience, polarised thinking, belief in a meaningful world, conscientiousness, distrust of others and so on. As this fell outside the scope of the hypotheses, the subscales were not identified or used as measurement tools within the experiment.

A discrete copy of the revised short-form Rational–Experiential Inventory is provided at Appendix 15, along with the identification of reversed-scored items. This inventory is also reflected in a randomised form within the questionnaire shown at Appendix 5.

In reviewing previous studies (e.g. Ahluwalia and BurnKrant 2004; Alexander et al 2001; McQuarrie and Phillips 2005; Roehm and Sternthal 2001; van Enschat-van Dijk and Hoeken 2005) it was apparent there was no single standout measure of persuasion suited to a management context and no studies were uncovered that measured persuasion with an Aristotelian approach. Consequently, there was little alternative in this study but to draw on a number of elements and scales from previous research to operationalise the persuasion construct, with separate constituent scales measuring the credibility, emotion and logic dimensions of the Aristotelian concept.

McCroskey’s (1966) long established 12-item ‘Source Credibility’ scale (reflecting twelve pairs of bi-polar adjectives) was used to measure the speaker’s perceived credibility, while Watson, Clark and Tellegen’s (1988) semantic 10-item ‘Positive Affect’ scale was used to gauge the emotional impact achieved. In choosing the Watson, Clark and Tellegen (PANAS) scale, the experiment followed the approach used by Bono and Ilies (2006) in that respondents were asked to indicate the extent to which they felt each of the ten positive emotions in the speech they were exposed to. Bono and Ilies’ study achieved an alpha reliability of 0.96 using this approach. The scripts used in the current research were not designed or intended to elicit negative emotions (as evidence of persuasion), so exclusive use of a positive affect scale was seen as appropriate. Hirschman’s (1986) 5-item ‘Rationality’ scale was used to assess the perceived logicality of each speech, with Zhang’s
(1996) 4-item ‘Argument Strength’ scale used as the cross-check on the empirical consistency of the strength of the arguments used in the various speeches. Both scales deployed pairs of bi-polar adjectives. This was complemented with an additional overarching (single-item) measure that specifically asked respondents—via an additional pair of bi-polar adjectives (i.e. unsupportive/supportive)—the extent to which they would support the General Manager as a result of hearing the speech. The intention of this was to check whether any persuasive effect also resulted in accompanying support for the message (and speaker) in line with Conger’s (1998a) definition of persuasion used in this study (see Section 1.4).

When the overall instrument was reviewed, it was apparent that Hirshman’s (1986) scale was scored consistently with the other scales but formatted in the opposite direction. On observing this, it was determined that the variation, if left unadjusted, could possibly increase the response error, thereby affecting the results achieved. To avoid this outcome and improve the overall fit and consistency of the collective instrument, Hirshman’s scale was reformatted to match the direction of the other scales.

Table 14 - Alpha Reliability of Persuasion Source Scales

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Scale</th>
<th>Alpha</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>Source Credibility</td>
<td>0.92-0.93</td>
<td>McCroskey (1966)</td>
</tr>
<tr>
<td>Emotion</td>
<td>Positive Affect</td>
<td>0.89</td>
<td>Watson et al (1988)</td>
</tr>
<tr>
<td>Logic</td>
<td>Rationality</td>
<td>0.82-0.96</td>
<td>Hirschman (1986)</td>
</tr>
<tr>
<td>Cross-check</td>
<td>Argument Strength</td>
<td>0.94</td>
<td>Zhang (1996)</td>
</tr>
</tbody>
</table>

Table 14 highlights the alpha reliabilities previously achieved for each of the source scales used to operationalise the persuasion construct, with discrete copies of all four source scales shown at Appendix 16. These scales are also reflected in the questionnaire shown at Appendix 6, with the appropriate stems (i.e. lead-in phrases) being pre-tested within the Focus Group Pre-test discussed earlier. It should be noted that the bi-polar format of the additional single-item ‘unsupportive/supportive’ general measure was based on that used in the majority of the other source scales (i.e. McCroskey 1966; Hirschman 1986; Zhang 1996).

4.6 Analytical Procedures

Given the mixed-methods approach taken in the study, analysis of the data derived from the experiment was undertaken using the IBM SPSS™ and QSR NVivo™ statistical software packages (Arbuckle 2010; Byrne 2001; Coakes and Ong 2010; Field 2005; QSR...
International 2010a and 2010b). SPSS was used for the quantitative analysis while NVivo was used for the qualitative analysis. The commercial research company provided the results electronically in an SPSS-formatted data file, thereby eliminating the need to manually input or transcribe the data. This approach also removed potential transposition errors from the process. The subsequent analysis then proceeded in four broad steps:

1. Initial exploration, review and screening of the data
2. Refinement of the measurement model using Confirmatory Factor Analyses (CFAs)
3. Testing of the hypotheses with multivariate analysis
4. Exploring the complementary open comments provided within the experiment

The initial exploration, review and screening commenced with a preliminary examination of the data and various descriptive statistics and graphical profiles. The aim was to understand the characteristics and normality of the dataset, including such things as the extent and impact of outliers. Resulting from this assessment, refinements were made to the initial dataset, essentially to remove cases where respondents experienced problems in running the experiment or recorded a high number of outliers and extreme values in their responses.

The refined dataset was then subjected to a series of CFA procedures to assess the deployed efficacy of the measurement instruments used in the experiment and establish the psychometric properties of each, thereby confirming and validating the measurement model. This was followed by a succession of Multivariate Analysis of Variance (MANOVA), Discriminant Analysis, Analysis of Variance (ANOVA) and t-test procedures to analyse the group results for particular speech types, and in doing so, test the hypotheses. In all cases, the inherent assumptions underlying individual multivariate procedures were closely considered and addressed prior to undertaking the analysis.

Finally, the analysis was completed by qualitatively examining the comments associated with the final open question asked within the experiment. This involved categorising and analysing each comment through a series of procedures that included an exploration of embedded emotions and other characteristics of the material.

Further detail on the full analytical procedures and results achieved are provided in the following chapters.
4.7 Ethics and Confidentiality

Prior to involvement in the study, respondents were briefed about the exercise and their informed consent sought through the Information Sheet shown at Appendix 2. No names were sought on any of the questionnaires and the confidentiality of the individual data and results were maintained at all times. The market research company independently gathered the data and the results are published here in aggregate form to preserve the confidentiality of individual submissions, data and respondents. To ensure all the ethical issues were adequately addressed, the approval of the University of Western Australia’s Human Research Ethics Committee was sought and granted prior to the experiment being conducted.
4.8 Conclusion

This chapter documented the methodology and nature of the experiment used to explore the hypotheses about the relative persuasiveness of figurative language (and associated categories and forms) in management communication. It commenced with a presentation of the conceptual and operational definitions used, followed by a detailed description of the experiment—its basic design, sample, procedure, test material and pre-tests. It then identified the variables and introduced the measures and techniques used to analyse the results. Finally, the chapter documented the steps taken to ensure that high ethical standards and confidentiality were maintained.

The next chapter commences the quantitative analysis of the empirical results derived from the experiment.
Chapter 5

Refining the Measurement Model

5.1 Preface

Chapter 4 documented the methodology and experiment used to explore the hypotheses. This chapter commences the quantitative analysis of the empirical results derived from the experiment by assessing the efficacy of the measurement instruments deployed and establishing the psychometric properties of each using Confirmatory Factor Analysis (CFA). The work starts by documenting the initial exploration and inspection of the dataset; then proceeds to identifying and recording the various CFA and other analyses undertaken to assess and refine the measures.

The next chapter (Chapter 6) will use these refined measures to evaluate the hypotheses.

5.2 Overall Analytical Strategy

The approach taken to the overall quantitative analysis (in this chapter and the next) commenced with a preliminary examination of the dataset to identify and address obvious flaws and errors, and assess the multivariate normality of the variables. After this, the substantive assessment was undertaken using a two-step procedure in line with Anderson and Gerbing (1988). First, a series of Confirmatory Factor Analyses were conducted to assess, validate and refine the measures of thinking orientation, persuasion and argument strength scales. Doing so was consistent with the approach suggested by Joreskog (1993) that the measures for each scale (and combinations of sub-scales) should be assessed prior to further analyses being conducted. Complementary Correlation Analysis and Analysis of Variance (ANOVA) procedures were also undertaken. Secondly (in the next chapter), the
hypotheses were tested using a series of Multivariate Analysis of Variance (MANOVA) and further ANOVA procedures to assess group differences between the varying forms and aggregations of the speeches and persuasion variables (under different thinking orientation conditions), with complementary Discriminant Analysis where significant results were achieved. The overall aim of this two-step approach was first to confirm the psychometric properties of the measures and then to use those measures to test the hypotheses by assessing the persuasiveness or otherwise of the different treatment conditions reflected in the six various speech types.

All analyses, in this chapter and the next, were undertaken using IBM SPSS™ Version 18 statistical analytics software (Coakes and Ong 2010; Field 2005), with the exception of the confirmatory factor analyses which was undertaken using IBM SPSS AMOS Version 20 (Arbuckle 2010; Byrne 2001).

5.3 Preliminary Examination

The SPSS™ dataset provided by the market research company was first visually examined and screened for obvious flaws and errors. This process immediately identified seven respondents who had experienced problems in running the digital audio-visual files, involving difficulties such as download interruptions, transmission delays and poor synchronisation of audio and visual elements. In one instance, the audio-visual file stopped up to 15 times during the experiment. Whilst all registered subscribers (from which the sample was drawn) were initially screened for appropriate Internet capacity, these seven respondents did not appear to receive an adequate broadband service at the time the experiment was conducted in order to satisfactorily run the 2¼ minute video. As a result, they were unable to receive the same online viewing experience achieved by other respondents. This, in turn, degraded their ability to follow the presentation, scrutinise the arguments, engage emotionally with the speaker and retain appropriate information in memory. To overcome the disparity, all seven cases were subsequently excluded from the dataset and further analysis. Table 15 identifies the seven cases involved.

<table>
<thead>
<tr>
<th>Respondent ID</th>
<th>Respondent Comments About Difficulties Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>99</td>
<td>Audio and video were out of sync</td>
</tr>
<tr>
<td>163</td>
<td>Speech was stuttered and unable to be heard correctly</td>
</tr>
<tr>
<td>167</td>
<td>Delayed transmission</td>
</tr>
<tr>
<td>203</td>
<td>Disjointed video with about 15 breaks</td>
</tr>
<tr>
<td>526</td>
<td>Kept stopping, couldn’t hear all the speech</td>
</tr>
<tr>
<td>595</td>
<td>Speech kept cutting out</td>
</tr>
<tr>
<td>1312</td>
<td>Video cut out every few seconds</td>
</tr>
</tbody>
</table>
Following this initial review, the 25 reverse-scored questions in the Thinking Orientation and Speaker Credibility scales (i.e. 19 and 6 respectively) were recoded to prepare the dataset for a more detailed examination involving descriptive statistics and graphical profiles. This involved recoding responses to 19 of the 40 Thinking Orientation items and 6 of the 12 Credibility items.

5.3.1 Statistical and Graphical Review of the Dataset

In line with good research practice (as outlined in Brace, Kemp and Snelgar 2000; Field 2005; Hair et al 2010 and Tabachnick and Fidell 2007), the detailed examination of the dataset commenced with a review of the Frequency Table and Descriptive Statistics—focusing on areas such as central tendency (i.e. mean, median, mode), minimum and maximum values, standard deviation, skewness, kurtosis and percentiles. This examination was aimed at:

- Understanding the basic nature and distribution of the data
- Identifying and exploring abnormal values or cases

Review of the Descriptive Statistics was also complemented with a graphical examination of the item variables via histograms, stem and leaf plots, normal probability (Q-Q) plots, boxplots and appropriate scatterplots. The minimum and maximum values for each variable were all found to be consistent with the measurement scales in the questionnaires and the prescribed sampling criteria (i.e. in relation to categorical variables such as age, gender, English speaking background and years of paid employment). As such, they all reflected plausible values. Similarly, the means and standard deviations were also seen as logically consistent and plausible in the circumstances. However, the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality both indicated that the distributions of all the variables were significantly non-normal (i.e. \( p < .001 \)), although this was not unexpected given the large sample size. “[these tests]… have their limitations because with large [aggregate] sample sizes it is very easy to get significant results from small deviations from normality, and so a significant test doesn’t necessarily tell us whether the deviation from normality is enough to bias any statistical procedures that we apply to the data” (Field 2005, p. 93). As expected, the skewness and kurtosis statistics and related z-scores also suggested numerous abnormal distributions. However, with the large aggregate sample size involved, the ultimate judgement was made based on Field’s (2005) advice about using
the visual shape of the distribution and the value of the statistics themselves, rather than their perceived z-score significance.

“In a large sample, a variable with statistically significant skewness often does not deviate enough from normality to make a substantial difference in the analysis … underestimates of variance associated with positive kurtosis (distributions with short, thick tails) [also] disappear with samples of 100 or more cases; with negative kurtosis, underestimation of variance disappears with samples of 200 or more” (Tabachnick and Fidell 2007, p.80).

As a result, all were ultimately judged to be acceptable and within expected values, subject to final consideration of outliers. In respect to the continuous variables, the highest skewness statistic was -1.173 (for the ‘motivational resonance’ question), while the highest kurtosis statistics was 1.830 (for the first thinking orientation question). The categorical variable embodying the demographic Question “How well do you speak English” also produced a significantly abnormal dichotomous result with skewness and kurtosis of 5.589 and 29.375 respectively. This was caused by 97% of respondents answering the question with the same response (i.e. saying ‘very well’) —with the remaining 3% saying ‘well’—reflecting a split significantly greater than 9 to 1. Rummel (1970) proposed deleting dichotomous results and variables where splits exceeded 9:1 because of truncated correlation coefficients with other variables and the disproportionate influence of minority scores, which were likely univariate outliers. However in this case, the demographic question was merely a verifying device to confirm that the sampling criterion (requiring respondents to come from English speaking backgrounds) had been complied with. As the results (reflected in both categories collectively) demonstrably verified that requirement and there was no intention of including the variable in any further analysis, the abnormal distribution was simply noted and the matter closed.

Following this assessment, the dataset was checked for missing values. While the online control measures within the experiment precluded respondents from proceeding without answering each question, a formal scan for missing values was seen as a prudent double-check on the completeness of the dataset and verification that the control feature had worked as intended. This check confirmed the absence of missing values.

The stem and leaf plots highlighted a significant number of outliers and extreme values across the majority of variables. In this respect, it was noted that there are normally four
archetypal reasons why outliers and extreme values occur (Field 2005; Hair et al 2010; Tabachnick and Fidell 2007):

1. Procedural error involving data entry mistakes or the mistreatment of missing values
2. Extraordinary events or observations where the cases involved are not true members of the population being sampled
3. Extraordinary events or observations that are proper members of the population but whose extreme responses may be explained or mitigated (i.e. transformed) to more closely resemble a normal distribution
4. Observations drawn from normally distributed univariates that are aberrant when combined with others in multivariate data points

In reflecting on the results, it was noted that the potential for outliers and extreme values to result from missing data or transposition errors had been eliminated by the design of the experiment. It was also noted that all the continuing cases involved members of the intended population, as confirmed by a review of the demographic results against the sampling criteria. Consequently, the likely reason for the observed univariate outliers and extreme values was that they reflected extraordinary observations from members of the intended population that needed to be explained or mitigated. As a first step towards doing this, it was resolved to schematically map the dispersion of all outliers and extreme values against the continuous variables, essentially looking for aberrant cases (i.e. those with a high incidence of outliers and extreme values across a range of variables), and potential patterns. The instances disclosed were then assessed to determine any particular cases with undue representation across the continuous variables. To do this, a separate stem and leaf plot of the total number of instances per case was undertaken as shown in Figure 5. This exercise highlighted 15 aberrant cases where each had outliers and extreme values affecting more than 10 variables. To address the situation, these 15 cases were subsequently removed from the dataset, reducing the sample by 3.4%.
Removing these cases did however change the distribution on other variables, resulting in a small increase in outliers and extreme values elsewhere. Overall though, the situation was improved and the removal of these cases did not affect the viability of the continuing sample, either in terms of its overall or independent-group size, or its general representation of the intended population.

Following this, a more detailed review of the remaining outliers and extreme values was conducted which disclosed that the majority were restricted to just seven variables—all of which were items within the thinking orientation scale where more than half the respondents gave the same answer. In each case an absolute majority with the same response meant that the interquartile range was zero, resulting in all other responses showing up as outliers and extreme values. Table 16 highlights the items involved.

While it is arguable that an absolute majority in each case was indicative of the population, it is also arguable that such strong responses within continuous variables reflected on the inadequacy of the items to produce an appropriate variability of responses (Walonick 2008; Zikmund et al 2007). Whatever view is taken, the adverse effect on the distributions with the inordinate number of outliers and extreme values—as well as their potential impact on intended statistical procedures—were all so significant that some remedial action was considered necessary. Consequently, in line with advice advocated by Field (2005) and Tabachnick and Fidell (2007), several remedial strategies to address the situation were sequentially considered including:

- Removing sufficient cases
- Transforming the data
- Adjusting the scores

The first option—removing cases—was not seen as an appropriate course of action on both theoretical and practical grounds. If adopted it would amount to arbitrary action as there is no valid reason to suggest that particular cases are not part of the intended

Table 16 - Variables With High Numbers of Outliers and Extreme Values

<table>
<thead>
<tr>
<th>Univariate Items</th>
<th>No. of Outliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1_1 I often go by my instincts when deciding on a course of action</td>
<td>154</td>
</tr>
<tr>
<td>1_7 I believe in trusting my hunches</td>
<td>178</td>
</tr>
<tr>
<td>2_2 Intuition can be a very useful way to solve problems</td>
<td>155</td>
</tr>
<tr>
<td>2_5 When it comes to trusting people, I can usually rely on my gut feelings</td>
<td>170</td>
</tr>
<tr>
<td>2_9 Using logic usually works well for me in figuring out problems in my life</td>
<td>173</td>
</tr>
<tr>
<td>4_3 I trust my initial feelings about people</td>
<td>169</td>
</tr>
<tr>
<td>4_8 I think there are times when one should rely on one’s intuition</td>
<td>158</td>
</tr>
<tr>
<td>Total:</td>
<td>1157</td>
</tr>
</tbody>
</table>
population. On the contrary, the reverse had already been confirmed when comparing the demographic results against the sampling criteria. Therefore, subjectively eliminating cases in these circumstances would simply bias the results and unjustifiably penalise particular respondents simply because they agreed with the majority. On top of that, eliminating the number of cases involved would significantly reduce the sample size and potentially affect the reliability of remaining results, particularly at an independent-group size level.

The second option—transforming the data—was actively contemplated and trialled without success, not the least because in all cases the ratio of the mean to the standard deviation exceeded the recommended level. “To judge the potential impact of a transformation, calculate the ratio of the variable’s mean to its standard deviation … noticeable effects should occur when the ratio is less than 4” (Hair et al 2010, p. 79).

As a consequence, and after considering that none of the arithmetic transformation techniques were conceptually able to resolve outliers and extreme values in a distribution with no interquartile range, there was little choice but to embrace the third option and adjust the base scores of the seven offending variables. This approach was taken in line with the concept that “… it is better to have statistics that describe 95% of the data well, than 100% of them badly” (Kinnear and Gray 1999, p.114). In each case the action involved modifying enough of the majority responses so that the number remaining unchanged represented one less than half the sample, thereby generating a discernible interquartile range and dramatically reducing the number of outliers and extreme values from 1157 to 19. The modified responses were re-scored downwards by the maximum of one rating point so that, in all cases, the original scores of ‘4’ became revised scores of ‘3’. This conservative approach successfully adjusted the distribution and extent of outliers in the lightest possible manner, whilst still reflecting the strong opinion of the majority and, as far as possible, preserving the basic structure and integrity of the dataset.

All continuous variables were then transformed (to check the optimum normality of distributions against retransformed counterparts) using square root, logarithmic and inverse transformation procedures. This occurred after all the negatively skewed variables were reflected (i.e. converted to mirror-image positively skewed variables), which involved all but five items. In undertaking the transformation procedures, all continuous variables were transformed where they would ultimately be grouped and used in comparison with other variables, irrespective of whether they directly contained outliers or extreme values. This was done in order to maintain common units of measurement between variables. “... even
if you have only one variable that has a skewed distribution, you should still transform any other variables in your dataset if you’re going to compare differences between that variable and others that you intend to transform” (Field 2005, p. 79). In each instance, standardised z-scores were also calculated to compare the relative results of different transformation procedures and to identify the one with the greatest positive effect on the distribution and residual outliers. In this respect, the dataset was found to respond best to square root transformations, with the procedure further improving skewness and kurtosis statistics and reducing remaining outliers and extreme values. However, even with this improvement, 27 of the 73 continuous variables still remained outside the normal distribution.

Field (2005) identifies that 95% of absolute values in a normal distribution (i.e. ignoring whether they are positive or negative), fall below a z-score of 1.96. Of the 5% above that figure, only 1% exceeds a z-score of 2.58 and none are above a z-score of 3.29. Of the 27 continuous variables outside the normal range, only 3 contained extreme outliers (with one case in each variable) where z-scores exceeded 3.29, as shown in Table 17. To address the situation, the base scores of these extreme outliers were modified in line with Field’s (2005) advice. This involved replacing each with a value that reflected the mean plus or minus three times the standard deviation (depending on the direction of the original values from the mean), rounded to the nearest whole number which was not otherwise the existing value, to suit the original scale intervals. The transformed square root variables were then recalculated and double-checked to confirm that the adjustment procedure had successfully eliminated the three extreme outliers.

Next, a preliminary scan for multivariate outliers was undertaken in anticipation of intended multivariate procedures using ungrouped data. “If you are going to perform one of the analyses with ungrouped data [e.g. factor analysis] … univariate and multivariate outliers are sought among all cases at once” (Tabachnick and Fidell 2007, p. 73). This involved checking the normality of standardised residuals, Cook’s distance, average leverage and Mahalanobis distance for each multivariate data point within a trial regression analysis, with Respondent ID as a dummy independent variable. While the result confirmed the absence of cases with standardised residuals exceeding 3.29, it did identify three recurring cases (i.e. Respondent IDs: 1384, 1389 and 1392) where extreme values above 2.58 affected multiple variables. As a precautionary step, it was resolved to remove these three cases from the

<table>
<thead>
<tr>
<th>Respondent ID</th>
<th>Variable</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>326</td>
<td>Q1_2</td>
<td>3.44</td>
</tr>
<tr>
<td>636</td>
<td>Q1_3</td>
<td>3.37</td>
</tr>
<tr>
<td>693</td>
<td>Q5_4</td>
<td>4.36</td>
</tr>
</tbody>
</table>
dataset. In addition, given the progressive reduction in the sample to this point, the
distribution of remaining cases between the differing speech types was also rechecked,
highlighting a proportionately high imbalance in Version 2 (i.e. the literal version of the
speech with female respondents). A marginal imbalance between respondent groups is not
normally seen as a problem however, in this case, any subsequent relationship between
gender and thinking orientation could bias the results of the experiment with unknown
consequences. In addition, uneven sample sizes can jeopardise the results achieved from
multiple comparison procedures (e.g. post hoc tests) and while different test statistics can
ameliorate this, it is preferable to have groups of roughly the same size (Field 2005).
Consequently, as a precautionary measure, it was resolved to rebalance the independent
groups by removing a further four Version 2 cases from the dataset (in line with the
random order in which they were received). Overall, the removal of the final round of
seven cases did not adversely affect the viability of the continuing sample which had now
been reduced to 420 respondents. This was confirmed with a one-sample t-test that used
the mean of the previous (normalised) sample as the test value to compare with the mean
of the revised (continuing) sample. The results showed that there was no significant
difference between the means (i.e. $t=.137$ with 419 degrees of freedom and $p=.891$).

At this point—following the relative success of the transformation and adjustment
procedures, and the reduction achieved in the number of outliers and extreme values—all
residual instances of outliers were retained on the basis they were now relatively consistent
with a normal distribution and there was no evidence they were not indicative of the
natural characteristics of the population.

“The researcher should refrain from designating too many observations as
outliers and not succumb to the temptation of eliminating those cases not
consistent with the remaining cases just because they are different …
[Outliers] should be retained unless there is demonstrable proof that they are
truly aberrant and not representative of any observations in the population …
[This is so because as they] are deleted, the researcher runs the risk of
improving the multivariate analysis but limiting its generalizability.” (Hair et
al 2010, p.67).

However, having used square root transformations to successfully identify and address
further instances of outliers and extreme values, it was resolved to use original respondent
values in the continuing dataset (rather than their transformed statistical equivalents) for all
ensuing multivariate procedures. This was done essentially for ease of reference and to improve the conceptual interpretability of results going forward.

5.4 CFA and ANOVA Procedures

With the preliminary screening of the dataset complete, CFA and ANOVA procedures were then undertaken to establish sound measures for subsequently testing the hypotheses. This was initially done by assessing the factor structure within all scales, testing the related effectiveness (loading) of individual items, trimming-off items with loadings below minimum levels (while confirming theoretical grounds for doing so) and establishing refined, more parsimonious instruments where possible that met both statistical and theoretical standards. For this procedure the IBM SPSS AMOS Version 20 structural equation modeling software (Arbuckle 2010; Byrne 2001) was used, with the work focusing on the two experiential and rational thinking orientation scales, the three constituent (credibility, emotion and logic) persuasion scales and the separate argument strength scale. In respect to the latter, a complementary ANOVA procedure was also performed to compare the argument strength variable with different versions of the speech.

5.4.1 Method

The two-step approach suggested by Anderson and Gerbing (1988) was followed in the analysis in which the measurement model was first tested to assess the validity and reliability of the measures, prior to using them in testing the hypotheses. The unidimensionality of the measures was tested first by estimating one-factor congeneric models for each construct since this approach allows measures to be refined if needed (Hair et al 2010). This phased approach to testing dimensionality has previously been used in management and related fields including predicting sports participation amongst individuals with acquired physical disabilities (Perrier et al 2012), examining managerial burnout (Densten 2001) and assessing the construct validity of the Goldberg International Personality Item Pool (Lim and Ployhart 2006).

The hierarchical structure of the multi-scale persuasion variable was then explored by comparing two models:

1. A one-factor model where all items loaded onto a single persuasion factor
2. A three-factor model where the items loaded onto the credibility, emotion and logic subscales respectively
During the initial model generating stage, items that did not achieve factor loadings above 0.5 and/or items with highly correlated error variances were eliminated (Hair et al 2010). In doing so, items with loadings below 0.5 were removed before the error variances were examined and the model fit was assessed. In addition, the poor fitting items were assessed on theoretical grounds to determine possible reasons for the conceptual misalignment with other items and to ensure the theoretical consistency of the continuing scales. In some instances, this resulted in a reduced number of items used to predict each measure, consistent with an acceptably fitting model.

Following the recommendations of Hoyle and Panter (1995) and Hair et al (2010), a range of indices were used to assess the ‘goodness of fit’—these included the chi-square statistic ($\chi^2$), the Comparative Fit Index (CFI), the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error for Approximation (RMSEA) with a 90% Confidence Interval (i.e. CI$_{90\%}$) (Browne and Cudeck 1992; MacCallum, Browne and Sugawara 1996).

The chi-square statistic is the fundamental measure of differences between the observed and estimated (theoretical) covariance matrices (Hair et al 2010). A model is deemed to have an acceptable fit when compared to the observed data, if the chi-square statistic is not significant. However, since the chi-square statistic is influenced by sample size (Bentler and Bonett 1980), Hair et al (2010) also recommend examining the ratio of the chi-square statistic to the degrees of freedom—i.e. the normed chi-square statistic. In this respect, an acceptable model fit is said to be achieved when the ratio of the chi-square statistic to the degrees of freedom is less than 3.0 (Hair et al 2010).

The CFI is an improved version of the Normed Fit Index, reflecting the ratio of the difference in the chi-square statistic for the fitted model with the null model, divided by the chi-square statistic for the null model. As such it takes sample size into account. The CFI is normed so that values range between 0 and 1, with higher values indicating better fit. In this respect, values less than 0.9 are not usually associated with a good fit (Hair et al 2010).

The GFI calculates the proportion of variance accounted for by the estimated population covariance (Tabachnick and Fidell 2007). In doing so, it shows how closely a model comes to replicating the observed covariance matrix with values ranging between 0 and 1. Values greater than 0.9 are usually associated with an acceptable fit (Hair et al 2010).
The AGFI adjusts the GFI based upon degrees of freedom, with values ranging between 0 and 1. As with the GFI, it is generally accepted that values of 0.9 or greater suggest an acceptable fit (Hair et al. 2010; Tabachnick and Fidell 2007).

The TLI is conceptually similar to the CFI in that it involves a mathematical comparison of a specified theoretical measurement model and a baseline (null) model. The index is not normed and while values can fall outside the 0 to 1 range, a higher value suggests a better fit. In practice, the TFI and CFI generally provide similar values with a statistic above 0.9 usually associated with a good fit (Hair et al. 2010).

The RMSEA is a ‘badness of fit’ index that tells how poorly (or well) a model with unknown but optimally chosen parameter-estimates fits a population’s covariance matrix. The statistic explicitly tries to correct for both model complexity and sample size by including both in its computation (Hair et al. 2010). Lower values suggest a better fit, with Hooper, Coughlan and Mullen (2008) reporting that tighter values below 0.07 are now associated with acceptable models. Hair et al (2010), on the other hand, points to recent research that suggests drawing a hard cut-off is inadvisable since empirical examination has shown that RMSEA is best suited for use (in a confirmatory or competing model strategy) as samples become larger (i.e. N=>500). Therefore, while the 0.07 threshold has been used as a general guide for acceptable models, Hair et al’s advice has also been considered as appropriate. In addition, the RMSEA statistics will be assessed using a 90% confidence interval in line with the position advocated by Brown and Cudeck (1992).

Composite Reliability (CR)—the degree to which all measures consistently represent the same latent construct—was determined with the approach suggested by Fornell and Larcker (1981). The coefficient was computed from the squared sum of factor loadings \((L_i)\) for each construct and the sum of the error variance terms for each construct \((\varepsilon_i)\), in line with the following formula:

\[
CR = \frac{\left( \sum_{i=1}^{n} L_i \right)^2}{\left( \sum_{i=1}^{n} L_i \right)^2 + \left( \sum_{i=1}^{n} \varepsilon_i \right)^2}
\]
This approach is considered a more rigorous test of reliability than Cronbach’s (1951) alpha, which is influenced by sample size. The values obtained were assessed against a 0.7 threshold to gauge the reliability and internal consistency of grouped items (Hair et al 2010).

Convergent and Discriminant Validity of all measures were also assessed using Fornell and Larcker’s (1981) approach. Evidence of Convergent Validity—the extent to which all items of a specific measure converge or share a high proportion of variance in common (Hair et al 2010)—was provided where the Average Variance Extracted (AVE score) was greater than 0.5—indicating that the measurement error was less than the variance captured by the measure (Fornell and Larcker 1981). Evidence of Discriminant Validity—the extent to which a measure is truly unique and distinct from other measures (Hair et al 2010)—was provided where the AVE scores of two measures were both greater than the squared correlation between them (Farrell 2010, Fornell and Larcker 1981, Hair et al 2010).

5.4.2 Impact of Negatively Worded Items

Initial results for variables containing negatively worded scale items (i.e. thinking orientation and credibility) proved problematic in terms of measures that met the minimum ‘goodness of fit’ requirements. The thinking orientation subscales and credibility scales both contained a balance of positive and negatively worded items, whereas the scales used to assess all other variables contained only positively worded items.

A literature search was conducted exploring the impact and experience of incorporating negatively worded items in other studies. This disclosed mounting research, extending back at least a decade and a half, highlighting the bias effects evident in using both positive and negatively worded scale items in studies that involved CFA and structural equation modelling (e.g. Alessandri et al 2010; DiStefano and Motl 2006; Hevey et al 2010; Horan, DiStefano and Motl 2003; Magazine et al 1996; Marsh 1996; Motl and DiStefano 2002; Quilty, Oakman and Risko 2006; Young-Jin et al 2008). Specifically, the majority of these studies found that while a balance of positive and negatively worded items helped address acquiescence response bias⁶⁹ (as intended), they can also introduce a method effect bias⁷⁰ that unduly influences the outcomes of factor analyses and related interpretations.

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⁶⁹ Acquiescence response bias refers to the propensity of a respondent to uncritically agree with a statement
⁷⁰ Method effect bias refers to instances where a biased method influences the outcome of an experiment
For this reason, the experiential and rational thinking orientation and credibility variables were subjected to a reassessment based on excluding all the negatively worded items. This would have allowed a consistent ‘positive item’ approach to be taken across all variables in order to address potential method effect bias. However, while this approach improved the model fit for the credibility variable, it was unable to do so for the two thinking orientation variables. Loadings on retained positive items associated with the rational thinking orientation measure ultimately proved too low to achieve convergent validity. Consequently, the analysis of the experiential and rational thinking orientation variables ultimately retained both positive and negatively worded scale items, while that for the credibility variable used only positively worded scale items in line with the other scales measuring persuasion.

5.4.3 Results

**Experiential and Rational Thinking Orientation**

Figure 6 identifies the one-factor congeneric path diagram with an acceptable fit for the experiential thinking orientation variable. It displays a parsimonious model that contains only 4 of the original 20 items within Pacini and Epstein’s (1999) Experiential Inventory.

Likewise, Figure 7 presents the one-factor congeneric path diagram for the parsimouos rational thinking orientation measure that contains only 4 of the original 20 items within Pacini and Epstein’s (1999) Rational Inventory.
Whilst it can be seen that a large number of items were removed from the original 20-item scales, this was supported at each step by theoretical considerations, as well on statistical grounds. In both cases—from a theoretical perspective—the retained items arguably reflect the central ‘instinct versus logic’ paradigm within the different measures, while avoiding unintended cognitive dissonance associated with negative perceptions of respondent self-image raised by the discarded questions. For example, a number of the excluded items could have been perceived as judgemental or conveying mixed or negative connotations. In this respect, excluded items with pejorative sentiments in the experiential area might include: I don’t have a very good sense of intuition (possible subtext: I am not a complete person); I often go by my instincts when deciding on a course of action (possible subtext: I can be a bit flaky) and I think it is foolish to make important decisions based on feelings (possible subtext: only idiots would use feelings in this way). Examples of excluded items with pejorative sentiments in the rational area might include: I try to avoid situations that require thinking in depth… (possible subtext: I am lazy and dumb); I’m not that good at figuring out complicated problems (possible subtext: I am not smart enough); I don’t like to have to do a lot of thinking (possible subtext: I am intellectually lazy).

All of the retained items arguably avoid cognitive dissonance and consequently appear sound for use within the intended measures on both statistical and theoretical grounds.

The CFA results were achieved after trimming items that either cross-loaded or had weak loadings of less than 0.5. Of the eliminated items, six were from the seven shown earlier in Table 16 where initial scores were adjusted to eliminate outliers and extreme values (refer Section 5.3.1: Statistical and Graphical Review of the Dataset). Five of those six items were from the experiential scale and all were positively worded. In all cases, the retained items had also enjoyed factor loadings greater than 0.5 in the original study where the revised Rational-
*Experiential Inventory* used here was first developed (i.e. Pacini and Epstein 1999). It should be noted that this was not the case in the original study for 11 of the 40 inventory items.

Whilst stronger loadings consistently above 0.7 would have been desirable in the current study, across all retained items to improve the level of explained variance (Hair et al 2010), these ‘acceptable’ congeneric models do meet standardised loading thresholds on all items. As such, they both present acceptable models.

Table 18 displays the related model fit indices for the two thinking orientation measures (with both 20 and 4 items respectively). For the 4-item scales, all key statistics exceed minimum fit requirements (i.e. low \( \chi^2 \), \( p > 0.05 \), \( \chi^2/df < 3 \), CFI>0.95, GFI>0.95, AGFI>0.95 TLI>0.95, and the RMSEA<0.07 for acceptable fit and <0.05 for good fit) (Bentler and Bonett 1980; Hair et al 2010; Hooper, Coughlan and Mullen 2008). Conversely, both 20-item alternatives do not meet the minimum acceptable levels for the \( \chi^2/df \), CFI, GFI, AGFI, TLI and RMSEA statistics.

The convergent and discriminant validity of both 4-item measures were assessed using Fornell and Larcker’s (1981) method which suggests convergent validity can be assumed if the Average Variance Extracted (AVE) score is greater than 0.5. The AVE’s for the refined experiential and rational measures were both slightly less than 0.5 (i.e. 0.47 experiential and 0.45 rational), suggesting marginal convergent validity for both measures. Acceptance of results slightly below the 0.5 standard is consistent with the advice from Netemeyer, Bearden and Sharma (2003) that a cut-off of 0.45 is reasonable for newly developed scales.
However, the composite reliability for both were greater than 0.7 (i.e. 0.78 experiential and 0.76 rational), indicating good reliability and internal consistency of the items in terms of reflecting separate measures (Hair et al 2010). Moreover, the minimal correlation of 0.01 between the two scales is consistent with Pacini and Epstein’s (1999) result of 0.04, providing strong support that the condensed scales focus on discrete experiential and rational measures. All items within the trimmed measures also show strong face validity.

In addition, AVE scores for the refined experiential and rational measures were all greater than the squared correlation estimate of 0.0001, which provides good evidence of discriminant validity between the measures (Fornell and Larcker 1981).

The impact of removing a large number of items from Pacini and Epstein’s (1999) Rational-Experiential Inventory was also checked to confirm the reduction did not result in a substantial loss of information. One way of doing this is to assess the correlations between the experiential and rational measures within the sample using both the original set of items and those reflected in the reduced set (Thomas, Soutar and Ryan 2001). High correlations between like measures would suggest that the trimming process did not have an undue impact. To undertake this assessment, compound variables for the two variables reflecting both the original and reduced set of items were computed and correlated. In all cases, relevant correlations were over 0.85 (i.e. 0.89 experiential and 0.86 rational), suggesting that little information was lost using the reduced set of items.

Overall, the collective results suggest that the two separate experiential and rational measures for thinking orientation are psychometrically sound.

**Compound Thinking Orientation Variables and Scores**

With the factor structure and best-fit model now determined for the thinking orientation construct, each respondent’s primary orientation was then determined based on the method used by Pacini and Epstein (1999). This step was taken in order to allow the effect of dominant orientations on persuasion to be assessed within Chapter 6.
In line with Pacini and Epstein’s 2x2 approach, the medians within the compounded (sample-wide) experiential and rational variables were calculated (i.e. 3.5 experiential and 3.75 rational) and used as cut-off points to allocate respondents to one of four archetypal groups reflecting the quadrants on an experiential/rational matrix as shown at Figure 8.

This procedure identified respondents as high on both scales, low on both scales, high on one and low on the other, and vice versa. The quantitative results of this apportionment are shown in Table 19. In undertaking this procedure, it should however be noted that subsequent research by Norris and Epstein (2011) has suggested that people overestimate their rational thinking and underestimate their experiential thinking when conducting self-assessments, as used in this study.

**Persuasion**

Figures 9, 10 and 11 show the resulting one-factor congeneric path diagrams (models) with an acceptable fit for the items within each of the persuasion constituent scales (i.e. credibility, emotion and logic).
In each case, items were removed to eliminate cross-loadings and instances where item loadings were below 0.5. With the exception of one credibility item, all the remaining items have strong loadings in excess of 0.7, which significantly improved the level of variance explained by each, ranging from 56% (for a loading of 0.75) up to 86% for a loading of 0.93) (Hair et al 2010). The exception (i.e. Q5_3 in the credibility congeneric model) had an acceptable but low loading above the minimum 0.5 threshold and was therefore retained.

Table 20 records the related model fit indices with all key results for the refined congeneric models exceeding minimum fit requirements. Chi-square statistics are low, $p$-values are non-significant, the ratio of the chi-square statistic to degrees of freedom are below the accepted level of 3, the CFI, GFI, AGFI and TLI indices are all greater than 0.95, RMSEA results are less than 0.07 (Bentler and Bonett 1980; Hair et al 2010; Hooper, Coughlan and Mullen 2008).
The composite reliabilities for the refined congeneric models are all above the 0.7 threshold (i.e. 0.84 credibility, 0.95 emotion and 0.94 logic), while the AVE scores are all above the 0.5 level (i.e. 0.58 credibility, 0.79 emotion and 0.79 logic). Collectively, this suggests strong reliability and convergent validity (Hair et al 2010; Fornell and Larcker 1981). All AVE scores of the three measures were also greater than the squared correlation between each of them (i.e. 0.30, 0.41 and 0.55, confirming discriminant validity (Fornell and Larcker 1981), albeit the discriminant validity between the credibility and logic measures was marginal with the AVE for the credibility measure (i.e. 0.58) only slightly greater than the squared correlation between the two scales (i.e. 0.55).

The potential hierarchical structure of the persuasion scale was then confirmed by comparing nested models: primarily a one-factor model (where all items load directly onto a single persuasion factor) and a higher order three-factor model (where the items load onto the respective, separate and distinct, credibility, emotion and logic factors). The latter ultimately proved the best fitting model, with the path diagram and related correlations between variables shown at Figure 12.

For completeness, the analysis also examined a two-factor model where the credibility and logic variables loaded onto a common factor, separate from emotion. However, the model fit statistics of the three-factor solution proved superior, particularly in respect to Chi-square/degrees of freedom, CFI, GFI, AGFI and TLI indices and RMSEA results.
The relatively high correlations between the three subscales (i.e. .55 credibility/emotion, .64 emotion/logic and .74 credibility/logic) occurred while achieving acceptable discriminant validity as discussed previously (i.e. the AVE scores for all scales were greater than the squared correlation between them). Importantly, the results show that all three subscales contribute to an empirically distinct higher-order persuasion variable in line with Aristotle’s theory and support the use of the three persuasion subscales in the subsequent testing of hypotheses.

In respect to the higher correlation between the credibility and logic measures (i.e. .74), the phenomena seems to reflect a perceived association between the qualities of a credible source and the attributes of a logical argument. To the extent respondents perceive a speaker as an informed, qualified and nice (likeable) expert—reflecting the items within the credibility scale—they also perceive the speaker’s argument as logical, educational, factual and useful—reflecting the items within the logic scale. This echoes research showing links between factors such as qualifications and education in raising mutual perceptions of trustworthiness and competence (O’Keefe 2002), the role of liking in building...
trustworthiness (Cialdini 1984, 1987; Levine 2003) and the effect that perceptions of expertise (i.e. being an expert) have on accepting arguments, reason and facts (O’Keefe 2002, Perloff 2003). The unidimensionality of the credibility measure—which other studies have found often loads onto separate trustworthiness and competence dimensions (Leathers 1992; O’Keefe 2002)—is reflected in the relatively high reliability (0.84), supporting the internal consistency of the items within the scale.

**Table 21** shows the related model fit indices for the two primary competing models, highlighting that the three-factor (credibility, emotion and logic) presents the better overall fit, with all key results exceeding minimum fit requirements.

**Table 21 - Persuasion: assessment of competing models**

<table>
<thead>
<tr>
<th>Models (n=420)</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
<th>χ²/df</th>
<th>Δχ²</th>
<th>Δdf</th>
<th>CFI</th>
<th>GFI</th>
<th>AGFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>CI 90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-factor Persuasion (13-items)</td>
<td>1581.29</td>
<td>65</td>
<td>.000</td>
<td>24.33</td>
<td>-</td>
<td>-</td>
<td>.68</td>
<td>.49 (.28)</td>
<td>.61 (.24)</td>
<td>.95 (.23–.25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three-factor Persuasion (13-items)</td>
<td>155.91</td>
<td>62</td>
<td>.000</td>
<td>2.52</td>
<td>1425.38***</td>
<td>3</td>
<td>.98</td>
<td>.95 (.92)</td>
<td>.98 (.95–.98)</td>
<td>.06 (.05–.07)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a: Chi-square Statistic*<br>*b: Degrees of Freedom*<br>*c: Probability*<br>*d: Chi-square/Degrees of Freedom*<br>*e: Change in Chi-square Statistic*<br>*f: Change in Degrees of Freedom*<br>*g: Comparative Fit Index*<br>*h: Goodness of Fit Index*<br>*i: Adjusted Goodness of Fit Index*<br>*j: Tucker-Lewis Index*<br>*k: Root Mean Square Error of Approx.*<br>*l: 90% Confidence Interval*** p<0.001

The chi-square statistic for the three-factor model is low and although the p-value is significant, the ratio of the chi-square statistic to degrees of freedom is below the accepted level of 3. The CFI, GFI, AGFI and TLI indices are all greater than 0.95 and the RMSEA result is less than 0.07 (Bentler and Bonett 1980; Hair et al 2010; Hooper, Coughlan and Mullen 2008).

When comparing the two models, it is also clear from the ‘change in chi-square’ that the three-factor model is a better fit to the data (i.e. Δχ² = 1425.38 at p<0.001 with Δdf = 3). This provides evidence that the three-factor model is suitable to measure persuasion since respondents individually evaluated the speaker as credible, felt emotional arousal and perceived the speeches as logical—all to varying distinct degrees.
Table 22 summaries the item loadings, composite reliabilities and AVE scores for the three-factor model based on the preceding analyses. In all cases, loadings are well above the 0.5 threshold, composite reliabilities were greater than 0.7 and the AVE scores were all greater than 0.5 (Fornell and Larcker 1981; Hair et al. 2010), demonstrating strong reliability and convergent validity. And as mentioned earlier, the AVE scores were also greater than the squared correlation between the measures, providing evidence of discriminant validity, albeit the discriminant validity for the credibility and logic subscales were slightly marginal. As such, the three-factor model presents an acceptable fit to the data.

**Overall Measurement Model**

Based on Anderson and Gerbing’s (1998) approach, the next stage of the analysis involved confirming the entire measurement model comprising:

- All five latent variables (i.e. experiential thinking orientation, rational thinking orientation, credibility, emotion and logic)
- Each variable’s respective indicator items based on the one-factor congenericers
- The related covariances between the measures

While the chi-square statistic was significant at the 1% level ($\chi^2 = 442.035$, df = 181), the normed chi-square statistic (i.e. the ratio of the chi-square statistic to degrees of freedom) was 2.442 which is below the recommended threshold of 3.00 (Hair et al. 2010). The CFA
(0.953), TLI (0.945) and GFI (0.912) all suggested an acceptable fit, as did the RMSEA (0.059: CI_{90\%} 0.052 – 0.066)—albeit the RMSEA Confidence Interval was marginally above the 0.05 level (Browne and Cudeck 1992). In addition, at 0.887, the AGFI did suggest marginal fit to the data. However, taken together, the overall fit statistics suggest that the refined measures do have an acceptable fit to the sample data and can be used in the subsequent testing of hypotheses, through the intended multivariate analytical procedures.

**Unsupportive/Supportive Question**

The further single-item unsupportive/supportive question was included on theoretical grounds on the basis of Conger’s (1998a) assertion that persuasion leads to support for the message (and speaker). Such an effect would correspond with the definition used in this study—see Section 1.4). The related analysis involved an assessment of the correlations between the observed persuasiveness of speeches (reflected in responses to the credibility, emotion and logic variables) and support for the speaker, as assessed in subsequent tests of the hypotheses.

**Argument Strength Scale**

A cross-check was also included in the study as a cross-verification of the general operation of the experiment. The intended aim of this argument strength scale was to confirm that the strength of the arguments in the various speeches were broadly consistent with each other, thereby suggesting that any observed differences (between speeches) reflected the persuasive effect of the different language forms used, rather than variations in the underlying power of the arguments.

The argument strength check comprised the four-item (Zhang 1996) argument strength scale, the veracity of which was initially assessed by conducting a CFA with the four items, however the results failed to meet minimum ‘goodness of fit’ requirements. Given that four items are the minimum required to run a CFA (i.e. any less giving rise to zero degrees of freedom), the two error variances closest in value (i.e for items Q8_2 and Q8_3) were fixed so as to be equal, thereby creating one degree of freedom and allowing the adjusted model fit to be retested.
Figure 13 shows the path diagram for the best fitting adjusted (3-item) argument strength model. The three retained items have strong loadings significantly in excess of 0.7, considerably improving the level of variance explained by each, ranging from 83% (for a loading of 0.91) up to 92% for loadings of 0.96) (Hair et al 2010).

![Path Diagram](image)

### Figure 13 - One-factor Congeneric: Argument Strength

I would rate the speech as …

- Q8_1 – Weak/Strong
- Q8_2 – Unpersuasive/Persuasive
- Q8_3 – Not Convincing/Convincing

However, as shown in Table 23, apart from the CFI, GFI and TLI, the model failed the majority of statistical tests for acceptable fit.

<table>
<thead>
<tr>
<th>Models (n = 420)</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$p$</th>
<th>$\chi^2$/df</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>CFI</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>TLI</th>
<th>CI 90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-factor Argument Strength (4-items)</td>
<td>45.18</td>
<td>2</td>
<td>0.000</td>
<td>22.59</td>
<td>-</td>
<td>-</td>
<td>.98</td>
<td>.96 (0.78)</td>
<td>.94</td>
<td>23 (17–29)</td>
<td></td>
</tr>
<tr>
<td>One-factor Argument Strength (3-items)</td>
<td>14.51</td>
<td>1</td>
<td>0.000</td>
<td>14.51</td>
<td>8.08**</td>
<td>1</td>
<td>.99</td>
<td>.98 (0.87)</td>
<td>.97</td>
<td>18 (0.11–0.27)</td>
<td></td>
</tr>
</tbody>
</table>

| a | Chi-square Statistic |
| b | Degrees of Freedom |
| c | Probability |
| d | Chi-square/Degrees of Freedom |
| e | Change in Chi-square Statistic |
| f | Change in Degrees of Freedom |
| g | Comparative Fit Index |
| h | Goodness of Fit Index |
| i | Adjusted Goodness of Fit Index |
| j | Tucker-Lewis Index |
| k | Root Mean Square Error of Approx. |
| l | 90% Confidence Interval |

** $p=0.05$  

The chi-square statistic is significant and the normed chi-square statistic is not less than 3. The AGFI is not greater than 0.9 and the RMSEA is not less than 0.07 (Bentler and Bonett 1980; Hair et al 2010; Hooper, Coughlan and Mullen 2008). In addition, with the RMSEA value above 0.10, the results suggest a poor fitting model (Browne and Cudeck 1992) and with the entire 90% Confidence Interval for the RMSEA above 0.05, the hypothesis of ‘close-fit’ is rejected. A one-way independent ANOVA comparing argument strength with the ‘speech type’ categorical variable confirmed there were no recorded variances (i.e. significant results) between the constructs. As a result, because of both poor fit and poor measurement properties, the argument strength scale was not used in any subsequent analyses.
**Control Variable**

Within the design of the experiment, a separate question was included asking respondents how much they enjoyed things to do with ships and/or the ocean. This enquiry occurred within the Initial Demographics Questionnaire (see Appendix 3) and was included as a control variable to assess the cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech (Ottati, Rhoads and Graesser 1999).

While of no significance to respondents ultimately allocated to consider other versions of the speech, the question was asked of all respondents within the screening process for consistency purposes and because it was unknown at that stage of the experiment which respondents would ultimately be allocated to the metaphor version of the speech.

The ‘ships and/or the ocean’ control variable (question) was therefore analysed to allow the assessment of the overall cross-gender ‘motivational resonance’ of the nautical theme which is undertaken in the next chapter via a t-test.

### 5.4.4 Summary of Measures

With the efficacy and psychometric properties of the measurement instruments now established, the examination of the hypotheses (and comparative persuasiveness of different versions of the speech) will proceed in **Chapter 6** using the validated measures and items summarised at **Table 24**.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Construct</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thinking Orientation</strong></td>
<td>Experiential (thinking orientation)</td>
<td>Q1_7 I believe in trusting my hunches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q3_7 I generally don’t depend on my feelings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q4_1 I like to rely on my intuitive impressions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q4_7 Using my gut feelings usually works…</td>
</tr>
<tr>
<td></td>
<td>Rational (thinking orientation)</td>
<td>Q1_4 I have a logical mind</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2_7 I enjoy solving problems…</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q2_10 I am much better at figuring things out logically…</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q3_10 I am not a very analytical thinker</td>
</tr>
<tr>
<td><strong>Persuasion</strong></td>
<td>Credibility</td>
<td>I feel the speaker was…</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q5_3 • Inexpert/Expert</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q5_8 • Awful/Nice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q5_9 • Uniformed/Informed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q5_11 • Unqualified/Qualified</td>
</tr>
<tr>
<td></td>
<td>Emotion</td>
<td>As a result of hearing the speech, I feel…</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q6_2 • Interested</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q6_3 • Determined</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q6_4 • Excited</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q6_7 • Active</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q6_9 • Proud</td>
</tr>
<tr>
<td></td>
<td>Logic</td>
<td>My impression of the speech was…</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q7_1 • Not Logical/Logical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q7_2 • Not Educational/Educational</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q7_4 • Not Factual/Factual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Q7_5 • Not Useful/Useful</td>
</tr>
<tr>
<td></td>
<td>Support for the Speaker</td>
<td>Q9_1 • Unsupportive/Supportive</td>
</tr>
<tr>
<td><strong>Control Variable</strong></td>
<td>Motivational resonance</td>
<td>Q50_1 • Ships and/or the Ocean</td>
</tr>
</tbody>
</table>
5.5 Conclusion

The initial review and close inspection of the dataset resulted in the successful identification and removal of outliers and extreme values, culminating in the normalisation of the sample distributions within acceptable parameters.

CFAs then undertaken have confirmed that a parsimonious 8-item thinking orientation model (reflecting separate 4-item experiential and rational measures) provides an acceptable fit for the data, with the results supporting a strong orthogonal relationship between the experiential and rational measures. Although the revised scales were significantly reduced from the 40-item Pacini and Epstein (1999) *Rational-Experiential Inventory* originally deployed in the experiment, the remaining 8-item parsimonious measure was strongly correlated with the original scale. With the factor structure determined, the primary thinking orientation of each respondent was then determined for subsequent use in Chapter 6.

CFAs undertaken also showed an acceptable three-factor structure for the persuasion measure within the data involving separate credibility, emotion and logic measures—comprising 4, 5, and 4 items respectively. These revised scales (with 13 items in total) will be used in the subsequent analysis.

All refined measures were found to be reliable with good face, convergent and discriminant validity.

Taken together, these results suggest that the measurement model as a whole (comprising all five latent variables: experiential thinking orientation, rational thinking orientation, credibility, emotion and logic) has an acceptable fit to the sample data and can therefore be used in the subsequent testing of hypotheses.

The further single-item unsupportive/supportive question was included on theoretical grounds as a means of assessing the persuasiveness of each speech type (reflected through credibility, emotion and logic ratings) and subsequent support or otherwise for the speaker.

A review of the Zhang (1996) argument strength scale did not however, result in a valid measure since the congeneric with the best fit for the data did not meet acceptable levels on all fit indices. The failure of this scale was unexpected and in hindsight could possibly
be attributed to the fact it is normally applied to advertising studies and was relatively untested in the persuasion context. Consequently, the argument strength measure will not be used in any subsequent analyses.

The ‘ships and/or the ocean’ control variable will be used in subsequent analyses to assess the overall cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech.

This chapter commenced the quantitative analysis of the empirical results by testing the efficacy of the measurement instruments deployed in the experiment and establishing the psychometric properties of these measures using CFA procedures. It started by documenting the initial exploration and inspection of the dataset and then proceeded to identifying and recording the various CFAs and other analyses undertaken to refine and validate the measurement model.

The next chapter will use the validated measures to test the hypotheses using MANOVA and discriminant analysis. Other multivariate procedures including ANOVA and t-tests will also be used selectively to explore various correlations and differences, and check on the cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech.
Chapter 6

Testing the Hypotheses

6.1 Preface

Chapter 5 commenced the quantitative analysis of the empirical results by assessing the efficacy and psychometric properties of the measures deployed in the experiment. This chapter continues the quantitative analysis by using the refined measures (determined in Chapter 5) to evaluate the hypotheses. Utilising IBM SPSS™ Version 18 statistical analytics software (Coakes and Ong 2010; Field 2005), the work commences with a close examination of the summary descriptive statistics and correlations for all refined measures (including the demographic and control variables), then proceeds to test the hypotheses through a series of multivariate analytical procedures. Multivariate Analysis of Variance (MANOVA) techniques are used to test the relative persuasiveness of different versions and aggregation of speeches and categorical variables under different treatment conditions, with complementary discriminant analyses deployed where significant results are observed. Analysis of Variance (ANOVA) procedures are used to independently assess the extent of accompanying support for the speaker, along with a t-test to confirm the cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech. The chapter closes with an examination of demographic differences within the sample in order to follow-up on residual observations from the correlation analysis and explore potential relationships with the dependent variables.
6.2 Summary Descriptive Statistics and Correlations

Table 25 shows the relevant descriptive statistics for all five summated scales in the measurement model (i.e. experiential thinking orientation, rational thinking orientation, credibility, emotion and logic), along with key demographic variables and the unsupportive/supportive question.

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>Statistic</th>
<th>Statistic</th>
<th>Statistic</th>
<th>Statistic</th>
<th>Std. Error</th>
<th>Statistic</th>
<th>Std. Error</th>
<th>Statistic</th>
<th>Std. Error</th>
<th>Statistic</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Construct (4-items)</td>
<td>420</td>
<td>1.75</td>
<td>5.00</td>
<td>3.49</td>
<td>.66</td>
<td>-.31</td>
<td>.12</td>
<td>-.19</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rational Construct (4-items)</td>
<td>420</td>
<td>1.75</td>
<td>5.00</td>
<td>3.82</td>
<td>.67</td>
<td>-.28</td>
<td>.12</td>
<td>-.11</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credibility (4-items)</td>
<td>420</td>
<td>2.00</td>
<td>7.00</td>
<td>5.00</td>
<td>1.10</td>
<td>-.33</td>
<td>.12</td>
<td>-.26</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotion (5-items)</td>
<td>420</td>
<td>1.00</td>
<td>5.00</td>
<td>3.05</td>
<td>1.10</td>
<td>-.23</td>
<td>.12</td>
<td>-.86</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logic (4-items)</td>
<td>420</td>
<td>1.00</td>
<td>7.00</td>
<td>4.74</td>
<td>1.48</td>
<td>-.44</td>
<td>.12</td>
<td>-.49</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>420</td>
<td>20</td>
<td>65</td>
<td>44.11</td>
<td>10.69</td>
<td>-.02</td>
<td>.12</td>
<td>-1.03</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment (full or part-time)</td>
<td>420</td>
<td>1</td>
<td>2</td>
<td>1.32</td>
<td>.47</td>
<td>.76</td>
<td>.12</td>
<td>-1.44</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years in paid employment</td>
<td>420</td>
<td>3</td>
<td>50</td>
<td>24.15</td>
<td>11.35</td>
<td>.16</td>
<td>.12</td>
<td>-.95</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ships and/or the ocean</td>
<td>420</td>
<td>1</td>
<td>9</td>
<td>2.72</td>
<td>1.67</td>
<td>1.18</td>
<td>.12</td>
<td>1.50</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsupportive/Supportive question</td>
<td>420</td>
<td>1</td>
<td>7</td>
<td>5.04</td>
<td>1.56</td>
<td>-.61</td>
<td>.12</td>
<td>-.47</td>
<td>.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>420</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The data shows that experiential thinkers generally scored lower on their self-assessment but with roughly the same variability (SD) as rational thinkers. Moreover, the speeches aroused comparatively less emotion amongst respondents than their perceptions of speaker credibility and logic, even after allowing for the different Likert scales used (i.e. a 5-point scale for emotion versus 7-point scales for credibility and logic). The lower standard deviation for respondents’ emotional versus logical ratings also suggests a greater level of agreement about how they felt or were affected/unaffect ed by the speeches, as opposed to what they thought of them in terms of reasoned arguments. In contrast, there was greater variability in respondents’ perceptions of the logic of the arguments and their support (or lack of support) for the speaker.

Results for age and education demonstrate a relatively high mean age of 44 years within the sample, with the average education between Year 12 and the next level upwards (i.e. a technical college or business school qualification).
The low mean and standard deviation for responses to the question about ships and/or the ocean (i.e. 2.72 on a 9-point scale, with a 1.67 standard deviation) shows that respondents generally scored relatively tightly on the ‘dislike’ end of the spectrum. On the surface, this result suggests that negative emotions may have been at play (at least on this question, which was asked of all respondents), which is consistent with and may help explain the relatively low ratings on the emotion scale.

Table 26 details complementary means and standard deviation data for the central persuasion variables (i.e. credibility, emotion and logic) across each of the six core speech types, demonstrating the range and extent of the variance involved and respondents’ collective mean score for each speech.

<table>
<thead>
<tr>
<th>Speech Types</th>
<th>1 (Literal)</th>
<th>2 (Alliteration)</th>
<th>3 (Antithesis)</th>
<th>4 (Rhetorical Question)</th>
<th>5 (Metaphor)</th>
<th>6 (Consolidated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>4.89</td>
<td>1.15</td>
<td>5.17</td>
<td>1.11</td>
<td>5.08</td>
<td>1.09</td>
</tr>
<tr>
<td>Emotion</td>
<td>3.04</td>
<td>1.15</td>
<td>3.24</td>
<td>1.13</td>
<td>3.04</td>
<td>1.13</td>
</tr>
<tr>
<td>Logic</td>
<td>4.61</td>
<td>1.58</td>
<td>5.00</td>
<td>1.43</td>
<td>4.81</td>
<td>1.47</td>
</tr>
</tbody>
</table>

Again, the speeches aroused consistently lower emotional responses than respondents’ perceptions of speaker credibility and logic. The lower mean and standard deviation on the emotion variable evident in the metaphor version of the speech, suggests a particular lack of emotional response, possibly linked with the earlier observation about the low (dislike-oriented) rating to the question on ships and/or the ocean. This nautical theme was the topic on which all the extended metaphors used in the metaphor version of the speech were based.

The low standard deviations shown for the credibility and emotion variables on the consolidated version of the speech (i.e. 0.98), demonstrate a tighter grouping of responses, possibly suggesting that the use of mixed, interwoven language forms aid consensus—at least in respect to judgements about credibility and emotional arousal.
Table 27 shows the Pearson correlations for all five summated scales (i.e. experiential thinking orientation, rational thinking orientation, credibility, emotion and logic), along with key demographic variables and the unsupportive/supportive question. In reviewing the correlations, statistically significant results are deemed to exist wherever a significance level is less than 0.05 (Field 2005). Where this occurs, Field also advises that a correlation coefficient of $\pm 0.1$ represents a small effect, $\pm 0.3$ represents a medium effect and $\pm 0.5$ represents a large effect.
### Table 27 - Correlations

<table>
<thead>
<tr>
<th></th>
<th>Experiential Thinking (4-items)</th>
<th>Rational Thinking (4-items)</th>
<th>Credibility (4-items)</th>
<th>Emotion (5-items)</th>
<th>Logic (4-items)</th>
<th>AGE</th>
<th>GENDER (male or female)</th>
<th>Employment (full or part-time)</th>
<th>Years in paid employment</th>
<th>Education</th>
<th>Enjoy ships/ocean</th>
<th>Unsupportive/Supportive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Thinking (4-items)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>Sig. (1-tailed)</td>
<td></td>
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<tr>
<td></td>
<td>1</td>
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<tr>
<td>Rational Thinking (4-items)</td>
<td></td>
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± 0.1 = small effect
± 0.3 = medium effect
± 0.5 = large effect (Field 2005)

TABLE 27 - CORRELATIONS
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**p < .01 (correlation is significant at the .01 level).**  
* p < .05 (correlation is significant at the .05 level).**  
Note: N = 420

± 0.1 = small effect  
± 0.3 = medium effect  
± 0.5 = large effect (Field 2005)
The key significant correlations show that:

- Experiential thinking was positively correlated (to a small degree) with credibility, logic and the unsupportive/supportive question; with the credibility correlation occurring at the $p=0.001$ level. This shows that experiential thinkers rated the speaker higher on credibility and logic and were more supportive overall. Other correlations with gender and ships and/or the ocean are discussed below.

- Rational thinking was significantly positively correlated with education and significantly negatively correlated with gender (both at the $p=0.001$ level). This suggests that rational thinkers who are disproportionately male have higher educations.

- All three dependent variables, that is: credibility, emotion and logic, were highly positively correlated with each other. The credibility correlation with emotion, and emotion with logic both occurred at the tighter $p=0.01$ level. This correlation mirrors the correlation demonstrated in the three-factor CFA documented earlier and lends *prima-facie* support for Aristotle’s theory on persuasion.

- All three dependent variables (i.e. credibility, emotion and logic) had a large positive correlation with the unsupportive/supportive question, all at the $p=0.001$ level. This meant that 41-58% of the variability in respondents’ preparedness to support the speaker (i.e. the square of the correlation coefficients) was accounted for in their reaction to the credibility, emotion and logic generated. This suggests that the persuasive effect shown in respondents’ ratings on the credibility, emotion and logic scales was reflected in their preparedness to support the speaker.

- Ships and/or the ocean was significantly negatively correlated with experiential thinking, credibility, emotion, logic and the unsupportive/supportive question — broadly to the same extent and all at the $p=0.01$ level. The more respondents were experiential thinkers and the more persuaded they were (in terms of credibility, emotion and logic) and the more they were supportive of the speaker, the less affinity they had with the sea.

- Gender was not significantly correlated with respondents who enjoyed ships and/or the ocean but was significantly correlated with thinking orientation and employment at the $p=0.01$ level. Males were more rational in their thinking orientation and females more experiential, a result that mirrored the self-perceptions identified in the Pacini and Epstein (1999) study. In addition, males were more likely to have full-time employment and females part-time employment. On the surface, the correlation between females and experiential thinking, together
with the significant negative correlation between females and ships and/or the ocean (as cited earlier), would appear to harbour implications for the issue of cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech. This will be examined further when testing hypotheses concerning the metaphor version of the speech.

- Gender was also significantly positively correlated with credibility (at the $p=0.01$ level), logic and the unsupportive/supportive question (at the $p=0.05$ level). Females rated the speaker higher and were generally more supportive than males.

- Education was significantly negatively correlated with all three dependent variables (i.e. credibility, emotion and logic) and the unsupportive/supportive question. The less educated respondents were, the higher they rated the speaker on credibility, emotion and logic, and the more supportive they were. With the exception of emotion, all correlations occurred at the $p=0.01$ level; emotion occurred at the $p=0.05$ level.

- Age and years of employment were also highly, positively correlated at the $p=0.001$ level, indicating (as may have been expected) that older respondents also had long employment histories. 68% of the variability of one was explained by the other.

Overall, the correlation matrix shows several covariance relationships. Strongest amongst them (apart from age and years of employment) was the high positive cross-correlation of all three dependent variables (i.e. credibility, emotion and logic) and the corresponding high positive correlation each had with the unsupportive/supportive question. This result mirrored the cross-correlated three-factor structure for the persuasion construct disclosed in the CFAs and suggests that the more respondents were persuaded (i.e. the higher they rated the credibility, emotion and logic scales), the more they supported the speaker. The latter is consistent with the idea that persuasion (reflected by success in the manner in which a message is presented) is associated with support for the speaker, as embodied within Conger’s (1998a) definition of persuasion used in this study.

In addition, the correlations between thinking orientation and other variables showed important distinctions between experiential and rational thinkers in areas such as credibility, logic, education, the enjoyment of ships and/or the ocean, and support for the speaker.

Gender was also shown to be correlated with experiential thinking, credibility, logic, support for the speaker and part-time employment, but not with ships and/or the ocean.
6.3 Multivariate Analysis

With the psychometric properties of the measures established in the previous chapter, the hypotheses were tested first by subjecting the sample to a series of MANOVA procedures. Where significant results were observed, complementary discriminant analyses were undertaken to further explore the dependent variables to determine the exact source of the variances. The primary MANOVA approach was chosen for the dependent credibility, emotion and logic variables because it is the statistical test procedure best suited for comparing the multivariate means of several groups and using the variance-covariance between variables for testing the statistical significance of those differences. When there are multiple independent and multiple dependent variables, MANOVA is helpful for determining whether changes in one have significant effects on the other and what the various interactions may be amongst and between the dependent and independent variables (Field 2005; Hair et al 2010). Importantly, MANOVA can also be used when there is only one independent variable (and several dependent variables) to examine interactions and contrasts between groups (Field 2005).

The results related to the unsupportive/supportive question were assessed separately using ANOVA procedures, with the relevant versions of the speech and/or thinking orientation as the independent variable and the unsupportive/supportive question as the dependent variable. Post hoc analyses were also included in the procedures to assess the precise nature and source of any significant variance(s). The general ANOVA approach was chosen because it allows analysis to be undertaken on several independent variables and can explore how those independent variables interact with one another, as well as the effect those interactions have on the dependent variable (Field 2005).

A t-test was conducted to assess the cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech, as foreshadowed in the previous chapter. This was based on comparing relative responses to the ‘ships and/or the ocean’ control variable.

Where statistically significant differences were observed, additional MANOVA and discriminant analysis procedures were also conducted to explore the effect that individual speech types might have had on the results.
For exploratory reasons, a final assessment of the demographic differences between independent group samples was also undertaken, again using MANOVA, discriminant analysis and ANOVA procedures. This involved gender, age, occupation and education.

In all instances, the assumptions underlying the choice of test procedures were checked and considered prior to conducting the analyses. These assumptions collectively included independence amongst observations, random sampling, univariate and multivariate normality and homogeneity (equality) of variance and variance-covariance matrices (Field 2005; Hair et al 2010).

In undertaking the statistical analysis, appropriate procedures were conducted on each of the following hypotheses:

**Hypothesis 1:** Figurative language is more persuasive than literal language in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.

To test this hypothesis a MANOVA was conducted using a computed categorical variable comprising all six speech types (i.e. literal, alliteration, antithesis, rhetorical question, metaphor and consolidated) as the independent variable and the credibility, emotion and logic measures as the dependent variables. A simple contrast was also included on the independent variable comparing all the experimental groups (types of speech) with the non-treatment control group (i.e. literal version of the speech). The cross-check of accompanying support for the speaker was assessed using a one-way independent ANOVA with post hoc analyses, where the computed categorical variable (as above) was the independent variable and the unsupportive/supporting measure was the dependent variable.

**Hypothesis 2:** Tropes are more persuasive than schemes in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.
To test this hypothesis a MANOVA was conducted using a computed categorical variable comprising collective *scheme* versions of the speech (i.e. alliteration and antithesis) and collective *trope* versions of the speech (i.e. rhetorical questions and metaphor) as the independent variable and the credibility, emotion and logic measures as dependent variables. To assess the cross-gender ‘motivation resonance’ of the nautical theme used in the metaphor version of the speech, a t-test was also conducted. The cross-check of accompanying support for the speaker was assessed using a one-way independent ANOVA with post hoc analyses, where the computed categorical variable (as above) was the independent variable and the unsupportive/supporting measure was the dependent variable.

**Hypothesis 3:** *There is an ascending order in the persuasiveness of schemes and tropes in management communication in line with their ascending complexity (i.e. from simple schemes, to complex schemes, to simple tropes, to complex tropes), as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.*

To test this hypothesis the results of the varying tests used to assess Hypothesis 1 were reviewed since the speech types tested in that situation necessarily included the dedicated *schemes* and *tropes* reflected in this hypothesis. For example: speech type 2 reflected the simple (alliteration) *scheme*, speech type 3 reflected the complex (antithesis) *scheme*, speech type 4 reflected the simple (rhetorical question) *trope* and speech type 5 reflected the complex (metaphor) *trope*.

**Hypothesis 4:** *The thinking orientation of listeners affects the perceived persuasiveness of management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker, such that listeners who rate high as experiential thinkers are more persuaded than those who rate high as rational thinkers.*

To test this hypothesis a MANOVA was conducted using a computed categorical variable comprising the four primary thinking orientation
categories shown at Figure 8 (in Chapter 5) as the independent variable and the credibility, emotion and logic measures as dependent variables. This was supplemented with additional MANOVAs to assess what particular speech type might have the greatest effect. The cross-check of accompanying support for the speaker was assessed using a one-way independent ANOVA with post hoc analyses, where the computed categorical variable (as above) was the independent variable and the unsupportive/supporting measure was the dependent variable.

In assessing MANOVA results, the four principal and most widely accepted statistics for testing null hypotheses were used, namely Pillai’s Trace, Wilk’s Lambda, Hotelling’s Trace and Roy’s Largest Root (Field 2005; Hair et al 2010). Field cites Olson’s (1974) observation that the four test statistics differ little in terms of power when sample sizes were small or moderate. Since the sample size for the current experiment was less than 38 respondents for each gender-disaggregated version of the speech (see Table 7 in Chapter 4), it was resolved to retain all four test statistics within the assessment process for precautionary purposes.

Pillai’s Trace tests the sum of the proportion of explained variance on all discriminant functions, Wilk’s Lambda tests the ratio of error variance to total variance for each variate, Hotelling’s Trace tests the sum of the eigenvalues for each variate while Roy’s Largest Root tests the proportion of explained variance to unexplained variance for the first discriminant function (representing the maximum possible between-group difference in the data). Box’s Test of Equality of Covariance Matrices and Levene’s Test of Equality of Error Variances were also reviewed to affirm the assumption of homogeneity of variance-covariance between the groups and homogeneity of variance between all the dependent variables.

The $F$-ratio was used in assessing the results from the ANOVA procedures. The $F$-ratio is the ratio of between-groups variance (i.e. the effect of the independent variable combined with the error variance) to within-groups variance (i.e. the error variance itself) (Coakes and Ong 2010). Or put more simply, it is the ratio of the variation explained by the model and the variation explained by other unsystematic (random) factors (Field 2005). Levene’s Test of homogeneity of variances was used to test that the variances of the groups are the same (homogeneous), while both Tukey’s and Bonferroni’s tests were used in the post hoc analyses to assess the specific location of any significant variance. Bonferroni’s test was included since like Tukey’s test it tightly controls the risk of Type I error while being more
statistically powerful in detecting significant variations when the number of comparisons is small (Field 2005). This could potentially prove useful when undertaking certain comparisons at the speech type level.

6.3.1 Results

**Hypothesis 1:** *Figurative language is more persuasive than literal language in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic); and (b) their support for the speaker.*

The MANOVA assessing all six types of the speech with separate credibility, emotion and logic measures showed no significant results and therefore Hypothesis 1(a) was not supported. All four test statistics (i.e. Pillai’s Trace, Wilk’s Lambda, Hotelling’s Trace and Roy’s Largest Root) were non-significant, as shown in Table 28. All had p-values above the 0.05 level.

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<thead>
<tr>
<th>TABLE 28 - MULTIVARIATE TESTS: SELECTIVE PRIMARY VERSIONS OF THE SPEECH BY CREDIBILITY, EMOTION AND LOGIC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effect</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Intercept</td>
</tr>
<tr>
<td>Pillai’s Trace</td>
</tr>
<tr>
<td>Wilks’ Lambda</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
</tr>
<tr>
<td>Roy’s Largest Root</td>
</tr>
<tr>
<td>Speechtype</td>
</tr>
<tr>
<td>Pillai’s Trace</td>
</tr>
<tr>
<td>Wilks’ Lambda</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
</tr>
<tr>
<td>Roy’s Largest Root</td>
</tr>
</tbody>
</table>

<sup>a</sup> Exact statistic  
<sup>b</sup> The statistic is an upper bound on F that yields a lower bound on the significance level. 
<sup>c</sup> Design: Intercept + Speechtype

All contrasts between the literal version of the speech and other types (i.e. alliteration, antithesis, rhetorical question, metaphor and consolidated) were also non-significant.

Box’s Test of the homogeneity assumption was non-significant ($F=1.170; p=0.239$), as was Levene’s test of equality of variances between groups across the dependent variables—i.e. credibility ($F=0.985; p=0.427$), emotion ($F=0.759; p=0.580$) and logic ($F=0.604; p=0.697$).

A review of the Descriptive Statistics showed that all respondents scored the credibility dimension the highest (M=5.00; SD=1.10), followed by logic (M=4.74; SD=1.48) and
emotion (M=3.05; SD=1.10). This was reflective of earlier analysis shown at Section 6.2, with generally wider standard deviation (SD) within responses to the literal speech than other versions of the speech. The only exception was a higher SD on ratings for the credibility variable within the metaphor version of the speech.

Consistent with the previous results, the one-way independent ANOVA conducted to assess the accompanying support for the speaker (i.e. as reflected in the unsupportive/supportive question), showed no significant results either (i.e. $F=1.551$; $p=0.173$), with Levene’s test of homogeneity also non-significant ($F=0.414$; $p=0.839$). Hence, Hypothesis 1(b) was similarly not supported.

A review of the Descriptive Statistics from the ANOVA showed that respondents scored the alliteration version of the speech the highest (M=5.44; SD=1.53), with the metaphor version the lowest (M=4.83; SD=1.52). The literal version was rated the second lowest but with the highest standard deviation (M=4.88; SD=1.68), indicating greater variety of opinion.

Collectively, these MANOVA and ANOVA findings suggest that the differing types of speech (i.e. literal, alliteration, antithesis, rhetorical question, metaphor and consolidated) have no statistically significant effect on persuasion. Or, in terms of the Hypothesis 1, there was no evidence that figurative language (in any of its forms used in the experiment) is more persuasive than literal language. In addition, in line with this finding there was no discernible support for the speaker associated with any of the speech types.

**Hypothesis 2:** *Tropes are more persuasive than schemes in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.*

The MANOVA assessing collective *scheme* and (collective) *trope* versions of the speech with separate credibility, emotion and logic measures showed no significant results and therefore Hypothesis 2(a) was also not supported. All four test statistics (i.e. Pillai’s Trace, Wilk’s Lambda, Hotelling’s Trace and Roy’s Largest Root) were non-significant, as shown in Table 29.
All test statistics had \( p \)-values above the 0.05 level. Box’s Test of the homogeneity assumption was non-significant \( (F=0.879; p=0.509) \), as was Levene’s test across the dependent variables—i.e. credibility \( (F=0.795; p=0.373) \), emotion \( (F=0.030; p=0.862) \) and logic \( (F=0.101; p=0.750) \).

A review of the Descriptive Statistics again highlighted that all respondents scored the credibility dimension the highest \( (M=5.04; SD=1.11) \), followed by logic \( (M=4.83; SD=1.46) \) and with emotion well behind \( (M=3.05; SD=1.11) \).

The one-way independent ANOVA conducted to assess the accompanying support for the speaker (reflected in the unsupportive/supportive question), showed no significant results either \( (i.e. F=0.956, p=0.329) \), with Levene’s test of homogeneity also non-significant \( (F=0.189, p=0.664) \). Hence, Hypothesis 2(b) was also not supported.

A review of the Descriptive Statistics from the ANOVA showed that respondents scored the collective schemes slightly higher than the collective tropes—i.e. \( (M=5.18; SD=1.56) \) versus \( (M=5.00; SD=1.52) \) respectively.

In reviewing the tropes, the opportunity was also taken to assess the cross-gender ‘motivation resonance’ of the nautical theme used in the metaphor version of the speech. To do this a one-sample t-test was conducted comparing male responses to the ‘ships and/or the ocean’ control variable with a test value that reflected the mean of the female responses to the same question. This was done exclusively for respondents who rated the metaphor trope version of the speech, as well as sample-wide. Either way, the results

---

**TABLE 29 - MULTIVARIATE TESTS: SCHEME AND TROPE VERSIONS OF THE SPEECH BY CREDIBILITY, EMOTION AND LOGIC**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>( F )</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pillai’s Trace</td>
<td>.955</td>
<td>1970.264*</td>
<td>3.000</td>
<td>276.000</td>
<td>.000</td>
</tr>
<tr>
<td>Wilks’ Lambda</td>
<td>.045</td>
<td>1970.264*</td>
<td>3.000</td>
<td>276.000</td>
<td>.000</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
<td>21.416</td>
<td>1970.264*</td>
<td>3.000</td>
<td>276.000</td>
<td>.000</td>
</tr>
<tr>
<td>Roy’s Largest Root</td>
<td>21.416</td>
<td>1970.264*</td>
<td>3.000</td>
<td>276.000</td>
<td>.000</td>
</tr>
<tr>
<td>Scheme and Trope Versions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pillai’s Trace</td>
<td>.009</td>
<td>.808*</td>
<td>3.000</td>
<td>276.000</td>
<td>.490</td>
</tr>
<tr>
<td>Wilks’ Lambda</td>
<td>.991</td>
<td>.808*</td>
<td>3.000</td>
<td>276.000</td>
<td>.490</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
<td>.009</td>
<td>.808*</td>
<td>3.000</td>
<td>276.000</td>
<td>.490</td>
</tr>
<tr>
<td>Roy’s Largest Root</td>
<td>.009</td>
<td>.808*</td>
<td>3.000</td>
<td>276.000</td>
<td>.490</td>
</tr>
</tbody>
</table>

---

*Exact statistic

**Design:** Intercept + Scheme and Trope Versions
showed there were no significant differences between the means—i.e. metaphor version ($t=-1.497$ with 35 degrees of freedom and $p=0.143$) and sample-wide ($t=-1.417$ with 208 degrees of freedom and $p=0.158$). This conclusive result confirms the even-handed cross-gender ‘motivational resonance’ of the extended nautical metaphor used in the experiment. Both male and female respondents rated the control variable with similar assessments, suggesting they have similar levels of affinity with 'ships and/or the ocean'.

Collectively, these MANOVA and ANOVA findings suggest that the collective scheme and (collective) trope versions of the speech have no effect on persuasion. Or, in terms of Hypothesis 2, there was no evidence that tropes are any more persuasive than schemes. In addition, there was no discernible support for the speaker associated with either schemes or tropes. However, the results suggest that the nautical theme used in the metaphor version of the speech generated the same degree of ‘motivation resonance’ across the genders.

**Hypothesis 3:** *There is an ascending order in the persuasiveness of schemes and tropes in management communication in line with their ascending complexity (i.e. from simple schemes, to complex schemes, to simple tropes, to complex tropes), as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker.*

Hypothesis 3 was not supported based on the results of the tests against Hypothesis 1. Those tests failed to show any evidence that the differing types of speech (that reflected the different categories of schemes and tropes used in the experiment) had any statistically significant effect on assessments of credibility, emotion and logic, let alone an ascending order in persuasiveness that reflected each figure’s complexity.

A review of the Descriptive Statistics recorded at Table 30 show that respondents collectively rated the alliteration speech the highest of all the figurative speeches, with the metaphor speech the lowest across all persuasion variables (i.e. credibility, emotion and logic). In addition, respondents did so by scoring the credibility dimension the highest (Total M=5.04; SD=1.11), followed by logic (Total M=4.83; SD=1.46) and with emotion well behind (Total M=3.05; SD=1.11).
Notwithstanding the noticeable variance in the descriptive statistics between speech types, the MANOVA test ultimately showed that those differences were not statistically significant.

This result was repeated in the absence of support for the speaker and hence, Hypothesis 3(b) was also not supported.

Collectively, the MANOVA and ANOVA findings suggest that the various schemes and tropes have no statistically significant effect on persuasion. Or, in terms of Hypotheses 3(a) and 3(b), there was no evidence of an ascending order in the persuasiveness of schemes and tropes in line with their ascending complexity and there was no discernible support for the speaker associated with any scheme and trope.

**Hypothesis 4:** The thinking orientation of listeners affects the perceived persuasiveness of management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker, such that listeners who rate high as experiential thinkers are more persuaded than those who rate high as rational thinkers.

The MANOVA assessing the four primary thinking orientations (i.e. reflecting the quadrants on an experiential/rational matrix—see Figure 8 in Chapter 5) with separate credibility, emotion and logic measures, showed significant results and therefore Hypothesis 4(a) was supported. All four test statistics (i.e. Pillai’s Trace, Wilk’s Lambda, Hotelling’s Trace and Roy’s Largest Root) were significant, as shown in Table 31. All had p-values below the 0.05 level.
Box’s Test of the homogeneity assumption was non-significant \( (F=1.391; p=0.124) \), as was Levene’s test across two of the dependent variables—i.e. credibility \( (F=0.972, p=0.406) \), and logic \( (F=0.823, p=0.482) \). Levene’s test for the emotion variable however was significant \( (F=3.190, p=0.024) \), meaning that the equality of variance between groups (i.e. the four thinking orientations) cannot be assumed. As such, subsequent results on the emotion variable (if confirmed as significant) cannot be relied upon.

A review of the Descriptive Statistics again showed that all respondents scored the credibility dimension the highest \( (M=5.00; SD=1.10) \), followed by logic \( (M=4.74; SD=1.48) \) and emotion \( (M=3.05; SD=1.10) \).

Notwithstanding the results of Levene’s test on the emotion variable, the significant MANOVA results for the test statistics suggest that the four primary thinking orientations are having a meaningful effect on other dependent variables. To explore this phenomenon and determine which thinking orientation might be associated with the largest effect, discriminant analysis was undertaken.

**Table 31 - Multivariate Tests: Four Primary Thinking Orientations by Credibility, Emotion and Logic**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>( F )</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.951</td>
<td>2703.453·</td>
<td>3.000</td>
<td>414.000</td>
<td>.000</td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>.049</td>
<td>2703.453·</td>
<td>3.000</td>
<td>414.000</td>
<td>.000</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
<td>19.590</td>
<td>2703.453·</td>
<td>3.000</td>
<td>414.000</td>
<td>.000</td>
</tr>
<tr>
<td>Roy's Largest Root</td>
<td>19.590</td>
<td>2703.453·</td>
<td>3.000</td>
<td>414.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

**ThinkOrient Cat**

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>( F )</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillai’s Trace</td>
<td>.041</td>
<td>1.919</td>
<td>9.000</td>
<td>1248.000</td>
<td>.046</td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>.959</td>
<td>1.922</td>
<td>9.000</td>
<td>1007.718</td>
<td>.046</td>
</tr>
<tr>
<td>Hotelling’s Trace</td>
<td>.042</td>
<td>1.921</td>
<td>9.000</td>
<td>1238.000</td>
<td>.045</td>
</tr>
<tr>
<td>Roy's Largest Root</td>
<td>.028</td>
<td>3.890·</td>
<td>3.000</td>
<td>416.000</td>
<td>.009</td>
</tr>
</tbody>
</table>

a. Exact statistic
b. The statistic is an upper bound on \( F \) that yields a lower bound on the significance level.
c. Design: Intercept + ThinkOrientCat

**Table 32 - Standardised Canonical Discriminant Function Coefficients: Primary Thinking Orientation**

<table>
<thead>
<tr>
<th>Function</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>1.100</td>
<td>- .699</td>
<td>-.287</td>
</tr>
<tr>
<td>Emotion</td>
<td>.385</td>
<td>1.166</td>
<td>-.322</td>
</tr>
<tr>
<td>Logic</td>
<td>-.608</td>
<td>-.100</td>
<td>1.310</td>
</tr>
</tbody>
</table>

**Table 33** record the related standardised canonical discriminant function coefficients and the structure matrix involved.

Critically, the discriminant function coefficients in the first variate
(Function 1), where Wilks’ Lambda is significant, highlight the dominant contribution of the credibility variable followed by the strong (although opposite) contribution of the logic variable. The low value for the emotion variable suggests it does not make a significant contribution to the variate (confirmed with MANOVA post hoc analysis) and, given the earlier result for the Levene’s test, means it can be removed from further consideration. The structure matrix confirms that the credibility variable has a high loading (i.e. > 0.8), meaning it contributes most to group separation between the four primary thinking orientation groups. This is consistent with the highest ratings evident in the Descriptive Statistics. The 0.566 loading for the emotion variable has been discounted in line with the Standardised Canonical Discriminant Function Coefficients and the Levene’s test results discussed above.

Table 34 shows the functions at group centroids. The first variate (Function 1), where Wilks’ Lambda is significant, demonstrates that Low Experiential/Low Rational thinkers have the greatest effect (and contribute to the greatest separation), followed by High Experiential/Low Rational thinkers. Both groups are moderately discriminated opposites given the distance between their respective centroid values (taking account of the positive and negative weights). The other two thinking orientation styles (i.e. High Experiential/High Rational thinkers and High Rational/Low Experiential thinkers) have extremely low values and are not well discriminated, and therefore play little role in group separation.

To assess any further effect that individual speech types might have on the recorded persuasiveness of thinking orientation styles, a separate MANOVA was conducted using
the discriminant scores (from the discriminant analysis) as the predictor variables and the ‘speechtype’ categorical variable as the grouping variable. However, the results proved non-significant with the \( p \)-values for all four test statistics above the 0.05 level (e.g. Wilk’s Lambda was: \( F=0.883; p=0.583 \)). A follow-up MANOVA with the four primary thinking orientations and the six speech types as independent variables—and credibility, emotion and logic as dependent variables—was also conducted for comparative purposes with similar results. Again, all four test statistics proved non-significant—e.g. Wilk’s Lambda: Speechtype \( (F=0.763; p=0.720) \); ThinkOrientCat*Speechtype \( (F=0.636; p=0.971) \).

The one-way independent ANOVA as conducted to assess the accompanying support for the speaker (reflected in the unsupportive/supportive question), showed no significant results (i.e. \( F=0.757; p=0.519 \)), with Levene’s test of homogeneity also non-significant \( (F=0.429, p=0.732) \). As a result, Hypothesis 4(b) was not supported.

A review of the Descriptive Statistics from the ANOVA procedure showed that respondents scored the High Experiential/Low Rational thinking style the highest (M=5.19, SD=1.53), followed by the High Experiential/High Rational style (M=5.09, SD=1.59), the High Rational/Low Experiential style (M=4.94, SD=1.62) and finally the Low Experiential/Low Rational style (M=4.86, SD=1.42).

Collectively, these MANOVA and ANOVA findings (and associated discriminant analysis) suggest that two thinking styles (i.e. Low Experiential/Low Rational, and High Experiential/Low Rational) have a moderate and slight effect respectively on the persuasion variables, primarily through the credibility measure. In terms of Hypothesis 4(a), these results suggest that the proposition is supported. Listeners who rate high as experiential thinkers (i.e. High Experiential/Low Rational) are more persuaded (through the credibility dimension) than those who rate high as rational thinkers (i.e. High Rational/Low Experiential), although Low Experiential/Low Rational thinkers are the most persuaded. The effects are also independent of the type of speech involved. However, there was no discernible support for the speaker associated with any of the four primary thinking orientations, and as a result, Hypothesis 4(b) was not supported.
**Assessment of Demographic Differences**

An assessment of the impact of demographic variables within the sample was also undertaken to explore potential relationships. This involved separate MANOVAs with age, gender, occupation and education as independent variables, and credibility, emotion and logic as dependent variables. Of these, only the education categorical variable recorded p-values well below the 0.05 (and 0.01) level, with gender recording p-values slightly above the 0.05 level. The results are shown in Tables 35 and 36.

### Table 35 - Multivariate Tests: Education by Credibility, Emotion and Logic

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Pillai’s Trace</td>
<td>.954</td>
<td>2857.761a</td>
<td>3.000</td>
<td>413.000</td>
</tr>
<tr>
<td></td>
<td>Wilks’ Lambda</td>
<td>.046</td>
<td>2857.761a</td>
<td>3.000</td>
<td>413.000</td>
</tr>
<tr>
<td></td>
<td>Hotelling’s Trace</td>
<td>20.759</td>
<td>2857.761a</td>
<td>3.000</td>
<td>413.000</td>
</tr>
<tr>
<td>q46 Education</td>
<td>Pillai’s Trace</td>
<td>.068</td>
<td>2.400a</td>
<td>12.000</td>
<td>1245.000</td>
</tr>
<tr>
<td></td>
<td>Wilks’ Lambda</td>
<td>.933</td>
<td>2.408a</td>
<td>12.000</td>
<td>1092.987</td>
</tr>
<tr>
<td></td>
<td>Hotelling’s Trace</td>
<td>.070</td>
<td>2.411a</td>
<td>12.000</td>
<td>1235.000</td>
</tr>
<tr>
<td></td>
<td>Roy’s Largest Root</td>
<td>.047</td>
<td>4.846b</td>
<td>4.000</td>
<td>415.000</td>
</tr>
</tbody>
</table>

a. Exact statistic  
c. Design: Intercept + q46

### Table 36 - Multivariate Tests: Gender by Credibility, Emotion and Logic

<table>
<thead>
<tr>
<th>Effect</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>Pillai’s Trace</td>
<td>.956</td>
<td>2978.532a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td></td>
<td>Wilks’ Lambda</td>
<td>.044</td>
<td>2978.532a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td></td>
<td>Hotelling’s Trace</td>
<td>21.480</td>
<td>2978.532a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td></td>
<td>Roy’s Largest Root</td>
<td>21.480</td>
<td>2978.532a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td>Gender</td>
<td>Pillai’s Trace</td>
<td>.018</td>
<td>2.602a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td></td>
<td>Wilks’ Lambda</td>
<td>.982</td>
<td>2.602a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td></td>
<td>Hotelling’s Trace</td>
<td>.019</td>
<td>2.602a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
<tr>
<td></td>
<td>Roy’s Largest Root</td>
<td>.019</td>
<td>2.602a</td>
<td>3.000</td>
<td>416.000</td>
</tr>
</tbody>
</table>

a. Exact statistic  
c. Design: Intercept + gender

Box’s Tests of the homogeneity assumption were both non-significant (Education: F=1.085; p=0.351 and Gender: F=0.960; p=0.451), as was Levene’s test across the dependent variables—i.e. Education: credibility F=0.574; p=0.682, emotion F=2.193; p=0.069 and logic F=2.127; p=0.077) and Gender: credibility F=0.816; p=0.367, emotion F=0.026; p=0.872 and logic F=0.051; p=0.821).
The MANOVA results suggest that education and gender may have an effect on the dependent variables and to explore this prospect, discriminant analyses were undertaken with the findings shown in **Table 37**.

<table>
<thead>
<tr>
<th>TABLE 37 - DISCRIMINANT ANALYSES: GENDER AND EDUCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDUCATION BY CREDIBILITY, EMOTION AND LOGIC MEASURES</strong></td>
</tr>
<tr>
<td>• Wilks' Lambda: $p=0.004$ (first variate only, Function 1)</td>
</tr>
<tr>
<td>• Standardised Canonical Discriminant Function Coefficients—Dominant contribution from logic followed by a modest contribution from emotion (i.e. 1.213 and -0.450 respectively)</td>
</tr>
<tr>
<td>• Structure Matrix—Dominant contribution from logic followed by a moderate contribution from credibility (i.e. 0.932 and 0.540 loadings respectively)</td>
</tr>
<tr>
<td>• Functions at Group Centroids—Strongest separation evident from &lt; Year 12 education and University undergraduate studies (i.e. 0.379 and -0.214 respectively)</td>
</tr>
<tr>
<td>• CONCLUSION: Of the three dependent variables, logic and credibility have the greatest effect (i.e. contribute most to group separation between educational levels), with logic making the strongest contribution with a high loading &gt; 0.9 and credibility making a modest contribution. Respondents with a &lt; Year 12 education are more powerfully affected by the speeches than everyone else while those with a University undergraduate education are almost as effected but in the opposite direction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>GENDER BY CREDIBILITY, EMOTION AND LOGIC MEASURES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Wilks' Lambda: $p=0.052$ (first variate only, Function 1)</td>
</tr>
<tr>
<td>• Standardised Canonical Discriminant Function Coefficients—Dominant contribution from credibility followed by a strong contribution from logic (i.e. 0.759 and 0.523 respectively)</td>
</tr>
<tr>
<td>• Structure Matrix—Dominant contribution evident from credibility followed by a strong contribution from logic (i.e. 0.922 and 0.802 loadings respectively)</td>
</tr>
<tr>
<td>• Functions at Group Centroids—Some modest separation evident (males -0.137; females 0.136)</td>
</tr>
<tr>
<td>• CONCLUSION: Of the three dependent variables, credibility and logic have the greatest effect (i.e. contribute most to group separation between males and females), both with strong loadings &gt; 0.8. Male and female respondents are broadly affected to the same (although opposite) degree, with females positively affected and males negatively reflected</td>
</tr>
</tbody>
</table>

A separate MANOVA testing occupation (i.e. q45) with the primary credibility, emotion and logic measures also recorded a near-significant $p$-value of 0.054 for Roy’s Largest Root but this result did not survive discriminant analysis since the Structure Factor loadings were all below the 0.5 level.

Separate univariate ANOVAs were also conducted to assess any accompanying support for the speaker (reflected in the unsupportive/supportive question) that might be associated with the age, gender, occupation and education demographic variables. The results for the gender variable proved significant ($F=4.572; p=0.033$) while those for both occupation and education proved non-significant (i.e. $F=0.726; p=0.604$ and $F= 2.216; p=0.067$ respectively). In respect to age, Levene’s prerequisite test for the homogeneity of variances
proved significant ($p=0.24$), meaning that the population variances for each group were not broadly equal and therefore the tests of between-subject effects could not be relied upon.

Collectively, these MANOVA and ANOVA findings (and associated discriminant analyses) suggest that education is a significant negative determinant of persuasion largely through the logic and (to a less extent) the credibility dimension, with the strongest separations between those with less than a Year 12 education (who are more ‘persuadable’) and those with a University undergraduate education (who are more critical and less ‘persuadable’). Gender differences appear to be border-line determinants of persuasion occurring strongly through the credibility and logic dimensions, with male and female respondents reacting with the same intensity but in opposite directions. In addition, gender was strongly associated with overall support for the speaker.
6.4 Conclusion

An assessment of the means and standard deviations showed that experiential thinkers generally scored lower on their self-assessment but with roughly the same variability as rational thinkers. Moreover, the speeches aroused comparatively less emotion in respondents than perceptions of speaker credibility and logic, complemented by a lower mean and standard deviation in this area. Responses to the question about ships and/or the ocean showed that respondents generally scored (relatively tightly) on the ‘dislike’ end of the spectrum, suggesting that negative emotions were at play, consistent with the relatively low ratings on the emotion scale.

Mean (and standard deviation) statistics for the central persuasion variables (i.e. credibility, emotion and logic) across each of the six core speech types, confirmed that the speeches aroused consistently lower emotional responses than respondents’ perceptions of speaker credibility and logic. In addition, a proportionately lower mean on the emotion variable in the metaphor version and low standard deviations for the credibility and emotion variables on the consolidated version of the speech, were also observed.

The correlation matrix showed a high (positive) cross-correlation between all three dependent variables (i.e. credibility, emotion and logic) and between each of them and the unsupportive/supportive question. Rational thinking was shown to be positively correlated with education and more prevalent amongst males than females. Education was also negatively correlated with all three dependent variables and the unsupportive/supportive question, showing that the more educated the respondents were, the less persuaded and less supportive they were of the speaker. While gender was not related to whether respondents enjoyed ships and/or the ocean, males were shown to be more rational in their thinking orientation and females more experiential, with females rating the speaker higher on credibility and logic and being more supportive than males.

In testing the hypotheses, the MANOVA procedures and follow-up discriminant analysis culminated in the following findings:

**Hypothesis 1:** There was no evidence that figurative language is any more persuasive than literal language and therefore Hypotheses 1(a) and 1(b) were not supported
Hypothesis 2: There was no evidence that *tropes* are more persuasive than *schemes* and therefore Hypotheses 2(a) and 2(b) were not supported.

Hypothesis 3: There was no evidence of an ascending order in the persuasiveness of *schemes* and *tropes* in line with their ascending complexity and as a result Hypotheses 3(a) and 3(b) were not supported.

Hypothesis 4: There was evidence that listeners who rate high as experiential thinkers (i.e. High Experiential/Low Rational) are more persuaded (through the credibility dimension) than those who rate high as rational thinkers (i.e. High Rational/Low Experiential), although Low Experiential/Low Rational thinkers are the most persuaded. As a result, Hypothesis 4(a) was supported and in both cases the effects are independent of the type of speech involved. However, no support was found for Hypothesis 4(b).

Across the hypotheses, separate ANOVA procedures showed no discernible support for the speaker associated with any of the independent variables. Consistent with the correlation matrix that showed a high positive correlation between the unsupportive/supportive question and all three persuasion variables (i.e. credibility, emotion and logic), the general absence of evidence of persuasion against the different independent variables reflected in the hypotheses was mirrored by the absence of any evidence of support for the speaker against the same independent variables. However, amongst the demographic variables, gender was associated with support for the speaker.

A *t*-test conducted as part of assessing Hypothesis 2, confirmed that the nautical theme used in the metaphor version of the speech did generate evenly balanced cross-gender ‘motivation resonance’ within the experiment, as intended.

In addition, the wider assessment of demographic differences within the sample (against separate credibility, emotion and logic measures) suggested that education is a significant negative determinant of persuasion—largely through the logic and (to a less extent) the credibility dimension—with (as might be expected) the strongest separations between those with less than a Year 12 education (who are more ‘persuadable’) and those with a University undergraduate education (who are more critical and less ‘persuadable’). Gender differences appear to be border-line determinants of persuasion occurring strongly through the credibility and logic dimensions, with male and female respondents reacting with the
same intensity but in opposite directions. Gender was also strongly associated with support for the speaker.

Throughout the experiment, respondents consistently rated the credibility variable the highest and the emotion variable the lowest, with logic in between. The strong role of the credibility (and logic) variables also surfaced in the results from the various discriminant analyses. Taken together, respondents found the speaker credible (and logical), but the low scores on the (positive) emotion scale indicated they were not particularly happy. This is a phenomenon which will be explored in the next chapter when the open commentary—which also contained negative emotional remarks—is examined.

This chapter used the measures developed in the previous chapter to evaluate the various hypotheses through a series of multivariate analytical procedures. It deployed a number of MANOVAs to test the relative persuasiveness of different versions (and aggregations) of speeches, thinking styles and categorical variables under different treatment conditions, complemented with discriminant analysis where significant results were observed. ANOVAs were also deployed to independently assess the extent of any accompanying support for the speaker, along with a t-test to confirm the cross-gender ‘motivational resonance’ of the nautical theme used in the metaphor version of the speech. Finally, demographic differences and influences were examined and assessed.

The next chapter completes the intended mixed-methods analysis by examining the open commentary provided in response to the final (general) question included in the questionnaire. That overarching enquiry involved an invitation for respondents to provide any additional comments or feedback they wished to make about the speech or aspects of it.
Chapter 7

Analysing Supplementary Comments

7.1 Preface

Chapter 6 tested Hypotheses 1-4 through a series of multivariate procedures and documented the results. This chapter completes the mixed-methods analysis by examining the comments provided in response to the final open question asked within the experiment. It starts by assessing the proportion of respondents within the sample who provided a comment, along with the general (categorical) nature of that comment. It then proceeds to analyse each comment in a series of ways including correlations (by speech type, thinking orientation and demographic variables), analysis of positive and negative comments and an assessment of embedded emotions. Finally, other observations within the material are also explored.

All qualitative analysis was undertaken using QSR NVivo™ Version 10 analytics software (QSR International 2010a and 2010b), while residual quantitative analysis was undertaken with IBM SPSS™ Version 18 software (Coakes and Ong 2010; Field 2005).

7.2 Preliminary Examination

The questionnaire used in the experiment provided a closing opportunity for respondents to provide general feedback on the speech and exercise. The final question (i.e. Q10 of Appendix 6) asked the following:
“In the space below please provide any additional comments you may wish to make about the speech. For example, you may wish to comment generally on what you thought of the speech or remark on a particular aspect.

In respect to the speech, I thought …”

This opportunity was intended to allow respondents to express an overall view or convey any previously-unstated thoughts or observations, while at the same time providing an avenue for further insights into what each respondent thought of the speech, the speaker and/or the experiment. In the final analysis, it also provided a supplementary source of information about how respondents felt, the level of emotion the exercise aroused and the degree of empathy (or otherwise) the setting and speaker generated in the minds of respondents.

Of the 420 respondents, 264 (63%) felt compelled to provide some form of open comment, with slightly more remarks emanating from men than women (i.e. 53% versus 47% respectively). Figure 14 documents the statistics.

To determine whether the commenting group differed in any material respect from the non-commenting group, an independent-groups t-test was conducted with test variables involving credibility, emotion, logic, thinking orientation, speech type, education, gender and age. The results showed no statistical difference between the two groups on all variables, except for thinking orientation. In that respect Levene’s Test of Equality of Variances showed a significant difference between the groups on the Low Experiential/Low Rational thinking dimension (i.e. $F=7.142$, $p=0.01$). Further analysis of related descriptive statistics confirmed greater variability on this dimension in the commenting group (i.e. $M=6.10$; $SD=0.81$), as against the non-commenting group (i.e. $M=6.06$; $SD=0.39$). This suggests that those who identify as Low Experiential/Low Rational thinkers are statistically different within the two groups, with those in the commenting group more diverse in their opinions and offering a wider range of responses to issues than those in the non-commenting group.
To facilitate further examination of the comments received, each remark was then examined and assigned to one of three primary categories:

1. **Positive**—Comments expressing a favourable reaction to the speech or speaker, or general satisfaction with the exercise (e.g. “Speech was to the point and precise; speaker was believable” – female, clerical, sales or service worker, year 12 education, age 36—alliteration speech)

2. **Negative**—Comments expressing an unfavourable reaction to the speech or speaker, or dissatisfaction with the exercise (e.g. “I believe the speaker was fake and just reading a script to make it all sound good to the shareholders” – male, manager/administrator, technical college/business school education, age 39—rhetorical question speech)

3. **Neutral**—Comments expressing a general remark without indicating any preference for the speech, speaker or exercise (e.g. “Need more details” – male, manager/administrator, postgraduate education, age 51—literal speech)

**Figure 15** shows the results, disclosing that 51% of the comments were negative, 35% positive and the remainder (14%) neutral. It is noted that the disparity in the number of negative versus positive comments could potentially be linked with the ‘bad is stronger than good’ phenomenon where people are more sensitive to negative than positive aspects in a situation and process them more deeply (Baumeister et al 2001). This disposition may in turn have stimulated or contributed to the more numerous negative than positive feedback.

The categorised comments were then analysed by demographic variables, namely: gender, speech type, thinking orientation and education. **Figure 16** shows the outcome by gender, demonstrating that female respondents offered substantially fewer neutral...
Comments (only 9% of those made), compared with 18% for male counterparts. Females also made considerably more positive comments (42%) than male respondents (28%), with conversely less negative comments (49%) than males (54%).

Table 38 shows that—with the possible exception of the rhetorical question version of the speech (that received the most comments)—all speech-types attracted a similar number of comments, with the consolidated version receiving the fewest. However, appreciably more neutral comments were associated with the literal speech while more negative comments were associated with the antithesis and rhetorical question speeches. Other than the antithesis speech (that attracted the fewest positive comments), all other speech types recorded a similar number of positive comments. In summary though, there appeared to be no obvious pattern or explanation for the variability observed between the comments across the speech types.

Table 39 shows that more negative comments—as well more comments in total—were made by respondents with thinking orientations not associated with those found to be persuaded by different language types on Hypothesis 4(a) (see Chapter 6).

After taking account of the uneven proportions of the four thinking orientations within the sample—as highlighted earlier at Table 19 (in Chapter 5)—Table 40 reaffirms the per capita over-representation of comments from respondents with thinking orientations not associated with the Hypothesis 4(a) effect.
It also identifies the commensurate under-representation of comments from respondents with thinking orientations that were associated with the Hypothesis 4(a) effect. In both cases the results are consistent with those who were and were not persuaded.

The pro rata benchmark used within the table reflects a notional reallocation of the total number of comments received (i.e. 264) based on the proportion of the different thinking orientations within the sample, as drawn from earlier Table 19 (in Chapter 5). This provides a proportional baseline for assessing the real extent of comments received in each category.

Table 41 confirms the low number of comments in total from respondents with a Low Experiential/Low Rational thinking orientation, along with the marginally low number of comments associated with the consolidated version of the speech.

The low number of aggregate comments from respondents with a Low Experiential/Low Rational thinking orientation is consistent with the fact that respondents with that thinking
orientation represented the smallest cohort within the sample (15.7%)—see Table 19 (in Chapter 5). Moreover, the situation is offset by the earlier finding that, for the commenting group at least, those with this thinking orientation comprised a more statistically variable group than others.

Table 42 shows the distribution of comment types by the educational background of respondents, highlighting the high number of comments from those with trade (i.e. technical college/business school) and university undergraduate qualifications.

This analysis is again put in context by Table 43 which compares the actual number of comments made with a notional benchmark that takes account of the differing proportions of respondents with those educational backgrounds in the sample.

Collectively, the results show that while more comments (in aggregate) came from respondents with trade (i.e. technical college/business school) and university undergraduate qualifications, proportionately more per capita comments were generally associated with
those having higher levels of education, with the highest proportion from respondents with a postgraduate qualification. This and the high proportion of negative comments potentially suggest that critical thinking skills are more prevalent amongst those with higher levels of education (Cottrell 2005). This, in turn, is consistent with the finding in Chapter 6 that respondents with a higher education were less ‘persuadable’ than those with a lower education.

7.3 Exploring Positive and Negative Comments

Polarised positive and negative comments were then subjected to further analysis and classification. Figure 17 demonstrates that 72% of the positive comments focussed on expressing some form of liking for the speech, speaker or speaker style. Since ‘liking’ effects judgement of credibility (discussed later), this result is consistent with the high ratings on the credibility scale shown in Chapter 6 and the observed role of the credibility dimension in effecting the perceived persuasiveness of different language types on Hypothesis 4(a).

Typical positive comments included:

- “Speech was to the point and precise; speaker was believable” (female, clerical, sales or service worker, year 12 education, age 36—alliteration speech)
- “Fairly positive speech outlining the need to work together for the common goals …” (male, manager/administrator, technical college/business school education, age 43—antithesis speech)
- “I think we need more speakers like him in workplaces; he’s done a very good job” (male, plant, machine or transport operator, technical college/business school education, age 47—consolidated speech)
- “Very good speaker; looked around the audience and not in one spot. Very articulate” (male, plant, machine or transport operator, under year 12 education, age 56—alliteration speech)
- “He had inspiring body language” (female, professional/associated professional, postgraduate education, age 56—rhetorical question speech)
Figure 18 shows that the number of positive comments consistently increased with the age of respondents, from 20% for those in the 20-34 age category to 30% for those in the 55-65 age category.

In respect to the distribution of positive comments by thinking orientation and speech type, Table 44 highlights the high number from respondents with thinking orientations not associated with those found to be persuaded by different language types on Hypothesis 4(a), and the relatively low number associated with the antithesis version of the speech.

Figure 19 analyses the negative comments, showing that 52% reflected a lack of trust in either the speaker or the speech (message). Typical related comments included:

- “I believe the speaker was fake and just reading a script to make it all sound good to the shareholders” (male, manager/administrator, technical college/business school education, age 39—rhetorical question speech)

- “There was also an element of salesmanship which made me wonder if he [the speaker] … was genuine in his beliefs” (male, manager/administrator, year 12
In addition to the trust issues, a further 27% of the negative comments reflected a dislike for the speech or speaker style. The potential implications of both matters on the speaker’s credibility and the high number of positive comments expressing the opposite opinion (mentioned earlier), will be explored in the next chapter.

**Figure 20** shows that most negative comments were associated with the antithesis and rhetorical question versions of the speech (21% and 20% respectively), with the fewest associated with the literal and consolidated versions (12% and 13% respectively).

On the surface this may suggest that speeches at either end of the language spectrum are more effective and less likely to engender pejorative impressions for certain listeners—i.e. those speeches without figures of speech (likely to appeal to the logical/rational mind) and those with complex creative language reflecting multiple integrated figures of speech (likely to appeal to the intuitive/experiential mind). In respect to the consolidated version of the speech, this interpretation is consistent with Aristotle’s observation that the more there is in a thought or expression (in terms of multiple integrated figures of speech), the more urbane and appealing the language seems to an audience (Kennedy 1991). Also, a denser forest of seemingly creative language might potentially help individual figures (and types) to be less visible or discernible to the listener.

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**Figure 20 - Negative Comments by Speech Type**

- Alliteration (a): 21%
- Antithesis (b): 20%
- Consolidated (c): 16%
- Literal (d): 13%
- Metaphor (e): 18%
- Rhetorical Question (f): 12%

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To explore this idea, the distribution of negative comments by thinking orientation within speech types was also examined. Table 45 highlights the low number of negative comments for the literal and consolidated versions of the speech against the two thinking orientations found to effect the perceived persuasiveness of different language types on Hypothesis 4(a) in Chapter 6—i.e. Low Experiential/Low Rational, and High Experiential/Low Rational. It also highlights the generally low number of negative comments these speeches attracted against the other orientations as well, along with the higher number of negative comments in aggregate linked to the two thinking orientations not associated with the Hypothesis 4(a) effect.

Critically though, for the supposition to hold true a complementary effect should be observed in respect to the positive comments. This could potentially involve:

- A high number or concentration of available positive (liking) comments against the two speeches centred on the thinking orientations responsible for the Hypothesis 4(a) effect, OR
- A lower number of positive than negative comments against the relevant speeches and thinking orientations, in line with Baumeister et al’s (2001) ‘bad is stronger than good’ finding. This phenomenon, where people are more sensitive to negative than positive aspects in a situation and where the psychological effects of bad things outweigh those of the good, suggests that more negative than positive comments would normally be received as feedback

A review of the situation, however, proved that neither was the case. Tables 44 and 45 together both show low instances of negative and positive comments in the areas of interest, providing evidence of other (most likely random) factors at work. Consequently,
the supposition that the literal and consolidated versions of the speech might be more effective was not be substantiated.

In respect to negative comments by age, Figure 21 identifies that 34% of the negative comments came from respondents in the 35-44 age category, with a further 26% in the 45-54 age category and 27% in the 55-65 age category—87% in total. In all cases, bar the 20-34 age category, the negative comments received were marginally above the per capita representation of those age groups in the sample (i.e. 3-17% above). The 20-34 age category was 40% below, suggesting that young people were less critical about the speaker, speech and exercise. Additionally, more negative comments came from male respondents than female respondents (i.e. 55.1% versus 44.9% respectively).

### 7.4 Embedded Emotions

Since many of the comments appeared to contain an emotional dimension, each remark was then examined for embedded displays of emotion and assigned to one of three primary categories:

1. **Positive Emotions**—Comments embodying an optimistic emotional reaction or tone that involved feelings of interest, excitement, enthusiasm, inspiration, motivation or attentiveness
2. **Negative Emotions**—Comments embodying a pejorative emotional reaction or tone that involved feelings of hostility, suspicion, fear, distress, irritability, gloom or resentment
3. **No Particular Emotions**—Comments embodying no particular or observable emotional display, reaction or tone
**Figure 22** records the results showing that 41% of comments conveyed negative emotions, 21% positive emotions and 38% no particular emotional display.

Typical comments associated with assessed positive emotions included:

- “It was a great motivational speech” *(female, manager/administrator, technical college/business school education, age 35—antithesis speech)*

- “It was inspiring and I felt the speaker really believed what he was saying” *(female, clerical, sales or service worker, year 12 education, age 57—alliteration speech)*

- “An inspirational motivating speech. He kept my attention the whole way through” *(female, clerical, sales or service worker, year 12 education, age 55—rhetorical question speech)*

- “Genuine delivery from the heart; passionate plea for workers to elevate themselves and the company from its difficulties” *(female, professional/associated professional, postgraduate education, age 55—rhetorical question speech)*

- “Enthusiastic, excited about future productivity; working as a team to share rewards” *(female, professional/associated professional, university undergraduate education, age 63—metaphor speech)*

Typical comments displaying negative emotions included:

- “To me it was a roundabout way of saying that more people are going to lose their jobs” *(female, clerical, sales or service worker, under year 12 education, age 35—alliteration speech)*

- “Just sounded like he wanted everyone to work harder so they can drag HIS company out of the manure [capitalisation applied by respondent]” *(female, manager/administrator, year 12 education, age 57—literal speech)*

- “I found it irritating … lots of fancy talk but no strategies and rather patronising” *(female, professional/associated professional, university undergraduate education, age 65—metaphor speech)*
• “It was all the usual junk you hear from CEOs … hard to swallow when you know they’ve earned enough in the last year to retire on and you’d be the first out the door if cost reduction strategies were needed” (male, manager/administrator, university undergraduate education, age 30—consolidated speech)

• “I would be scared for my job and wondering what upcoming bad news prompted the ‘pep talk’ ” (female, clerical, sales or service worker, under year 12 education, age 29—metaphor speech)

**Figure 23** demonstrates that comments from female respondents contained considerably more emotions than those from male respondents (70% versus 55%) and were substantially more positive in their displays than males (30% versus 12%). Both results were partly associated with the previous observation that female respondents made more positive comments overall, with only half the number of neutral comments, than male respondents (see **Figure 16**). Negative emotions between females and males were broadly similar (40% versus 43% respectively).

**Table 46** shows that 50% of the emotion-laden (positive and negative) comments came from respondents with trade (technical college/business school) and university undergraduate qualifications.
This is contextualised by Table 47 which compares the number of emotion-laden comments made by each group with a notional benchmark that takes account of the differing proportions of respondents with those educational backgrounds in the sample.

<table>
<thead>
<tr>
<th>Educational Category</th>
<th>Positive Emotions</th>
<th>Negative Emotions</th>
<th>% Showing Emotion</th>
<th>No Particular Emotions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under Year 12</td>
<td>7</td>
<td>18</td>
<td>15%</td>
<td>21</td>
<td>46</td>
</tr>
<tr>
<td>Year 12</td>
<td>14</td>
<td>14</td>
<td>17%</td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td>Technical College or Business School</td>
<td>14</td>
<td>26</td>
<td>24%</td>
<td>26</td>
<td>66</td>
</tr>
<tr>
<td>University Undergraduate Studies</td>
<td>9</td>
<td>33</td>
<td>26%</td>
<td>19</td>
<td>61</td>
</tr>
<tr>
<td>Postgraduate Studies</td>
<td>11</td>
<td>18</td>
<td>18%</td>
<td>18</td>
<td>47</td>
</tr>
</tbody>
</table>

**Note:** 1. Reflects the sum of the positive and negative emotions for each category as a proportion of the total (positive and negative) emotions received (i.e. 164)

<table>
<thead>
<tr>
<th>Educational Category</th>
<th>Emotion-laden Comments</th>
<th>Number of Respondents by Educational Background</th>
<th>Pro Rata Benchmark</th>
<th>Unders and Overs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Year 12</td>
<td>(25)</td>
<td>(85)</td>
<td>(33.2)</td>
<td>−24.7%</td>
</tr>
<tr>
<td>Year 12</td>
<td>(28)</td>
<td>(69)</td>
<td>(27.0)</td>
<td>+3.7%</td>
</tr>
<tr>
<td>Technical College or Business School</td>
<td>(40)</td>
<td>(113)</td>
<td>(44.1)</td>
<td>−9.3%</td>
</tr>
<tr>
<td>University Undergraduate Studies</td>
<td>(42)</td>
<td>(91)</td>
<td>(35.5)</td>
<td>+18.3%</td>
</tr>
<tr>
<td>Postgraduate Studies</td>
<td>(29)</td>
<td>(62)</td>
<td>(24.2)</td>
<td>+19.8%</td>
</tr>
</tbody>
</table>

**Totals:** (164) 100 (420) (164) |

**Notes:** 1. Reflects the sum of the positive and negative emotions for each category as a proportion of the total emotion-laden comments made (i.e. 164)
2. Shows the number of respondents with each educational background within the sample, as drawn from earlier Table 8
3. Shows the notional reallocation of the total emotion-laden comments received based on the proportion of respondents with the different educational backgrounds within the sample
4. Represents variations in the number of comments made as against the pro rata benchmark

Taken collectively, the results show that while more emotion-laden comments (in aggregate) came from respondents with trade and university undergraduate qualifications, proportionately more were associated (on a per capita basis) with those having higher levels of education, with the highest proportion from respondents with undergraduate and postgraduate qualifications.

In respect to emotions generally, the comments collectively demonstrated a high degree of arousal with 62% of respondents (in the commenting group) exhibiting some form of positive or negative emotion. Whether in favour of the speech or not, these embedded
emotions demonstrated a strong empathic association with the scenario, particularly for respondents offering adverse comments where the level of muted anger and negative feelings (41%) was twice as high as those with a positive disposition (21%). Moreover, there is no reason to suggest that a similar pattern of emotional engagement did not exist within the non-commenting group as well.

This rather strong emotional undercurrent did not however translate into strong scoring on the emotion scale used within the experiment, a contrast that will be further explored in the next chapter.

7.5 Other Observations

Further examination of the comments also disclosed that:

- **Cues**—21% of the comments (56 cases) specifically mentioned cues (e.g. no tie, body language, arm movements, wink, talking behind lectern, use of clichés, proximity to door and so on), with 41% emanating from males and 59% from females

- **Industrial issues**—12% of the comments (31 cases) indicated that the associated respondents viewed the exercise through an adversarial industrial relations frame (lens), interpreting the message cynically in terms of ‘them and us’; with twice as many comments of that nature from males as females (i.e. 65% versus 35% respectively)

*Figure 24* shows that disproportionately more cues were associated with the metaphor and rhetorical question versions of the speech (i.e. 23% and 20%—or 13 and 11 instances respectively), with the fewest—approximately half as many—associated with the consolidated and alliteration versions (11% and 12%—or 6 and 7 instances respectively).
Table 48 demonstrates that the majority of cue-related comments came from respondents with thinking orientations not associated with those found to be persuaded by different language types on Hypothesis 4(a).

Typical comments involving cues included:

- “His body language left a lot to be desired; aggressive and poking/pointing one moment, then open arms and outward palms the next. He also tended to ‘hide’ behind the lectern … I also noted he was close to the exit door as well” (male, professional/associated professional, university undergraduate education, age 64—consolidated speech)
- “I would have thought that a person in his position would have worn a tie” (male, clerical, sales or service worker, under year 12 education, age 55—rhetorical question speech)
- “Too much arm waving” (female, clerical, sales or service worker, technical college/business school education, age 54—metaphor speech)
- “He held eye contact which I appreciate …” (female, manager/administrator, year 12 education, age 47—alliteration speech)
- “The background was poor and the speaker pointed too much and did not smile much” (female, professional/associated professional, postgraduate education, age 41—literal speech)

In respect to the adversarial industrial relations perception, typical comments included:

- “All gung ho, no substance, bottom line jobs will go” (male, professional/associated professional, university undergraduate education, age 55—literal speech)

However, caution should be exercised in reading too much into these results, given the relatively low number of cases reflected in each cell of the matrix.
• “Same old shit about working harder for company profits” (female, manager/administrator, technical college/business school education, age 61—literal speech)

• “I interpreted too much veiled 'us & them'” (male, plant, machine or transport operator, year 12 education, age 41—literal speech)

• “I felt a pay cut was coming, or downsizing” (male, professional/associated professional, year 12 education, age 56—metaphor speech)

• “The speech to me seemed to be more about the Company and not the worker” (male, manager/administrator, technical college/business school education, age 43—antithesis speech)

Table 49 shows that 39% of the industrial-oriented comments in aggregate came from respondents with trade (technical college/business school) qualifications. However, when compared with a notional benchmark that takes account of the differing proportions of respondents with those educational backgrounds in the sample, proportionately more comments came from those with Year 12 qualifications. The table also shows that no comments were made by respondents with a postgraduate qualification who arguably felt safer about their future prospects.

<table>
<thead>
<tr>
<th>Educational Category</th>
<th>Comments Made</th>
<th>Number of Respondents by Educational Background</th>
<th>Pro Rata Benchmark</th>
<th>Unders and Overs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Year 12</td>
<td>(5) 16</td>
<td>(85)</td>
<td>(6.3)</td>
<td>-21%</td>
</tr>
<tr>
<td>Year 12</td>
<td>(7) 22</td>
<td>(69)</td>
<td>(5.1)</td>
<td>+37%</td>
</tr>
<tr>
<td>Technical College or Business School</td>
<td>(12) 39</td>
<td>(113)</td>
<td>(8.3)</td>
<td>+17%</td>
</tr>
<tr>
<td>University Undergraduate Studies</td>
<td>(7) 23</td>
<td>(91)</td>
<td>(6.7)</td>
<td>+4.5%</td>
</tr>
<tr>
<td>Postgraduate Studies</td>
<td>(0) -</td>
<td>(62)</td>
<td>(4.6)</td>
<td>-100%</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td>(31) 100</td>
<td>(420)</td>
<td>(31)</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. Numerals in brackets show the number of comments/respondents
2. Percentages reflect proportions of the total industrial-oriented comments made (i.e. 31)
3. Shows the number of respondents with each level of education within the sample, as drawn from earlier Table 8
4. Shows the notional reallocation of comments based on the proportion of respondents with the different educational backgrounds in the sample
5. Represents variations in the number of comments made as against the pro rata benchmark
Loosely mirroring the age-based distribution of negative comments discussed earlier, Table 50 shows that 45% of the industrial-oriented comments came from respondents in the 35-44 age category, with an further 29% in the 55-65 age category (74% in total).

<table>
<thead>
<tr>
<th>Educational Category</th>
<th>Comments Made</th>
<th>Number of Respondents by Age Background</th>
<th>Pro Rata Benchmark</th>
<th>Unders and Overs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N¹</td>
<td>%²</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Age Category 20-34</td>
<td>(4)</td>
<td>13</td>
<td>(92)</td>
<td>(6.8)</td>
</tr>
<tr>
<td>Age Category 35-44</td>
<td>(14)</td>
<td>45</td>
<td>(125)</td>
<td>(9.2)</td>
</tr>
<tr>
<td>Age Category 45-54</td>
<td>(4)</td>
<td>13</td>
<td>(108)</td>
<td>(8)</td>
</tr>
<tr>
<td>Age Category 55-65</td>
<td>(9)</td>
<td>29</td>
<td>(95)</td>
<td>(7)</td>
</tr>
<tr>
<td>Totals:</td>
<td>(31)</td>
<td>100</td>
<td>(420)</td>
<td>(31)</td>
</tr>
</tbody>
</table>

Notes: 1. Numerals in brackets show the number of comments/respondents
2. Percentages reflect proportions of the total industrial comments made (i.e. 31)
3. Shows the number of respondents in each age category within the sample, as drawn from earlier Table 8
4. Shows the notional reallocation of comments based on the proportion of respondents with the different age profiles in the sample
5. Represents variations in the number of comments made as against the pro rata benchmark

In both cases, when compared against a notional benchmark that takes account of the uneven proportions of the four age categories within the sample, the situation is maintained—albeit that disproportionately more comments came from those age categories than others.

Figure 25 shows that disproportionately more of the industrial-oriented comments were associated with the rhetorical question version of the speech (i.e. 29%), but that this result reflected only 9 of 31 cases. The fewest number of comments (reflecting 3% or only 1 of 31 cases) was associated with the consolidated version of the speech. Given the small number of cases in each category it would be inadvisable to draw too heavily on the results for reliable conclusions.

The potential implications of the cue and industrial-related comments are discussed further in the following chapter.
7.6 Conclusion

A little under two-thirds of respondents (63%) provided comments under the final open question in the questionnaire. Of these 51% were negative, 35% positive and 14% neutral. Female respondents offered only half as many neutral comments as males (9% versus 18%), 50% more positive comments (42% versus 28%) and only slightly less negative comments (49% versus 54%).

More per capita comments were associated with respondents having higher levels of education, which together with the high proportion of negative comments suggests that critical thinking skills are more prevalent amongst those with higher education. This is consistent with the finding in Chapter 6 that respondents with a higher education were less ‘persuadable’ than those with a lower education.

When analysing the distribution of comments and cue-related observations (discussed later) by speech type, a degree of variability was observed with no apparent pattern. For example:

- **Antithesis speech** — received the most negative comments (29), the fewest positive comments (9) and the second fewest number of cues (7)
- **Consolidated speech** — received the fewest comments and cues (39 and 6 respectively)
- **Literal speech** — received the most neutral comments (10)
- **Metaphor speech** — received the most cues (13)
- **Rhetorical Question speech** — received the most comments (50) and the second highest number more negative comments and cues (27 and 11 respectively)

In respect to thinking orientation, proportionately more negative comments—as well more comments in total—came from respondents with thinking orientations not associated with those found to be persuaded by different language types on Hypothesis 4(a) (in Chapter 6). Similarly, more positive comments also came from respondents with thinking orientations not associated with the Hypothesis 4(a) effect. The former is consistent with the results on Hypothesis 4(a) in that those making the considerably more numerous negative comments would be less likely to be persuaded by any language form. On the surface however, an abundance of positive comments (as in the latter finding) might be expected to be associated with a persuasion effect from those thinking orientation groups, which was not the case. Deeper examination suggests that this situation may also be
consistent with the Hypothesis 4(a) results in that while 50% more positive comments came from female respondents than males, more female respondents were associated with experiential thinking as shown in Chapter 6. Therefore, thinking orientations with a high rational component—as reflected in those not associated with the Hypothesis 4(a) effect—could be expected to contain fewer female respondents and therefore fewer of the positive comments otherwise available. Also, since there were 32% fewer positive comments than negative comments in the sample, any disproportionate allocation of available positive comments may well have been sufficient to impede the tipping point needed for a different result. Collectively, this suggests that the allocation of positive and negative comments is potentially consistent with the Hypothesis 4(a) effect.

72% of the positive comments focussed on expressing some form of liking for the speech, speaker or speaker style, while 52% of the negative comments reflected a lack of trust in the speaker or speech and a further 27% reflected a dislike of the speech or speaker style. The possible implications of these assessments on judgements of the speaker’s credibility will be explored in the next chapter.

In respect to emotions, 62% of the comments demonstrated some form of embedded positive or negative emotion, with twice as many negative emotions than positive emotions (i.e. 41% versus 21% respectively). Appreciably more aggregate emotions were also associated with female respondents than males (i.e. 70% versus 55%), with female respondents substantially more positive in their displays than males (i.e. 30% versus 12%). Negative emotions between the genders were broadly similar (40% females versus 43% males).

In addition, proportionately more emotion-laden comments were associated with respondents having higher levels of education, mirroring the earlier observation about the association between the volume of comments (and potential critical thinking skills) and higher education.

The embedded emotions demonstrated a strong empathic association of respondents with the exercise, particularly for those offering adverse comments where the level of muted anger and negative feelings was twice as high as those with a positive reaction. This rather strong emotional undercurrent did not however translate into strong scoring on the emotion scale used within the experiment, a contrast that will be further explored in the next chapter.
A high incidence of cues was also recorded within the comments (21%), with 41% emanating from males and 59% from female respondents. 43% of all cue-related comments were associated with the collective metaphor and rhetorical question versions of the speech. In addition, 12% of the comments indicated that an appreciable number of respondents viewed the change management scenario within the speeches through an adversarial industrial relations frame, provoking considerable negative reactions. 45% of the industrial-oriented comments came from respondents in the 35-44 age category, with an further 29% in the 55-65 age category (74% in total). The potential implications of the cue and industrial-related comments are discussed further in the next chapter.

This chapter completed the mixed-methods analysis of the data by documenting the qualitative assessment of the general open question incorporated in the experiment. It assessed the proportion of respondents who made comments and analysed each remark in a series of ways including correlations (by speech type, thinking orientation and demographic variables), examination of positive and negative comments, assessment of embedded emotions and scrutiny of other characteristics evident within the material.

The next (final) chapter explores the collective results in terms of the overall findings and conclusions from this research.
Chapter 8
Discussion and Conclusions

8.1 Preface

Chapter 7 finalised the analysis by examining the supplementary comments invited as part of the experiment. This chapter explores the collective results from the thesis in greater detail and discusses what they mean in terms of overall findings and conclusions against the intended purpose of the research. This includes consideration of the outcomes for the hypotheses and the potential interpretation of the results in various areas. The chapter closes by documenting the contributions and implications for theory and practice, along with areas for future research and the limitations of the study.

8.2 Introduction

This study set out to address four research questions:

1. Is figurative language more persuasive than literal language in management communication?
2. Are particular categories of figurative language more persuasive than others in management communication?
3. Is there some order in the persuasiveness of figurative language categories in management communication?
4. Does the thinking orientation of the listener affect the perceived persuasiveness of a management message?

In doing so, it aimed to assess persuasion through an Aristotelian lens involving credibility, emotion and logic—with all the attendant strategies of *pistis* (compelling proof in each
area), *lexis* (engaging language and expression) and *taxis* (sensible orderly arrangement of the material)—and, as an acid test, by assessing the flow-on support (or otherwise) for the speaker. In addition, the study was conducted mindful of the broader accumulated literature on persuasion and the different ways people think and process information.

To explore each research question, four corresponding hypotheses were posed, namely:

- **Hypothesis 1 (reflecting research question 1):** Figurative language is more persuasive than literal language in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker
- **Hypothesis 2 (reflecting research question 2):** Tropes are more persuasive than schemes in verbal management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker
- **Hypothesis 3 (reflecting research question 3):** There is an ascending order in the persuasiveness of schemes and tropes in management communication in line with their ascending complexity (i.e. from simple schemes, to complex schemes, to simple tropes, to complex tropes), as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker
- **Hypothesis 4 (reflecting research question 4):** The thinking orientation of listeners affects the perceived persuasiveness of management communication, as measured by (a) listeners assessments of speaker credibility, emotion and logic; and (b) their support for the speaker, such that listeners who rate high as experiential thinkers are more persuaded than those who rate high as rational thinkers

The research was conducted over the Internet with an experiment designed to suit the data-collection medium. This involved using an actor to record the various speeches for subsequent down-loading (as audio-visual files) by respondents at a convenient time, along with a clear information sheet (explaining the context) and on-line (pre and post-experiment) questionnaires. This methodological approach allowed the experiment to be conducted through a commercial research company which also provided logistical advantages such as real-time controls over missing data, ready access to the required demographically-profiled sample and a final SPSS-formatted data file for subsequent analysis by the researcher.
8.3 Emergent Themes

Before examining the results on the hypotheses, it is useful to revisit certain aspects of the analysis from Chapter 7. This means exploring the meaning and implications of four emergent themes, namely:

- The extensive liking, disliking and distrust of the speaker, speech and speaker style evident within the comments
- The disparity between the low scoring on the emotion scale and the rather strong emotional undercurrent evident within the negative comments
- The high number of cue-related comments made by respondents
- The appreciable number of respondents who viewed the exercise through an adversarial industrial relations frame

**Liking, Trust and the Implications for Credibility**

The analysis conducted in Chapter 7 identified that 63% of respondents offered a comment in response to the final open question asked within the experiment. Of these, 51% were negative, 35% positive and 14% neutral. 52% of the negative comments reflected a lack of trust in the speaker or speech while a further 27% reflected a dislike of the speech or speaker style—comprising 79% collectively. Of the fewer positive comments, 72% expressed some form of liking for the speech, speaker or speaker style. Issues of liking and trustworthiness can and do effect listeners’ judgements of credibility and therefore persuasion (Levine 2003; O’Keefe 2002; Perloff 2003; Petty and Cacioppo 1996). Consequently, the high level of ‘liking’ evident within the positive comments is consistent with the high ratings on the credibility scale observed in Chapter 6 (particularly amongst females) and the associated role of the credibility dimension in the results achieved on Hypothesis 4(a). However, the high level of distrust and dislike of the speech and speaker within the negative comments (particularly by male respondents) potentially impeded higher judgements of speaker credibility, which as observed in Chapter 6, were lower for males than females. In turn, this may explain some of the limited persuasiveness of the speeches and conditions observed within the experiment and the low associated rating of the speeches by rational thinkers (discussed later).

**Emotional Undercurrent**

Chapter 7 also identified a high degree of emotional arousal within the study, with 62% of respondents in the commenting group exhibiting some form of positive or negative emotion. Whether in favour of the speech or not, these embedded emotions demonstrated
a strong empathic association with the situation, particularly for respondents offering the more numerous adverse comments where the level of muted anger and negative feelings (41%) was twice as high as those with a positive reaction (21%). And, there is no reason to suggest that a similar pattern of emotional engagement and anguish did not exist within the non-commenting group as well.

However, this rather strong emotional undercurrent did not translate into significant scoring on the emotion scale used within the experiment, as observed in Chapter 6. Following the approach previously adopted by Bono and Ilies (2006), the instrument deployed in the study only reflected Watson, Clark and Tellegen’s (1988) positive PANAS scale, essentially because negative emotions (in the context of this study) were not anticipated or seen as consistent with a listener being persuaded and/or supporting a speaker’s advocated position. In retrospect though, the absence of a place to register negative emotions effectively gave respondents no alternative but to lightly score the positive options on offer, which was consistent with the observed results. In doing this, it is arguable that the legitimate scoring of the positive emotions produced by the speeches was artificially suppressed for some respondents by the negative emotions generated in part by the context for example (discussed later). In hindsight, it may have been better to incorporate some capacity for respondents to directly register their negative emotions, and ideally do so, against the issues that generated them. This unanticipated constraint in the design of the experiment suggests a possible reason for the muted persuasiveness of the speeches.

**Cue-related Comments**

21% of the open comments provided as part of the study, as highlighted in Chapter 7, specifically made mention of cues (e.g. no tie, body language, arm movements, wink, talking behind lectern, use of clichés, proximity to door and so on). In addition, there was no reason to suggest that a similar situation did not exist within the non-commenting group and others who may have omitted to mention cues in their comments. Cues are essentially the hallmark of peripheral processing (Petty and Cacioppo 1996). This approach to absorbing and processing information involves listeners using contextual cues and heuristics to take mental shortcuts to form views rather than analysing a message cognitively. This practise occurs when listeners are not sufficiently motivated or able to think deeply, do not have sufficient opportunity (Hallahan 2000) or are distracted. Typically, peripheral processing is associated with complex matters or issues not necessarily
seen as personally relevant, interesting or important to listeners, or where the consequences of error are perceived as low.

Despite the design of the experiment intended to encourage central (cognitive) processing, the sizeable number of cue-related comments indicates that substantial peripheral processing occurred, particularly amongst female respondents (i.e. 59% versus 41% from male respondents). In addition, the majority of cues (i.e. 80%) reflected negatively on the speech or speaker (discussed later). This potentially suggests that the level of cognitive attention to the actual language used in the different speeches may not have been sufficient to facilitate a noticeable effect from the linguistic treatments involved. In turn, this may help explain why many of the speeches were not perceived as more persuasive than they were.

**Industrial-related Comments**

12% of respondents also offered comments indicating they viewed the exercise through a negative industrial relations frame. As such, they were suspicious of the underlying change management scenario reflected in the scripts, viewing the situation as a potential loss or threat to the employees rather than more favourably. There was also no reason to suggest a similar situation did not exist within the non-commenting group. This reaction complemented (and potentially fuelled) the high level of distrust, muted anger and negativity observed within the study and/or perceptions of the speech and speaker. Moreover, it arose despite instructions for the exercise advising respondents that each person’s supervisor would meet with them afterwards to explain their new role in the future of the company—inferring there would be no retrenchments.

Despite this, the adverse framing caused by the change management scenario appears to have aroused latent feelings about the negative consequences or downside of change, possibly connected with prior experience or because workplace change often harbours more personal and economically-threatening impacts. A review of contemporary literature is replete with examples of employee cynicism, distrust and antipathy towards workplace change (e.g. Abraham 2000; Ferres and Connell 2004; Rafferty, Jimmieson and Armenakis 2013; Stensaker and Meyer 2012; Westwood, Sparrow and Leung 2001). Other authors also highlight the BOHICA syndrome (i.e. ‘Bend Over Here It Comes Again’) that is often prevalent amongst ambivalent and/or change-weary employees (e.g. Connell and Waring 2002; Stensaker, et al 2002).
On top of this, many people experience the world through their own mental models and rehearsed positions, often fortified with emotional underpinnings. Mental models reflect the beliefs, values and assumptions people hold which in turn underpin their reasoning, behaviour and responses (Ellis, Margalit and Segev 2012; Maani and Cavana 2007; Senge et al 1999). Karp (2005) and Santos and Garcia (2006) highlight the manifestation and significance of mental models in situations involving organisational change and the pivotal role they play for managers and employees in facilitating or impeding successful change. Moreover, the more mental rehearsal of the various associations underlying an internalised position (i.e. reasons, attitudes and beliefs)—as typically occurs through life experience—the stronger the connections, recall and influence that position has (Perloff 2003).

Consistent with mental models, long-standing social judgement theory (Sherif and Sherif 1967) also highlights that people don’t evaluate a message based solely on the arguments; rather they compare the advocated position with relevant attitudes (and positions) they already hold and then decide what to do.

Collectively, the use of a change management scenario within the scripts may have inadvertently introduced another (latent) variable into the experiment by prompting the adverse industrial relations perspective taken by some respondents and the overall level of negative emotions at play. It may, for example, have triggered unintended negativity and cynicism towards the speaker and the message, and (for some respondents at least) activated adversarial mental models and/or rehearsed positions about change that drew on prior experiences or beliefs. This may help explain the scale of negative emotions evident within the comments and the limited persuasiveness of the various speeches and figures reflected in the experiment.

With these emergent themes now considered, what did the study actually show?

8.4 Collective Results

Chapter 6 disclosed that only Hypothesis 4(a) was supported by the data—there was no evidence to support Hypotheses 1, 2, 3 or 4(b). In respect to Hypothesis 4(a), listeners who rated high as experiential thinkers (i.e. High Experiential/Low Rational) were shown to be more persuaded in general (through the credibility dimension) than those who rated high as rational thinkers (i.e. High Rational/Low Experiential), although the Low Experiential/Low Rational thinkers were the most persuaded. In both cases the effects
were independent of the type of speech involved and therefore the particular language deployed.

The study also provided other results. For example, the work in Chapter 5 checking the psychometric properties of the instruments used in the experiment confirmed a valid three-dimension (credibility, emotion and logic) persuasion construct and scale within the data—conceptually supporting Aristotle’s theory. In addition, despite the absence of recorded persuasion effects for the first three hypotheses, all three persuasion variables were shown to be highly (positively) cross-correlated with each other and the unsupportive/supportive question. Again, this is consistent with Aristotle’s theory of an empirically distinct higher-order persuasion construct comprising credibility, emotion and logic, with the ‘unsupportive/supportive’ correlation evidence that persuasion is linked to support for the speaker (and therefore the message), in line with Conger’s (1998a) definition of persuasion used in this study (see Section 1.4).

Moreover, respondents with a higher education were shown to be disproportionately rational in their thinking orientation, as well as more critical and less ‘persuadable’ than those with a lower education. Rational thinking was also more prevalent amongst male than female respondents.

Gender also appeared to be a border-line determinant of persuasion, with male and female respondents reacting with the same intensity but in opposite directions. Females, who were also proportionately more experiential, were positively disposed towards the potential persuasion effect while males, who were proportionately more rational, were negatively disposed. Gender was also strongly associated with support for the speaker, again with females positively disposed and males negatively disposed.

In line with the emergent themes discussed earlier, other results included:

1. A high proportion of negative comments (79%) were associated with a distrust or dislike of the speaker, speech or speaker style, with disproportionately more coming from males who also rated the speaker lower on the credibility dimension
2. All speeches attracted appreciatively lower scores (and means) on the emotion scale used within the experiment, than ratings of either speaker credibility or logic. As highlighted earlier, this contrasted starkly with the strong emotional undercurrent and high level of negativity evident within the open comments sought in the final question of the questionnaire
3. A relatively high incidence of cues were mentioned within the comments (21%), with 41% of those emanating from males and 59% from females.

4. An appreciable number of respondents (12%) viewed the exercise negatively through an adversarial industrial relations frame.

8.5 Discussion

8.5.1 Hypotheses 1, 2 and 3

On face value, the results for Hypotheses 1-3 suggest that the various figurative speeches were not differentially more persuasive than the literal speech. If this is true it follows that the complexity and deviation from literal language—the hallmark of figurative expressions (McQuarrie and Mick 1996)—do not transfer additional power or qualities to arguments, proofs or language that discernibly effect the perceived persuasiveness of a message. Figurative expressions then are merely different from literal expressions and their impact, whatever it is, is unrelated to persuasion. This rhetorical conclusion not only conflicts with Aristotle’s perspective and the work of more recent researchers (e.g. Den Hartog and Verburg 1997; Grassi 1980; McQuirie 2000; McQuarrie and Mick 2003; Perloff 2003; Sopory and Dillard 2002; Toncar and Munch 2003), it is also contrary to the practical application and commercial success achieved in the advertising field (e.g. Ang and Lim 2006; Lim et al 2009; Lagerwerf 2007; Lagerwerf and Meijers 2008; McQuarrie and Phillips 2005; Roehrm and Sterntal 2001).

So what is going on?

While the practical use and impact of figurative language are not confined exclusively to advertising, the results of this study may (by comparison) suggest that figures of speech are more potent when used in shorter target messages. The advertising context—as opposed to the complexity of longer speeches in more formal settings—may well help listeners more readily discern differences in language styles and pick-up on intended creative or non-literal meanings. Reasons for this could involve:

- The necessary use of fewer strategic figures of speech within the shorter communication opportunity
- The likely increased use of passive peripheral processing to decipher messages, given the vicarious situation within which short-form text such as advertising normally occurs
• Shorter attention spans and less cognitive effort required by shorter texts
• Greater entertainment value, humour and wit often inherent in short, hard-hitting messages intended to be noticed

The more strategic, less frequent use of figures of speech within a communication is also consistent with John Quincy Adams’s view about the effectiveness of metaphors—they ought to be used sparingly, he said, to ‘season rather than soak language’ (Downey 1997).

While further research is needed to test this observation, any contextual difference in the effective use or application of figures of speech could well harbour useful clarifications about the generally accepted view of their universal strength across applications, along with information about how best to deploy them in different settings, including management communication.

Alternately, there are other potential explanations and reasons for the observed results that go to the design of the experiment.

Firstly, as discussed earlier, it is apparent that the emotion scale used within the study did not include a quantitative capacity to directly capture the negative emotions apparent within the commenting group. As such, these respondents may have had no alternative but to lightly score the positive options on offer which affected their assessment of the speeches (and language forms) and their reaction to them. With the disproportionate level of negativity observed (i.e. 41% negative emotions within the closing comments versus 21% positive emotions) and with all figurative versions of the speech attracting a greater number of negative comments than the literal version, the absence of negative scale options within the measurement instrument presents a possible explanation for the low scoring on the emotion scale and the limited persuasiveness observed.

Another possible explanation lies within the change management scenario used in the speech scripts. In retrospect, for some respondents the use of this theme appears to have unnecessarily provoked adversarial mental models and rehearsed reactions connected with workplace change and potential concerns about job security. In turn, this may have obscured the possible effects of the figurative language devises embedded in the various speech types. 12% of the comments indicated that respondents viewed the situation (and message) in terms of a ‘them and us’ industrial struggle; with twice as many comments from males as females (i.e. 65% versus 35% respectively). In hindsight, a less provocative,
more loss-neutral scenario may have been useful to direct more attention onto the message and avoid distracting negative stereotypes and troublesome connotations. Alternately, the speeches could have included more detailed arguments about the personal gains from the proposed change to overcome apparent fears and trepidations experienced by some respondents. The use, therefore, of a change management scenario within the experiment may have differentially affected the results.

A further explanation for the outcome lies in the general design of the base script. It is debatable that the scenario and arguments embedded in the literal speech may not have been sufficiently compelling in their own right and that the subsequent language embellishments within the figurative versions were simply unable to overcome this enduring impediment. For example, the high level of distrust and dislike of the speech and speaker within the negative comments (i.e. 79%) is evidence that the foundational base of the test material may have caused the problem. Or put another way, a poor argument is a poor argument even when dressed in linguistic finery. The figurative speeches were perhaps unpersuasive because the basic proposal, proofs and arguments throughout the test material were unpersuasive. It should however be noted that the high rating on the credibility dimension and the evidence in relation to Hypothesis 4(a) (discussed later) would appear to throw some doubt on this perspective, given that some persuasiveness was reported.

Another alternative explanation concerns the nature of the audience. Chapter 2 identified the importance of knowing the audience and tailoring the message and arguments accordingly. While at any time it is virtually impossible to persuade every listener, a speaker’s success is enhanced the more he or she knows about the audience. In this study, respondents were selected randomly by the research company from a panel of registered subscribers based solely on the sampling criteria provided. Nothing was known about the detailed nature of the audience at the time of crafting the test material and none of the speeches (or arguments) was tailored in any way to suit the particular psychological profile, attitudes, processing preferences, expectations or idiosyncrasies of the audience. In respect to preferred processing modes alone, the 21% of respondents commenting on cues offered evidence that a substantial proportion of the audience potentially engaged in peripheral processing—which often leads to superficial and erroneous judgements that fade over time.

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71 Sampling criteria involved requirements for gender balance, equal numbers of experiential and rational thinkers to each group, English speaking backgrounds, involvement in current employment (with at least three years full-time prior work experience) and aged between 20-65 years.
This occurred despite the experiment being designed to encourage central (cognitive) processing, suggesting a possible mismatch between communication strategies within the message and the processing mode potentially used by a sizeable proportion of the audience. The collectively long questionnaire(s)—covering 73 items (including a request for open comments) and requiring respondents to read an information sheet and scenario instructions and then view a 2¼ minute audio-visual file—coupled with the modest gratuity offered, may have been sufficient to encourage respondents to speed through the material as quickly as possible. In turn, this may have spurred or encouraged the level of peripheral processing that occurred. However, the blind approach to the nature of the audience was intentionally chosen to assess the persuasiveness of figurative language under what was seen as everyday conditions. In hindsight though, the absence of message tailoring coupled with the circumstances of the experiment may have been sufficient to influence the results.

Finally, the study may have simply encountered sufficient resistance from a critical number of respondents for a variety of disparate reasons. In this respect, Perloff (2003) observes that people are complex repositories of attitudes and needs, not all of which are about making cognitive sense of the world or the information presented to them. They can be clear focused thinkers or turbulent distracted ones; they can be motivated by a search for accuracy or the basest of self-serving needs and fears. As a consequence, not everyone can be persuaded at any one time. For example, listeners may:

- Harbour rehearsed attitudes and positions that conflict with matters under discussion (Perloff 2003)
- Benefit from hidden self-interests that support maintaining a contrary position (Darke and Chaiken 2005)
- Have allegiances and loyalties to parties that hold adverse views (Darke and Chaiken 2005)
- Have a predetermined or desired outcome in mind and therefore engage in motivated reasoning (Kunda 1990; Pandelaere 2007)
- See certain topics through established mental models and frames that conflict with advocated positions or arguments (Ellis, Margalit and Segev 2012)
- Refrain from acting on particular beliefs and attitudes when doing so serves another deeper need (O’Keefe 2002; Perloff 2003)
In short, listeners may not always have an open mind or care sufficiently about a given topic and may therefore be unreceptive to whatever arguments are put forward.

In relation to Hypotheses 1-3, the impact of demographic variables has also shown that respondents with a higher education were more critical (in terms of negative comments) and less ‘persuadable’ than those with a lower education—largely through the logic and (to a lesser extent) the credibility dimension. They provided proportionately more comments, more negative comments and more emotion-laden comments than those with a lower education. This phenomenon is consistent with earlier studies that have confirmed the role of prior knowledge in resistance to persuasive communications (e.g. Perloff 2002; Petty and Cacioppo 1996). Female respondents were also more ‘persuadable’ (in terms of their ratings on the credibility and logic sub-scales, and support for the speaker) and offered a higher number of positive comments than male respondents.

These findings collectively suggest that situational differences may differentially affect the persuasiveness of management communication, regardless of how a speech is structured or delivered.

8.5.2 Hypothesis 4

The results for Hypothesis 4 showed that:

- High Experiential/Low Rational thinkers were more persuaded than High Rational/Low Experiential thinkers (who were indifferent)
- Low Experiential/Low Rational thinkers were the most persuaded, followed by High Experiential/Low Rational thinkers
- High Experiential/High Rational thinkers and High Rational/Low Experiential thinkers were unaffected by the merits or otherwise of the language used (i.e. they were not persuaded)
- The above effects did not translate into recorded support for the speaker

Or seen another way, only experiential thinkers (i.e. those with a low rational component such as High Experiential/Low Rational and Low Experiential/Low Rational)—who also reflected the minority of the sample (i.e. 38% collectively)—found the language persuasive in terms of speaker credibility, emotion and logic. And, since the result was independent of the type of speech involved, both figurative and literal language had the same effect.
This suggests that the thinking orientation of the listener may be more important as an ingredient for persuasion than the actual nature of the language used to convey a message.

Epstein (1994, 2003) theorised that experiential thinkers were intuitive, affect-sensitive and holistic in their conceptions, preferring to assess situations based on intuition, feelings and associations. Rational thinkers on the other hand, were deliberative, analytical and logical, preferring to assess situations based on arguments, reason and facts. The results from the study appear to suggest that a listener’s disposition to form intuitive, affect-based, broad impressions (more prevalent amongst experiential thinkers) is more persuasion-receptive, than a capacity for reasoned analysis (which is more prevalent amongst rational thinkers). This resonates with Aristotle’s advice that (example, story, image-based) inductive reasoning is more convincing and clear, and better suited to less-focused or critical minds, while (logic, premise-based) deductive reasoning is more forceful and effective against those prone to debate or challenge ideas and arguments (Aristotle 350 BCE).

Moreover, the extent of the cues, negative emotions and adverse reactions mentioned earlier, along with the non-persuasiveness of the speeches against other hypotheses, all suggest that the thinking orientation result is fairly robust. The cues and emotions both contained strong negative dimensions. For example, 80% of the cues reflected negatively on the speech or speaker (e.g. he should have worn a tie; too many clichés; didn’t like the wink), while 66% of the emotions embedded in the closing comments were also negative (e.g. I found it irritating; usual junk you hear from CEOs; I would be scared for my job). Both were accompanied by 12% of respondents who viewed the exercise negatively through an adversarial industrial relations frame. Individually and collectively, these negative signals would likely have triggered a switch by many respondents to more detailed rational thinking. Epstein (1994, 2003) argues that individuals harbour a natural (unconscious) propensity to use experiential thinking which can be overridden in favour of rational thinking by situational factors such as cues and dissonance that challenge internalised rules or prior learning. The adverse environment experienced suggests that the incidence of experiential thinking during the exercise would likely have been reduced to a hard core of respondents, suggesting that the results observed are fairly remarkable (and sturdy) in the circumstances and could have been much stronger and more pronounced under more favourable conditions.
If confirmed by subsequent studies, the primacy of thinking orientation in the persuasion process holds significant implications for the way all communicators, including leaders and managers, could or should tackle communication tasks and topics.

The results from this study have also shown that proportionately more negative comments—as well as more positive comments and more comments in total—came from respondents with thinking orientations not associated with the persuasion effect. Given the fewer number of positive than negative comments overall (i.e. 35% versus 51%), this result is consistent with the findings on Hypothesis 4(a) in that respondents with more numerous negative views were not persuaded. Moreover, respondents with a higher education were found to be more rational in their thinking orientation than those with a lower education. For example, High Rational/Low experiential thinkers held 30% of the post-secondary qualifications in the sample while High Experiential/Low Rational held only 23%. More males were also rational in their thinking orientation than females (i.e. 57% versus 43% respectively)—a finding consistent with that in Pacini and Epstein’s (1999) landmark study where the refined Rational-Experiential Inventory (i.e. the thinking orientation instrument used in this study) was determined. This gender result is also consistent with findings in other more recent scholarship (e.g. Mao and Oppewal 2012; Norris and Epstein 2011; Sladek, Bond and Phillips 2010) and collectively suggests an enduring gender effect is associated with use of the Rational-Experiential Inventory.

8.6 Contributions and Implications

**Theoretical and Empirical Contributions**

Using a large sample of gender balanced respondents, this study has made significant and original contributions to the current theoretical and empirical understanding of persuasion and figurative language in a management context. These involve:

- Empirical support for Aristotle’s theory that persuasion (in management communication) is composed of three distinct dimensions of credibility, emotion and logic, and that these are strongly correlated with support for the speaker
- Developing and testing two parsimonious, psychometrically sound scales—a three-sub-scale Persuasion measure and an 8-item Thinking Orientation measure based on Pacini and Epstein’s (1999) Rational-Experiential Inventory. The latter will complement efforts to improve Pacini and Epstein’s Inventory, including its revised form (the Rational-Experiential Multimodal Inventory) documented in Norris and Epstein (2011). To date, most contemporary studies using the Rational-
Experiential Inventory} have failed to conduct detailed psychometric tests, relying generally on Cronbach’s alpha coefficient of reliability (e.g. Fletcher, Marks and Hine 2012; Freeman, Evans and Lister 2012; Godek and Murray 2008; MacLaren et al 2012; Mao and Oppewal 2012; Sladek, Bond and Phillips 2010). The more rigorous Confirmatory Factor Analyses conducted as part of this study have shown that the existing (short-form) Rational-Experiential Inventory does not meet contemporary standards, with many low-loading items previously included by Pacini and Epstein (e.g. Learning new ways to think would be very appealing to me [0.30 loading]; I usually have clear, explainable reasons for my decisions [0.40 loading]; I suspect my hunches are inaccurate as often as they are accurate [0.35 loading]) failing to meet minimum fit statistics under a CFA regime. Going forward, the empirical implication of this for other researchers is twofold:

1. To apply any future use of Pacini and Epstein’s Rational-Experiential Inventory to the discipline of CFA procedures, in an attempt to replicate or otherwise the finding from this study, and

2. To expose the parsimonious 8-item thinking orientation scale now available to further testing and application in other contexts

- Extending research and understanding of figurative language in the business field from advertising to general management communication
- Applying Epstein’s (1994, 2003) Cognitive–Experiential Self-Theory to the persuasion process and widening the understanding of thinking orientation and its role in persuasion, including that:
  - Experiential thinkers are more persuaded by engaging language than rational thinkers, in terms of speaker credibility, emotion and logic. As previously observed, this suggests that the thinking orientation of the listener may be more important for persuasion than the language form used in a message and holds significant implications for communicators (including leaders and managers), in terms of how they could or should approach communication tasks and topics
  - Experiential and rational thinking operate independently of one another in the management communication context, extending previous (similar) findings in organisational behaviour and clinical settings (Epstein et al 1996; Freeman, Evans and Lister 2012; Godek and Murray 2008)
– More males self-assessed as rational thinkers and more females self-assessed as experiential thinkers. Together with previous studies this suggests an enduring gender effect associated with use of the Rational-Experiential Inventory
– Rational thinking is disproportionately associated with higher education

- Identifying education as a significant, potentially negative determinant of persuasion, such that those with a lower education are less critical and more ‘persuadable’ than those with a higher education

Practical Implications

The finding that the thinking orientation (and educational background) of the listener may be more important for persuasion than the nature of the language used in a message, reinforces the need to understand the audience and for the speaker’s performance and message to be tailored accordingly. Precisely how the latter is done (in the context of thinking orientation) will potentially depend on the widest possible understanding of the full characteristics and nature of the audience, supplemented with crude associative markers such as gender.

Aristotle recognised the critical importance of understanding the audience and tailoring the approach, emotions, message and arguments accordingly. In a practical sense, the more information a speaker has about an audience—including, it seems, the thinking orientation of individual listeners—the more he or she can improve the content, delivery and/or reception of a message. For example, as disclosed in Chapter 2, an informed speaker can:

- Tailor a message to talk directly to the key attitudes, beliefs, needs or expectations of an audience
- Emphasise the benefits an advocated position has for the broadest range of listeners
- Identify key stakeholders or opinion setters to target with key points (particularly those high in experiential thinking and/or lower in education who may be more easily persuaded)
- Circumvent contentious issues or obstacles with careful language or tactical deviations and omissions
- Frame the argument and lines of reasoning with the best possible perspective
- Choose the most compelling expressions, examples and cues
- Deploy appropriate humour or wit targeting key issues or listeners
- Inoculate the audience where needed against superficially attractive counter-arguments listeners have or will be exposed to (particularly those listeners who are
high in rational thinking and/or education who may preferentially benefit from a well-crafted direct comparison of opposing arguments and reasoning)

- Identify vested interests (or allegiances) and adopt the best possible countermeasures to any associated motivated reasoning
- Leverage likely processing modes and thinking orientations of key listeners or situations
- Deal more effectively with potential resistance

In doing so, it is however unrealistic to expect that a speaker can dictate the nature or composition of an audience or choose its members based on a personal quality such as thinking orientation. Amongst other things, making that judgement would be discriminatory, require prior testing and be ineffective in any event, in terms of changing the minds of those subsequently excluded, who may outnumber those retained. In the current study, for example, those with thinking orientations not associated with the persuasion effect comprised 62% of the audience.

As a result, to be effective with all audiences, a speaker will need to use inclusive strategies that appeal across the thinking orientation spectrum. For rational (and better educated) thinkers, this will mean using strategies that resonate with the way they think and analyse issues, and their preference for facts over style. As a general approach, the collective literature would still suggest that to be persuasive, a speaker needs to:

- Optimise the message, arguments and framing to suit the audience
- Demonstrate credibility, emotion and logic, potentially with strategies such as:
  - Projecting competence and trustworthiness by knowing the subject, exuding confidence and integrity, and being seen to act in the interests of the listener
  - Displaying the appropriate emotions (and emotional intelligence) connected with the topic or those he or she wants to arouse in the audience
  - Providing compelling logic and reasons for listeners to follow their hearts
- Use a clear orderly arrangement and pace of delivery
- Start from common ground and emphasise arguments that go to the crux of the matter being considered (i.e. the stasis issues). This could be particularly appealing for rational thinkers
- Be conscious of the processing mode likely to be used in the context by most listeners (i.e. central or peripheral) and then meet the associated requirements—i.e. fact-rich for conscious consideration and/or cue and heuristic-rich for subtle absorption
Use simple, clear and engaging language and arguments, interspersed with good examples, stories and actuality, with wit and humour injected as appropriate on specific issues.

Be conscious of delivery style and eloquence, and align all body language to the verbal message to avoid dissonance.

The challenge will be to do this without disenfranchising experiential thinkers. This will mean monitoring how a message is being received at the moment of delivery (in terms of reactions, cues or body language of the audience) and then adapting the tactics and information as needed to keep the majority of listeners engaged and on side.

Apart from the implications of thinking styles and education generally, this research also has implications for followership theory, characteristics and behaviour (Bligh and Kohles 2012; Kohles, Bligh and Carsten 2012; Uhl-Bien et al 2014), in terms of how:

- The thinking orientation of followers affects their susceptibility (or otherwise) to persuasion attempts by leaders.
- Followers generally respond or interact with persuasive communications inside organisations.
- Followers potentially use persuasion strategies to achieve organisational goals, influence those around them and manage the demands and behaviour of leaders.

### 8.7 Future Research

This study has opened up persuasion in management communication as a field of interest worthy of further research. Future work is needed to test and replicate the findings achieved here, and in particular, explore related observations about:

- Possible contextual differences in the potency of figures of speech when confronted with strong negative/loss frames or mental models, or used in short versus longer messages.
- The primacy of thinking orientation over language forms within the persuasion process.

In addition, the nature of the role that thinking orientation plays between a message and its impact has not been explored. While the hypotheses in this study did not suggest that thinking orientation acts as a moderating variable (between language types and persuasiveness), the discussion and conceptual model do harbour this possibility.
Exploring this potential relationship may therefore offer a useful area for further research. Useful also in future studies would be determining whether the self-assessed thinking orientation of respondents changed after viewing a speech. Doing so may deepen understandings in the area and prove easier to undertake with the availability of the smaller 8-item scale developed in this study.

In repeating this study, the opportunity also exists to do so with appropriate adjustments to redress the shortcomings observed and extend the research to the many other figures of speech commonly used in communication (Dupriez 1991; McGuire 2000). Remedial adjustments to future experiments could potentially involve:

- Addressing the need to quantitatively capture both positive and negative emotions in a meaningful way
- Using a more neutral background scenario as a basis for the exercise rather than a contentious theme such as change management
- Incorporating a successful argument strength feature to facilitate further in-depth analysis and insights
- Deploying a larger sample comprising employees from an actual organisation rather than surrogate respondents drawn from a market research database, with more balance achieved across the thinking orientation styles
- Conducting the exercise with paired test material (both tailored and untailored to the nature and profile of the audience) and comparing the effect

The study reflected in this thesis was ambitious in that it asked four related questions that involved the simultaneous consideration of three primary dependent variables (i.e. credibility, emotion and logic) crossed with six speech types, two thinking orientation dimensions and an assessment of the flow-on support (or otherwise) for the speaker. This complex design may have led to an overly generalised model necessitating somewhat sophisticated multivariate and other analyses that introduced unnecessary ‘noise’ into the findings. Subsequent researchers may wish to compartmentalise any similar future studies and/or consider a simpler or multi-staged design for their experiments.

Chapter 1 identified the growing demise of the ‘command and control’ culture inside organisations, heralded by powerful evolutionary forces that included generational change, technology, globalisation and the changing needs of the modern competitive economy (Conger 1998a, 1998b). To be successful, these changes all require leaders and managers to
focus on merit as never before and to discuss and sell ideas inside organisations rather than impose them. They need to bring the best out of people, teams and situations, and encourage a collaborative winning culture where everyone (irrespective of thinking orientation) is empowered by egalitarian, rather than authoritarian, relationships to think and contribute to the best of their ability. And to do that leaders and managers need to know not just how to be good communicators but how to win hearts and minds and engage with others in the most compelling way. This ability is integral to a transformational leadership style that has been found to positively impact the performance of individuals, teams and organisations (Wang et al 2011). Sound persuasion skills are also important for followers. “Following behaviour [followership] could also involve … persuading in a respectful and trusting way to generate more effective outcomes” (Uhl-Bien et al 2014, p. 99). As a result, understanding the art of persuasion as a collegial and potentially transformative leadership/followership tool is more important than ever and more research is needed to pursue this. In addition, further specific research on the role of persuasion in dedicated leadership communication contexts may be useful in making the varying connections more explicit under differing conditions and scenarios. This could, for example, involve the development of a dedicated or appropriately tailored (or adjusted) conceptual model.

In addition, with the rigorous CFA procedures conducted as part of this study—to test and refine Pacini and Epstein’s (1999) Rational-Experiential Inventory—the opportunity now exists for future researchers to do the same when deploying the instrument. This will potentially help replicate the finding about the parsimonious 8-item thinking orientation scale in other situations, while simultaneously helping to refine Pacini and Epstein’s inventory, with likely ramifications for the purported ability and engagement subscales.

The observed strong cross-correlation of the credibility, emotion and logic variables with the single-item unsupportive/supportive question also offers an unfinished aspect for future research—in terms of replicating the relationship in circumstances where a persuasion effect is also recorded—as does the opportunity to calibrate results after accounting for the effect of argument strength in the process. Other correlations too in areas such as education are worthy of future research, especially in respect to quantifying the strength of the effect in different contexts and situations.
8.8 Limitations of the Study

This thesis was limited to exploring the persuasiveness of figures of speech using only four of the hundreds of archetypal figures commonly available to the communicator (Dupriez 1991; Lanham 1991; McGuire 2000). Moreover, it used only one example of each of the four categories of figures of speech under test (i.e. simple schemes, complex schemes, simple tropes and complex tropes). As such, the findings are limited in terms of their potential application to other figures of speech and their wider generalizability.

Other limitations also included:

- **Reliance on self-report data**—The Thinking Orientation and Final Persuasion Questionnaires both relied on respondents being able to assess their own preferences. While more recent research has suggested that other-party assessments of subjects rate fewer people as rational thinkers and more people as experiential thinkers, than self-assessments (Norris and Epstein 2011), the logistical and methodological soundness of the approach used for other party assessments remains untested. At the same time, the use of self-report data is the only way to obtain respondent-based information about persuasion, and consequently, the results of this study are subject to the normal biases associated with self-reporting.

- **One-way Internet communication**—The experiment involved respondents viewing a recorded performance by an actor over the Internet. As such, the exercise reflected a one-way, didactic communication rather than a two-way, face-to-face exchange on the topic, with the extent of respondents’ attention and observed use of central or peripheral processing unknown. The use of the Internet as the medium for the experiment—rather than a face-to-face leader forum—may also have affected respondents’ processing of the message. In addition, since the speaker was unable to see the audience or perceive associated reactions, cues or body language, he was also unable to monitor how the message was being received and take appropriate remedial action to improve the experience or counter perceived resistance or mental wandering.

- **Gender of the speaker**—The gender of the speaker may also have affected the reception of the message possibly reinforcing perceived adversarial stereotypes of management and/or male managers amongst some respondents.

- **Inconsistent use of positively and negatively worded scale items**—All variables other than thinking orientation were measured using positively worded scale items, while thinking orientation used a combination of both positive and negatively worded...
items. As discussed in Chapter 5, the use of only positive items was required to achieve minimum model fit statistics on the credibility variable, aligning it with the approach taken elsewhere. Conversely however, the use of both positive and negative scale items was required on the refined thinking orientation scale to do the same thing but giving rise to the inconsistency:

- **Thinking orientation imbalance**—The loss of balance in the distribution of styles within the continuing sample, as highlighted in Table 19, arguably reduced the power within the experiment and as such reflects a potential limitation of the study.

- **Emotion scale**—The inability of the emotion scale to capture the high degree of negative emotions evident within the study represents an inherent limitation.

- **Argument strength**—The poor psychometric properties of the argument strength measure in Chapter 5 (in terms of poor fit to the data) limited the capacity to affirm the strength and uniform application of the arguments, and in particular to:
  
  - Assess the strength (or otherwise) of the base arguments in the literal speech to ensure they were sufficiently compelling in their own right and comprised a good foundation for the wider test material
  
  - Confirm the consistency of argument strength across all versions of the speech
  
  - Explore how the argument strength variable interacted with individual credibility, emotion and logic variables in order to confirm adequate ‘proof’ was provided in each area, as Aristotle recommended

- **Australian sample**—The use of an exclusively Australian sample may also affect the generalisability of the findings.
8.9 Conclusion

In conclusion, this thesis has explored the persuasiveness of figurative language in a management context. It has done this by focusing on particular figures of speech that reflect four archetypal categories namely: alliteration (a simple scheme), antithesis (a complex scheme), rhetorical question (a simple trope) and metaphor (a complex trope). While the results showed no evidence to support the idea that figurative language per se improved the persuasiveness of management communication, or that there was an ascending order in the persuasiveness of archetypal categories (and figurative devises), the study has identified potential interpretations of the findings and possible reasons for the results, and made significant contributions to the management field that include:

- Support for Aristotle’s theory about persuasion and the development of a corresponding (credibility, emotion and logic) measurement scale that was positively related to support for the speaker
- Extension of the research and understanding of figurative language in advertising to general management communication
- Application of Epstein’s (1994, 2003) Cognitive–Experiential Self-Theory to the persuasion process, together with refinement of his Rational-Experiential Inventory into a parsimonious, psychometrically-sound 8-item Thinking Orientation scale
- The significant finding that experiential thinkers are more persuaded by engaging language than rational thinkers, and that consequently, the thinking orientation of the listener may be more important for persuasion than the language of a message
- Evidence for the importance of education in both critical and rational thinking, and as a potential constraint on gratuitous forms of persuasion
- A deeper understanding of persuasion as a complex multi-faceted process whereby, for many listeners, language strategies alone may not be sufficient to persuade

The practical implications about the finding that thinking orientation (and educational background) may be more important than language styles, has highlighted the significance of understanding the audience and tailoring the speaker’s performance and message accordingly. It has also highlighted the complementary need to use other inclusive strategies that appeal across the thinking orientation spectrum in order to communicate effectively with mixed audiences. In addition, the study has identified the likely implications of results for followership theory, characteristics and behaviour.
This study has opened up persuasion in management communication as a field worthy of further research and identified where adjustments can be made to improve and extend that research to the many other figures of speech commonly used in communication. In doing so, it has identified the value of persuasion as a collegial and potentially transformative tool, uniquely positioned to help organisations succeed in meeting the challenges of the new workplace and the growing demands of the modern competitive economy.

Persuasion remains the art of *enchanting the mind* by arguments. While this thesis has tested the power of figurative language and thinking orientation in that context, it is for others to continue the treasured quest for broader understanding in this area and to apply their findings to the urgent challenges of our time. Our survival as a species may well depend on finding our most enchanting voice.
Epilogue

Gazing wistfully from the scaled heights of understanding, buoyed with insights into the chemistry of persuasion—its roots, its make-up and its inherently human purpose—the pensive researcher slowly grasps a grand new take on the world and what it all means. From this high perch, the restless mind is drawn inexorably to the observation that the whole of civilisation, from prehistory to the modern world, reflects the faltering advance of persuasion at work. Our daily lives and the reality of the built world we experience as ephemeral beings are the sum total of countless social interactions oiled with soothing dollops of persuasion. Everything around us bears evidence of this—our very reality is an accretion of all the human relationships of our time, the conversations and opinions, the hair-splitting decisions, the agreements and commercial undertakings, and all the elections and social progress we make; all of this is wondrously founded on the gentle art of coaxing one another to common ground.

Across the ages, almost unnoticed, persuasion has become the morphing evolutionary force that has quietly shaped our world and our lives, and through its success, secured our freedom. It has taken us from savage surroundings to civilisation, from the wayward warrior to the wordsmith and from doom and despotism to democracy. It has driven us forward and drawn us all ever closer to the nobility of the human mind and, on a good day, to the decency of human kind and what we can become. We are it seems, ever feebly, living out Plato’s challenge to be better than we are, elevated by enlightened self-interest that echoes Cicero’s belief in action and the bounty that flows from cultivating shared interests and values. Above all, we are, bit by bit, validating Aristotle’s faith in the capacity of humankind to use reason and passion and character to move mountains. We still have a way to go, but as restless thinkers we have also made good progress, albeit slow and patchy across the modern world.
It is difficult then, with the researcher’s hand at rest, not to let the mind wonder at the philosophical dawning of persuasion and its intertwining with the eternal search for truth and justice through reason and honour. It is hard too, not to be awe-struck by how far we have come in its embrace since the early stirring of the free mind in ancient Greece and its gentle unfolding influence on the human story. It is just as hard to ignore the enchanting quality of persuasion as a critical cord in the fabric of freedom, or be indifferent to Plato’s concern about its possible misuse. Enchanting the Mind then, must be about uplifting it, elevating our thoughts and actions and eyes always to a higher purpose.

So it is, with this our shared heritage and destiny in mind, that all of us with deeper knowledge of this wondrous craft are called to use it, not for vain self-interest or personal advantage, but in the grand ongoing quest to deepen our shared humanity; to seek-out principle and agreement by civilised discourse; to use words not wars to forge a common cause and advance us all. It is no accident that the ancient entrance to the Temple of Apollo at Delphi bears the timeless inscription: ‘Know Thyself’. To use persuasion wisely is to embrace that challenge in the ennobling search for virtue and, as its founders intended, to temper power with wisdom and words with justice, not because we must but simply because we can. For to serve principle when dealing with others is to civilise the brute within and reaffirm the long march forward—ever striving to be the better person we can become.

We are still on that journey, all of us. After 24 centuries of struggle, beset with clumsy progress and tragedy, we are thankfully still adrift the ancient breeze bound for a better land. Our progress has proved the catalysing effect of persuasion and set us all—as mere globs of organic goo—on an evolving course for wisdom amid the messy turmoil of life.

We are forever at our best too when we reach out for that wisdom; when we use the trinity of reason and passion and character to enchant one another and awaken our better selves; when we fuse critical thinking with stirring emotion and goodwill to draw us all ever closer to the light. And when we do, when we capture the magic of that moment to see beyond our present selves, amazing things happen—we are transformed; we become selfless and civilised and enlightened all at the same time.
We are it seems, as the early Greeks imagined, fated to be more than mere individuals, castaways on lonely islands of self-interest and doubt. We are all connected, and words—lovingly tended in the garden of reason, crafted in oral prose, made urbane and eloquent by homespun orators—are the keys for unlocking the grand providence of human destiny.

We truly walk an enchanted path when we choose to persuade …
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Appendices

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Appendix 1

Aristotle’s Lines of Argument

**VALID Lines of Argument**

1. Restate your contention in an opposite way—e.g. instead of ‘excess is bad’ say ‘moderation is good’. If the opposite statement holds, so will the original.
2. Redefine a key term slightly to support your contention or use a synonym that does the same thing.
3. Use a correlative idea—e.g. you want to prove \( B \) justly punished, so prove \( A \) just for punishing him.
4. Argue *a fortiori* (with a yet stronger reason). Prove a person has acted in a cruel way at one time by showing that at another he or she acted still more cruelly.
5. Argue from past circumstances—e.g. what has been promised at one time must be performed at another, even though times and circumstance may have changed.
6. Turn an accusation against the accuser to diminish their implied moral superiority of the matter. This will not work however, if the accusation is obviously just or plausible.
7. Define your terms so as to place your argument in a favourable light.
8. Play upon various senses of a word.
9. Divide your argument into its logical parts.
10. Argue from parallel cases (induction).
11. Argue from some position of authority or previous verdict.
12. Argue your contention part by part.
13. Argue based on the consequences, good or bad.
14. When an action may have good or bad consequences, invert your opponent’s arguments.
15. Oppose an argument by seeming to support it and then maintain that things are not what they seem. If the opponent argues that things are not what they seem, argue the opposite.
16. Argue from logical consequences—e.g. if a person is old enough to fight for his or her country, is he or she not old enough to vote? Are we to say then that those who are too sick to fight should not vote?
17. Argue that if two results are the same, then their causes must be the same.
18. Apply an opponent’s earlier decision to a latter case, to his or her disadvantage.
19. Assume a possible (alternative) motive from the one that actually prevailed.
20. In arguing an individual motive, point to general motives or prohibitions (for or against) that support you position.
21. Make people believe an improbability by pointing to an even greater one which is true.
22. Catch your opponent out on mistakes and self-contradictions.
23. Refute slander by showing it was evoked by a mistaken view of the facts.
24. Prove effect by showing the presence of its cause, or vice versa.
25. Demonstrate trustful innocence by showing that a client or cause had a better argument and failed to use it.
26. Disprove an action by showing it inconsistent with previous actions.
27. Use previous mistakes as a defence or explanation for current ones.
28. Support an argument by playing upon the meaning of names—e.g. Mr Stern is a harsh man.

**INVALID Lines of Argument (fallacies)**

1. (a) Conclude an argument as if at the end of a reasoning process without having gone through that process
   (b) Play on illogical fortuitous similarity of words.
2. Make a statement about the whole that is only true of individual parts, or vice versa.
3. Feign indignation with indignant language.
4. Use a single unrepresentative example.
5. Take the accidental as essential.
6. Argue from consequence.
7. Argue *post hoc, ergo propter hoc* (i.e. after it, therefore because of it).
8. Ignore crucial circumstances.
9. Use fraudulent confusion of general and particular to suggest that the improbable is probable, and vice versa.

Source: Adapted from Lanham (1991)
Research into the Effectiveness of Management Communication

You are invited to participate in research that will examine your perceptions of a simulated management communication.

Purpose of the research
This research explores the impact of different language styles on the effectiveness of management communication and how different approaches to thinking affect the listener's interpretation of the message.

Who is conducting the research?
The research is being conducted by the market research company, Research Now, on behalf of the Chief Investigator, Dr Sandra Kiffin-Petersen from the University of Western Australia.

What is involved?
Participation in this study involves completing an initial questionnaire, watching a short recorded speech and then responding to some specific questions that ask you about your reaction to the speech. The whole exercise should take around 15-20 minutes to complete.

What information will be collected?
The questionnaire will collect information about:
- Your preferred thinking style and approach to processing information
- Your demographic profile (e.g. age, gender, occupation, education)
- Your impression of the speech, emotions experienced and feelings about the speaker

Confidentiality
All information provided by you will be treated as confidential by the researcher. Only general information will be used in the published results and you will not be identified in any reports or published articles that result from the research.

Voluntary participation and your right to refuse
Your involvement in this study is completely voluntary. You are free at any time to withdraw your consent without prejudice and any records containing your information will be destroyed. Completion of the questionnaire will be taken as your consent to participate in the research.

Contact for more information
If you have any concerns or questions about any aspect of this research, please contact Dr Sandra Kiffin-Petersen at the University of Western Australia on 6488-3070 or via email at sandra.kiffin-petersen@uwa.edu.au.

The Human Research Ethics Committee of the University of Western Australia requires that all respondents are informed that, if they have any complaints regarding the manner in which a research project is conducted, it may be given to the researcher or, alternatively to the Secretary, Human Research Ethics Committee, Registrar's Office, University of Western Australia, 35 Stirling Highway, Crawley, WA 6009 (telephone number 6488-3703). All respondents will be provided with a copy of this Information Sheet for their personal records.

I agree to participate in this research: [ ] Agree
I do not wish to participate in this research: [ ] Decline
## Initial Demographics Questionnaire

### About Yourself
The following information is sought for comparison purposes only. Please answer each question by clicking on one of the buttons:

1. **What age are you?** *(please place a number in the box opposite)*

2. **Are you a male or female?**
   - male [ ]
   - female [ ]

3. **Is English the primary language you use AT HOME each day?**
   - yes [ ]
   - no [ ]

4. **How well do you speak English?**
   - very well [ ]
   - well [ ]
   - not well [ ]
   - not at all [ ]

5. **How many years have you been in paid employment?** *(please place a number in the box opposite)*

6. **Are you in full or part-time employment now?**
   - full-time [ ]
   - part-time [ ]

7. **How many hours per week do you normally work in your current employment?** *(please place a number in the box opposite)*

8. **What type of paid occupation do you have?**
   - manager or administrator [ ]
   - professional or associated professional [ ]
   - tradesperson or related worker [ ]
   - clerical, sales or service worker [ ]
   - plant, machine or transport operator [ ]
   - labourer or related worker [ ]

---

72 Adapted from a relevant profile question included within the 2001 Census of Population and Housing – 2001 Census Household Form (Australian Bureau of Statistics 2001)

73 Adapted from a relevant linguistic question included within the 2001 Census of Population and Housing – 2001 Census Household Form (Australian Bureau of Statistics 2001)

74 Numbered as Question 44 in the online questionnaire

75 Adapted from a relevant linguistic question included within the 2001 Census of Population and Housing – 2001 Census Household Form (Australian Bureau of Statistics 2001)

76 Numbered as Question 47_1 in the online questionnaire

77 Numbered as Question 48 in the online questionnaire

78 Numbered as Question 49_1 in the online questionnaire

79 Numbered as Question 45 in the online questionnaire

80 Classifications adapted from the Major Groups within the Australian Standard Classification of Occupations (Australian Bureau of Statistics 1997)
Appendix 3

Initial Demographics Questionnaire

9. What is the highest level of education you have completed?

- less than year 12
- year 12
- technical college or business school
- university
- postgraduate studies
- undergraduate studies

10. How much do you enjoy things to do with ships and/or the ocean?

| Dislike | -4 | -3 | -2 | -1 | 0 | +1 | +2 | +3 | +4 | Like |

THANK YOU

To continue please click the button opposite:

Continue

---

81 Numbered as Question 46 in the online questionnaire
82 Adapted from a relevant profile question included within the 2001 Census of Population and Housing – 2001 Census Household Form (Australian Bureau of Statistics 2001)
83 Numbered as Question 50_1 in the online questionnaire
Appendix 4

Instructions to Respondents

Respondent Instructions

Thank you for agreeing to participate in this research. It will take approximately 15-20 minutes to complete and involves three stages. First, you will be asked to answer a brief survey about yourself. Then you will watch a short recorded speech and finally, you will be asked to respond to some specific questions about your reaction to the speech and the speaker.

The Setting

Imagine you and 80 other employees have assembled in the canteen to hear an address from the recently appointed General Manager of the company you work for. You have been told that once the General Manager has addressed the staff, your supervisor will meet with you individually to answer questions and explain your new role in the future of the company.

You have been with the organisation for five years and seen it go through hard times, particularly over the last three years. The company produces innovative pollution control equipment for industry and has spent the last 18 months developing a range of new products.

While listening to the speech, you are asked to watch the speaker closely, listening attentively to what is being said. The recorded speech lasts a little over two minutes and you will hear it only once.

To start please click the button opposite:  

Start
Thinking Orientation Questionnaire

This questionnaire assesses your preferred way of thinking and gathers some basic background information about you. For each of the following questions, please click on the button that best reflects your belief about yourself:

<table>
<thead>
<tr>
<th></th>
<th>Definitely NOT TRUE of myself</th>
<th>Somewhat untrue</th>
<th>Neither true nor untrue</th>
<th>Somewhat true</th>
<th>Definitely TRUE of myself</th>
</tr>
</thead>
<tbody>
<tr>
<td>1_1</td>
<td>I often go by my instincts when deciding on a course of action</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_2</td>
<td>I usually have clear, explainable reasons for my decisions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_3</td>
<td>Learning new ways to think would be very appealing to me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_4</td>
<td>I have a logical mind</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_5</td>
<td>I don't reason well under pressure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_6</td>
<td>I'm not that good at figuring out complicated problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_7</td>
<td>I believe in trusting my hunches</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_8</td>
<td>I tend to use my heart as a guide for my actions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_9</td>
<td>I suspect my hunches are inaccurate as often as they are accurate</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1_10</td>
<td>If I were to rely on my gut feelings, I would often make mistakes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_1</td>
<td>I am not very good at solving problems that require careful logical analysis</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_2</td>
<td>Intuition can be a very useful way to solve problems</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_3</td>
<td>I can usually feel when a person is right or wrong, even if I can't explain how I know</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_4</td>
<td>I don't have a very good sense of intuition</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_5</td>
<td>When it comes to trusting people, I can usually rely on my gut feelings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_6</td>
<td>Reasoning things out carefully is not one of my strong points</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
### Thinking Orientation Questionnaire

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Definitely NOT TRUE of myself</td>
<td>Somewhat untrue</td>
<td>Neither true nor untrue</td>
<td>Somewhat true</td>
<td>Definitely TRUE of myself</td>
</tr>
<tr>
<td>2_7</td>
<td>I enjoy solving problems that require hard thinking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_8</td>
<td>My snap judgments are probably not as good as most people's</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_9</td>
<td>Using logic usually works well for me in figuring out problems in my life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2_10</td>
<td>I am much better at figuring things out logically than most people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_1</td>
<td>I try to avoid situations that require thinking in depth about something</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_2</td>
<td>I have no problem thinking things through carefully</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_3</td>
<td>I hardly ever go wrong when I listen to my deepest gut feelings to find an answer</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_4</td>
<td>I don't like to have to do a lot of thinking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_5</td>
<td>Thinking hard and for a long time about something gives me little satisfaction</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_6</td>
<td>I would not want to depend on anyone who described himself or herself as intuitive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_7</td>
<td>I generally don’t depend on my feelings to help me make decisions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_8</td>
<td>I don’t like situations in which I have to rely on intuition</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_9</td>
<td>I don’t think it is a good idea to rely on one’s intuition for important decisions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3_10</td>
<td>I am not a very analytical thinker</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4_1</td>
<td>I like to rely on my intuitive impressions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4_2</td>
<td>I think it is foolish to make important decisions based on feelings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4_3</td>
<td>I trust my initial feelings about people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
# Appendix 5

## Thinking Orientation Questionnaire

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Rating Options</th>
<th>Reverse Scored?</th>
</tr>
</thead>
<tbody>
<tr>
<td>4_4</td>
<td>Thinking is not my idea of an enjoyable activity</td>
<td>Definitely NOT TRUE of myself</td>
<td>R</td>
</tr>
<tr>
<td>4_5</td>
<td>I enjoy thinking in abstract terms</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4_6</td>
<td>Knowing the answer without having to understand the reasoning behind it is good enough for me</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4_7</td>
<td>Using my gut feelings usually works well for me in figuring out problems in my life</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4_8</td>
<td>I think there are times when one should rely on one's intuition</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4_9</td>
<td>I prefer complex problems to simple problems</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4_10</td>
<td>I enjoy intellectual challenges</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

**THANK YOU**

To continue please click the button opposite: [Continue]

---

**NOTE:** ‘R’ denotes reverse scored items. This identifying code was used for analytical purposes only; it was not shown to respondents.
Final Persuasion Questionnaire

This questionnaire assesses your impression of the speech you have just heard. Please follow the instructions for each question.

5. **Instructions:** On the scales below, please indicate your feelings about the speaker. Click on the button between the adjectives which best represents your feelings. Numbers “1” and “7” indicate a very strong feeling. Numbers “2” and “6” indicate a strong feeling. Numbers “3” and “5” indicate a fairly weak feeling. Number “4” indicates you are undecided. Please work quickly. There are no right or wrong answers.

**FOR EACH OF THE FOLLOWING, I feel the speaker was …**

5_1 Reliable 1 2 3 4 5 6 7 Unreliable R
5_2 Honest 1 2 3 4 5 6 7 Dishonest R
5_3 Inexpert 1 2 3 4 5 6 7 Expert
5_4 Virtuous 1 2 3 4 5 6 7 Sinful R
5_5 Intelligent 1 2 3 4 5 6 7 Unintelligent R
5_6 Unfriendly 1 2 3 4 5 6 7 Friendly
5_7 Valuable 1 2 3 4 5 6 7 Worthless R
5_8 Awful 1 2 3 4 5 6 7 Nice
5_9 Uninformed 1 2 3 4 5 6 7 Informed
5_10 Selfish 1 2 3 4 5 6 7 Unselfish
5_11 Unqualified 1 2 3 4 5 6 7 Qualified
5_12 Pleasant 1 2 3 4 5 6 7 Unpleasant R

**NOTE:** ‘R’ denotes reverse scored items. This identifying code was used for analytical purposes only; it was not shown to respondents.
Final Persuasion Questionnaire

6. *Instructions:* The scales below consist of a number of words that describe different feelings and emotions. Read each item and then click on the appropriate button next to each word. Indicate to what extent you feel this way right now, that is, at the present moment as a result of hearing the speech.

**FOR EACH OF THE FOLLOWING, as a result of hearing the speech, I feel …**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>6_1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>6_2</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>6_3</td>
<td></td>
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<tr>
<td>6_4</td>
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<td>6_5</td>
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<td>6_6</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>6_7</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6_8</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6_9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6_10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. *Instructions:* On the scales below, please indicate your impression of the speech? Click on the button between the adjectives that best represents your assessment.

**FOR EACH OF THE FOLLOWING, my impression is that the speech was …**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>7_1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7_2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7_3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7_4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7_5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Final Persuasion Questionnaire

8. **Instructions:** On the scales below please indicate how you would rate the speech, overall. Click on the button between the adjectives that best represents your assessment.

**FOR EACH OF THE FOLLOWING, I would rate the speech as …**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Weak</th>
<th>Unpersuasive</th>
<th>Not convincing</th>
<th>Bad argument</th>
<th>Strong</th>
<th>Persuasive</th>
<th>Convincing</th>
<th>Good argument</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8_1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8_2</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8_3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8_4</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. **Instructions:** On the scale below please indicate the extent to which you would support the General Manager based on the speech you have just heard. Click on the button between the adjectives that best represents your position.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Unsupportive</th>
<th>Supportive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9_1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. **Instructions:** In the space below please provide any additional comments you may wish to make about the speech. For example, you may wish to comment generally on what you thought of the speech or remark on a particular aspect.

**In respect to the speech, I thought …**

| Comment | ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………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# Final Speech Scripts

## LITERAL SPEECH

| Bait | We stand together on the verge of a great calling! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future might test our spirit, but it will not break our resolve or see us fail. |
| Problem | Sadly though, the organisation has not been very successful over the last three years, achieving only mediocre results which have seen orders fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and introduce the profitable new range of products we have been working on. |
| Solution | Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the rewards of success. Finally, we need to help each other overcome the problems that arise and celebrate our achievements along the way. |
| Benefits | We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a more attractive deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be really well made and packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come. |
| Call to Action | So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! We all just need to have courage and play our assigned role. So let’s make it happen. |

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NOTE: The underlining denotes expressions with a recognised figurative source, but which were pre-tested to confirm they had become conventionalised to the point where they were now regarded as accepted literal expressions (i.e. they were no longer seen as containing any accepted figurative meaning in normal usage)
## Final Speech Scripts

### ALLITERATION SPEECH

| Bait | We stand together on the **cusp of a colossal calling**! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future might test our spirit, but it will not break our resolve or see us fail. |
| Problem | Sadly though, the organisation has not been very successful over the last three years, achieving **only ordinary outcomes** which have seen orders fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and introduce our **latest lucrative line** of products we have been working on. |
| Solution | Going forward, we have **three thrilling things** to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with **plenty of performance pay** available so everyone can share in the rewards of success. Finally, we need to help each other overcome the problems that arise and celebrate our achievements along the way. |
| Benefits | We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a more attractive deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be **properly produced and packaged**, if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come. |
| Call to Action | So let the word go forth from this date and time that we are coming back as a daring, **fresh and formidable force** in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! So be **brave, brilliant and bold**, and play your assigned role! And let’s make it happen. |

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**Note:** Highlighted underlining denotes alliterations
**FOREST SONG**

We stand together on the verge of a great calling! A challenge that draws us from a dismal past to a bright and happy future, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference.

The future might test our spirit, but it will not break our resolve or see us fail.

**SUMMARY**

- **Antithesis**
  - Bait: We stand together on the verge of a great calling! A challenge that draws us from a dismal past to a bright and happy future, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference.
  - Problem: Sadly though, while looking forward the organisation has actually gone backwards over the last three years, achieving only mediocre results which have seen orders fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to focus not on our weaknesses but on our strengths, improve the relationship with our customers and introduce the profitable new range of products we have been working on.
  - Solution: Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance and low error culture. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the rewards of success. Finally, we need to help each other overcome the problems that arise and celebrate our achievements along the way.
  - Benefits: We are doing this, in large part, to turn the company from decline and likely failure to a new era of growth and opportunity; to secure a better future for each of us and to provide a more attractive deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be really well made and packaged if we are to maximise our impact on pollution while we minimise the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.
  - Call to Action: So let the word go forth from this date and time that we are breaking with the past to embrace the future as a daring, renewed and stronger force, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! We need not look to others but to ourselves for the courage to do our bit. So let’s make it happen.

**NOTE:** Highlighted underlining denotes antitheses.
Final Speech Scripts

RHETORICAL QUESTION SPEECH

| Bait | Do we not stand together on the verge of a great calling? A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future might test our spirit, but will it break our resolve or see us fail? No! |
| Problem | Sadly though, the organisation has not been very successful over the last three years, achieving only mediocre results which have seen orders fall by 25% and 50 jobs go as revenues declined. Is this a situation we can ignore? No, it’s one we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and introduce the profitable new range of products we have been working on. |
| Solution | Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available. And why performance incentives? So everyone can share in the rewards of success. Finally, we need to help each other overcome the problems that arise and celebrate our achievements along the way. |
| Benefits | So why are we doing this? In large part, we are doing this to turn the company around; to secure a better future for each of us and to provide a more attractive deal for our customers and shareholders. But do we come to work just to earn money? No! The world needs our new products but it needs them to be really well made and packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come. |
| Call to Action | So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force in the years ahead. Why? To make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! Are you fearless enough to play a key role? Let’s make it happen. |

NOTE: Highlighted underlining denotes rhetorical questions
## Appendix 7

### Final Speech Scripts

**METAPHOR SPEECH**

<table>
<thead>
<tr>
<th>Bait</th>
<th>We stand together on the verge of a great calling! A challenge that draws us forward, not to <em>be galley slaves to hard work</em>—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future might test our spirit, but it will not break our resolve or see us fail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>Sadly though, the organisation has been <em>weathering a cruel storm</em> over the last three years, achieving only mediocre results which have seen orders fall by 25% and 50 jobs go <em>as we battled the waves</em>. This is a situation we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and introduce the profitable new range of products we have been working on.</td>
</tr>
<tr>
<td>Solution</td>
<td>Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—<em>our plan for rescuing the ship</em> and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the <em>gains as we make headway against the wind</em>. Finally, we need to help each other overcome the problems that arise and celebrate our achievements along the way.</td>
</tr>
<tr>
<td>Benefits</td>
<td>We are doing this, in large part, <em>to turn away from the reef</em>: to secure a better future for each of us and to provide a more attractive deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be really well made and packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.</td>
</tr>
<tr>
<td>Call to Action</td>
<td>So let the word go forth from this <em>our darkest hour in the storm</em> that we are coming back, as a daring, renewed and stronger force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! <em>We are an invincible crew</em>, when each of us has the courage to play our assigned part. So let’s make it happen.</td>
</tr>
</tbody>
</table>

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NOTE: Highlighted underlining denotes metaphors
CONSOLIDATED SPEECH

Bait

Do we not stand together on the cusp of a colossal calling? A challenge that draws us from a dismal past to a bright and happy future, not to be galley slaves to hard work—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference.

The future might test our spirit, but will it break our resolve or see us fail? No!

Problem

Sadly though, while looking forward the organisation has actually gone backwards, weathering a cruel storm over the last three years, and achieving only ordinary outcomes. This has seen orders fall by 25% and 50 jobs go as we battled the waves. Is this a situation we can ignore? No, it's one we must address and now. To do so, we need to focus not on our weaknesses but on our strengths, improve the relationship with our customers and introduce our latest lucrative line of products we have been working on.

Solution

Going forward, we have three thrilling things to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for rescuing the ship and what it involves. Secondly, we need to implement a high performance and low error culture. This will mean clear targets for volume and quality, with plenty of performance pay available. And why performance incentives? So everyone can share in the gains as we make headway against the wind. Finally, we need to help each other overcome the problems that arise and celebrate our achievements along the way.

Benefits

So why are we doing this? In large part, we are doing this to turn away from the reef and take the company from decline and likely failure to a new era of growth and opportunity; to secure a better future for each of us and to provide a more attractive deal for our customers and shareholders. But do we come to work just to earn money? No! The world needs our new products but it needs them to be properly produced and packaged if we are to maximise our impact on pollution while we minimise the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

Call to Action

So let the word go forth from this our darkest hour in the storm that we are breaking with the past to embrace the future as a daring, fresh and formidable force. Why? To make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! We are an invincible crew, when each of us has the courage to play our assigned part. Are you fearless enough to play a key role? We need not look to others but to ourselves for the courage to do our bit. So be brave, brilliant and bold! And let's make it happen.

NOTE: Highlighted underlining denotes figurative language
Early Base Scripts

(NOTE: These early versions were subsequently adjusted through the pre-test process to arrive at those shown at Appendix 7)

LITERAL SPEECH

| Bait | We stand together on the verge of a great challenge! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. This challenge we face might test our spirit, but it will not break our resolve or see us fail. |
| Problem | Sadly though, the organisation has not been very successful over the last three years achieving only mediocre results, which have seen sales orders fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and successfully launch the suite of new products we have been working on. |
| Solution | Going forward, there are three strategic actions to take. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available, so everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our successes along the way. |
| Benefits | We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution and controlling costs. A world with cleaner air is a better world—for you, me, our families, and all the generations to come. |
| Call to Action | So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force for the future, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! We all just need to have courage and play our assigned role. So let’s make it happen. |
Early Base Scripts

(Appendix 8)

ALLITERATION SPEECH

<table>
<thead>
<tr>
<th>Bait</th>
<th>We stand together on the crest of a clearly colossal challenge! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. This challenge we face might test our spirit, but it will not break our resolve or see us fail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>Sadly though, the organisation has not been very successful over the last three years obtaining only ordinary outcomes, which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and launch the latest lucrative line of products we have been working on.</td>
</tr>
<tr>
<td>Solution</td>
<td>Going forward, there are three tactical things to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with plenty of performance pay possible, so everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our successes along the way.</td>
</tr>
<tr>
<td>Benefits</td>
<td>We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be proficiently produced and professionally packaged if we are to maximise our impact on reducing pollution and controlling costs. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.</td>
</tr>
<tr>
<td>Call to Action</td>
<td>So let the word go forth from this date and time that we are coming back as a fearless, fresh and formidable force for the future, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! So be brave, brilliant and bold, and play your assigned role! And let’s make it happen.</td>
</tr>
</tbody>
</table>
## ANTITHESIS SPEECH

<table>
<thead>
<tr>
<th>Bait</th>
<th>We stand together on the verge of a great challenge! A challenge that draws us from a sad dismal past to a happy future, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. This challenge we face might test our spirit, but it will not break our resolve or see us fail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>Sadly though, the organisation has been spectacularly unsuccessful over the last three years achieving only mediocre results, which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to focus not on our weaknesses but on our strengths, rebuild the relationship with our customers and successfully launch the suite of new products we have been working on.</td>
</tr>
<tr>
<td>Solution</td>
<td>Going forward, there are three strategic actions to take. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance and low error culture. This will mean clear targets for volume and quality, with lots of performance incentives available, so everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our successes along the way.</td>
</tr>
<tr>
<td>Benefits</td>
<td>We are doing this, in large part, to turn the company from decline and decay to a new era of growth and renewal; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution and minimise costs. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.</td>
</tr>
<tr>
<td>Call to Action</td>
<td>So let the word go forth from this date and time that we are coming back to the future as a daring, renewed and stronger force, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! We need not look to others for the courage, but to ourselves and the part we are prepared to take on. So let’s make it happen.</td>
</tr>
</tbody>
</table>
**RHETORICAL QUESTION SPEECH**

| Bait | We stand together on the verge of a great challenge, don’t we? A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. This challenge we face might test our spirit, but will it break our resolve or see us fail? No! |
| Problem | Sadly though, the organisation has not been very successful over the last three years achieving only mediocre results, which have seen sales orders fall by 25% and 50 jobs go as revenues declined. Is this a situation we can ignore? No, it’s one we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and successfully launch the suite of new products we have been working on. |
| Solution | Going forward, there are three strategic actions to take. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available. And why performance incentives? So everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our successes along the way. |
| Benefits | But why are we doing this? In large part, we are doing this to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work, right? The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution and controlling costs. A world with cleaner air is a better world—for you, me, our families, and all the generations to come. |
| Call to Action | So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force for the future. Why? To make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! Are you daring enough to play a key role? Let’s make it happen. |
METAPHOR SPEECH

| Bait | We stand together on the verge of a great challenge! A challenge that draws us forward, not to be slaves to hard work—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. This challenge we face might test our spirit, but it will not break our resolve or see us fail. |
| Problem | Sadly though, the organisation has been weathering a savage storm over the last three years achieving only mediocre results, which have seen sales fall by 25% and 50 jobs go as we battled the waves. This is a situation we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and successfully launch the suite of new products we have been working on. |
| Solution | Going forward, there are three strategic actions to take o. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the ship, and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available, so everyone can share in the gains as we make headway against the wind. Lastly, we need to help each other overcome entrenched problems and celebrate our successes along the way. |
| Benefits | We are doing this, in large part, to turn away from the reef; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution and controlling costs. A world with cleaner air is a better world—for you, me, our families, and all the generations to come. |
| Call to Action | So let the word go forth from this our darkest hour in the storm that we are coming back, as a daring, renewed and stronger force for the future, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can. Together, there is nothing we can’t do! We are an invincible crew, when each of us has the courage to play our assigned part. So let’s make it happen. |
Introduction
Thank you for agreeing to participate in this procedure. As part of the validation process for material to be used in an upcoming experiment, you are invited to review five scripts to help assess whether they adequately reflect the intended design. Other experts in the literary field will also independently undertake similar examinations, with the overall results being aggregated for final analysis.

Test Material
Attached are five scripts that reflect different treatments of a speech about a proposed change management initiative. The scripts incorporate figures of speech involving alliterations, antitheses, rhetorical questions and live and conventionalised metaphors.

Your Task
You are asked to do three things:

1. For the first script, you are asked to underline any conventionalised or frozen metaphors. Conventionalised or frozen metaphors are those expressions which were originally used figuratively, but which are now so commonly entrenched in the language as to become conventionalised or frozen (i.e. they are so well used and recognised as to no longer embody an accepted figurative meaning in normal usage). An example would be the word ‘embody’.

2. For the remaining scripts, you are asked to identify the alliterations, antitheses, rhetorical questions and live metaphors, by underlining each and assigning relevant codes. To assist in this task the following definitions and identifying codes are provided:
   - **Alliteration** (Code ‘A’)—repetition of initial consonant sounds or vowel sounds within a phrase. For example ‘He looked trim, taught and terrific’
   - **Antithesis** (Code ‘AT’)—conjoined opposites (i.e. contrasting/opposite ideas or words) in a sentence or phrase. For example ‘We’ve got hot prices on cool stuff’
   - **Rhetorical Question** (Code ‘RQ’)—nominal question asked purely for effect not information and not intended to be answered. For example ‘If you cut me, do I not bleed?’
   - **Live Metaphor** (Code ‘LM’)—allegorical substitution of one thing for another where it is not literally applicable, and where the meaning has not become conventionalised or frozen. For example ‘Achilles was a lion in battle’

3. Finally, you are invited to offer any comments you may have on the first two tasks or what you thought of the scripts. For example, you may feel that some of the figures of speech were odd or confusing, or could be improved. Alternately, you may simply wish to make a general comment about the exercise. Any and all feedback is most welcome.

Completed Responses
Your completed responses should be placed in the stamped envelope provided and mailed to the address shown on it. Thank you again for participating.

Please proceed …
Appendix 9

Pre-test by Expert Panel

SCRIPT 1

Instructions

Please underline any conventionalised or frozen metaphors you find in the script below—i.e. those expressions which originally had a figurative meaning, but which are now so well used and recognised as to no longer embody an accepted figurative meaning in normal usage.

We stand together on the verge of a great calling! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future we face might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has not been very successful over the last three years, achieving only mediocre results which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and launch the profitable new suite of products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy, our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the rewards of success. Lastly, we need to help each other overcome the problems that arise and celebrate our successes along the way.

We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution while controlling the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! We all just need to have courage and play our assigned role. So let’s make it happen.
Appendix 9

Pre-test by Expert Panel

SCRIPT 2

Instructions

Please underline any alliterations, antitheses, rhetorical questions or live metaphors you find in the script below and, as close as possible to each phrase, write the corresponding code to identify it. For ease of reference, the relevant identifying codes are:

| A = Alliteration | AT = Antithesis | RQ = Rhetorical Question | LM = Live Metaphor |

We stand together on the verge of a great calling! A challenge that draws us from a dismal past to a bright future, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future we face might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has been spectacularly unsuccessful over the last three years, achieving only mediocre results which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to focus not on our weaknesses but on our strengths, rebuild the relationship with our customers and launch the profitable new suite of products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance and low error culture. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the rewards of success. Lastly, we need to help each other overcome the problems that arise and celebrate our successes along the way.

We are doing this, in large part, to turn the company from decline and likely failure to a new era of growth and renewal; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution while minimising the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back to the future, as a daring, renewed and stronger force, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! We need not look to others for the courage, but to ourselves and the part we are prepared to take on. So let’s make it happen.
Pre-test by Expert Panel

SCRIPT 3

Instructions

Please underline any alliterations, antitheses, rhetorical questions or live metaphors you find in the script below and, as close as possible to each phrase, write the corresponding code to identify it. For ease of reference, the relevant identifying codes are:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Alliteration</td>
</tr>
<tr>
<td>AT</td>
<td>Antithesis</td>
</tr>
<tr>
<td>RQ</td>
<td>Rhetorical Question</td>
</tr>
<tr>
<td>LM</td>
<td>Live Metaphor</td>
</tr>
</tbody>
</table>

Do we not stand together on the verge of a great calling? A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future we face might test our spirit, but will it break our resolve or see us fail? No!

Sadly though, the organisation has not been very successful over the last three years, achieving only mediocre results which have seen sales fall by 25% and 50 jobs go as revenues declined. Is this a situation we can ignore? No, it’s one we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and launch the profitable new suite of products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available. And why performance incentives? So everyone can share in the rewards of success. Lastly, we need to help each other overcome the problems that arise and celebrate our successes along the way.

So why are we doing this? In large part, we are doing this to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But do we come to work just to earn money? No! The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution while controlling the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force in the years ahead. Why? To make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! Are you fearless enough to play a key role? Let’s make it happen.
Appendix 9

Pre-test by Expert Panel

SCRIPT 4

Instructions
Please underline any alliterations, antitheses, rhetorical questions or live metaphors you find in the script below and, as close as possible to each phrase, write the corresponding code to identify it. For ease of reference, the relevant identifying codes are:

A = Alliteration     AT = Antithesis     RQ = Rhetorical Question     LM = Live Metaphor

We stand together on the verge of a great calling! A challenge that draws us forward, not to be galley slaves to hard work—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future we face might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has been weathering a cruel storm over the last three years, achieving only mediocre results which have seen sales fall by 25% and 50 jobs go as we battled the waves. This is a situation we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and launch the profitable new suite of products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for rescuing the ship and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the gains as we make headway against the wind. Lastly, we need to help each other overcome the problems that arise and celebrate our successes along the way.

We are doing this, in large part, to turn away from the reef; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on reducing pollution while controlling the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this our darkest hour in the storm that we are coming back, as a daring, renewed and stronger force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! We are an invincible crew, when each of us has the courage to play our assigned part. So let’s make it happen.
Appendix 9

Pre-test by Expert Panel

SCRIPT 5

Instructions

Please underline any alliterations, antitheses, rhetorical questions or live metaphors you find in the script below and, as close as possible to each phrase, write the corresponding code to identify it. For ease of reference, the relevant identifying codes are:

A = Alliteration  
AT = Antithesis  
RQ = Rhetorical Question  
LM = Live Metaphor

We stand together on the cusp of a clearly colossal calling! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future we face might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has not been very successful over the last three years, obtaining only ordinary outcomes which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, rebuild the relationship with our customers and launch our latest lucrative line of products we have been working on.

Going forward, there are three thrilling things to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture with reduced errors. This will mean clear targets for volume and quality, with plenty of performance pay possible so everyone can share in the rewards of success. Lastly, we need to help each other overcome the problems that arise and celebrate our successes along the way.

We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be proficiently produced and professionally packaged if we are to maximise our impact on reducing pollution while controlling the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back as a fearless, fresh and formidable force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! So be brave, brilliant and bold, and play your assigned role! And let’s make it happen.
GENERAL COMMENTS

Instructions
Please record below any comments you may have on the tasks you have just completed or what you thought of the scripts. For example, you may have felt that some of the figures of speech were odd or confusing, or could be improved. Alternately, you may simply wish to make a general comment about the exercise. Any and all feedback is most welcome.

Returning Your Responses
Please place your completed responses (i.e. all 7 pages of this paper) in the stamped envelope provided and mail to the address shown on it. In case you have misplaced the envelope, the return address is:

John Carruthers  
4570 Phillips Road  
Mundaring 6073

Your responses will assist in the refinement of the test material and will remain confidential. Thank you again for participating.
Appendix 10

Equivalence Comprehension Pre-test

LITERAL SPEECH

Pre-test Review

Introduction
Thank you for agreeing to participate in this procedure. The box below contains a short speech to be given to 80 employees of a company by the newly appointed General Manager. The company produces pollution control equipment for industry. You are asked to read and then review the speech by answering the questions on the following page. At various places you are also asked to record the current time for assessment purposes. Please read the speech and answer all the questions in one go, without taking a break. It is expected that the entire procedure will take at least 20 minutes.

You are the only person to review this version of the speech so please answer the questions carefully and do your best. When finished, please follow the instructions at the bottom of the last page. Thank you again for participating. Please proceed …

Speech to be Reviewed

We stand together on the verge of a great calling! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future before us might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has not been very successful over the last three years achieving only mediocre results, which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and launch the profitable suite of new products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available, so everyone can share in the rewards of success. Lastly, we need to help each other overcome the problems that arise and celebrate our achievements along the way.

We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! We all just need to have courage and play our assigned role. So let’s make it happen.

Now, please answer the questions on the following page. In doing so you may return to read the speech any number of times. Please proceed …
ALLITERATION SPEECH

Pre-test Review

Introduction
Thank you for agreeing to participate in this procedure. The box below contains a short speech to be given to 80 employees of a company by the newly appointed General Manager. The company produces pollution control equipment for industry. You are asked to read and then review the speech by answering the questions on the following page. At various places you are also asked to record the current time for assessment purposes. Please read the speech and answer all the questions in one go, without taking a break. It is expected that the entire procedure will take at least 20 minutes.

You are the only person to review this version of the speech so please answer the questions carefully and do your best. When finished, please follow the instructions at the bottom of the last page. Thank you again for participating. Please proceed …

Speech to be Reviewed

We stand together on the cusp of a clearly colossal calling! A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future before us might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has not been very successful over the last three years obtaining only ordinary outcomes, which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and launch the latest lucrative line of products we have been working on.

Going forward, there are three thrilling things to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with plenty of performance pay possible, so everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our achievements along the way.

We are doing this, in large part, to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be proficiently produced and professionally packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back as a fearless, fresh and formidable force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! So be brave, brilliant and bold, and play your assigned role! And let’s make it happen.

Now, please answer the questions on the following page. In doing so you may return to read the speech any number of times. Please proceed …
Appendix 10

Equivalence Comprehension Pre-test

ANTITHESIS SPEECH

Pre-test Review

Introduction
Thank you for agreeing to participate in this procedure. The box below contains a short speech to be given to 80 employees of a company by the newly appointed General Manager. The company produces pollution control equipment for industry. You are asked to read and then review the speech by answering the questions on the following page. At various places you are also asked to record the current time for assessment purposes. Please read the speech and answer all the questions in one go, without taking a break. It is expected that the entire procedure will take at least 20 minutes.

You are the only person to review this version of the speech so please answer the questions carefully and do your best. When finished, please follow the instructions at the bottom of the last page. Thank you again for participating. Please proceed ...

Speech to be Reviewed

We stand together on the verge of a great calling! A challenge that draws us from a sad dismal past to a happy future, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future before us might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has been spectacularly unsuccessful over the last three years achieving only mediocre results, which have seen sales fall by 25% and 50 jobs go as revenues declined. This is a situation we must address and now. To do so, we need to focus not on our weaknesses but on our strengths, improve the relationship with our customers and launch the profitable suite of new products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance and low error culture. This will mean clear targets for volume and quality, with lots of performance incentives available, so everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our achievements along the way.

We are doing this, in large part, to turn the company from decline and likely failure to a new era of growth and renewal; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on pollution while we minimise the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back to the future, as a daring, renewed and stronger force, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! We need not look to others but to ourselves for the courage to do our duty. So let’s make it happen.

Now, please answer the questions on the following page. In doing so you may return to read the speech any number of times. Please proceed …
Introduction
Thank you for agreeing to participate in this procedure. The box below contains a short speech to be given to 80 employees of a company by the newly appointed General Manager. The company produces pollution control equipment for industry. You are asked to read and then review the speech by answering the questions on the following page. At various places you are also asked to record the current time for assessment purposes. Please read the speech and answer all the questions in one go, without taking a break. It is expected that the entire procedure will take at least 20 minutes.

You are the only person to review this version of the speech so please answer the questions carefully and do your best. When finished, please follow the instructions at the bottom of the last page. Thank you again for participating. Please proceed …

Speech to be Reviewed

Do we not stand together on the verge of a great calling? A challenge that draws us forward, not to work harder—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future before us might test our spirit, but will it break our resolve or see us fail? No!

Sadly though, the organisation has not been very successful over the last three years achieving only mediocre results, which have seen sales fall by 25% and 50 jobs go as revenues declined. Is this a situation we can ignore? No, it's one we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and launch the profitable suite of new products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for saving the company and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available. And why performance incentives? So everyone can share in the rewards of success. Lastly, we need to help each other overcome entrenched problems and celebrate our achievements along the way.

But why are we doing this? In large part, we are doing this to turn the company around; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But do we come to work just to earn money? No! The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this date and time that we are coming back as a daring, renewed and stronger force in the years ahead. Why? To make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! Are you fearless enough to play a key role? Let’s make it happen.

Now, please answer the questions on the following page. In doing so you may return to read the speech any number of times. Please proceed …
Appendix 10

Equivalence Comprehension Pre-test

METAPHOR SPEECH

Pre-test Review

Introduction
Thank you for agreeing to participate in this procedure. The box below contains a short speech to be given to 80 employees of a company by the newly appointed General Manager. The company produces pollution control equipment for industry. You are asked to read and then review the speech by answering the questions on the following page. At various places you are also asked to record the current time for assessment purposes. Please read the speech and answer all the questions in one go, without taking a break. It is expected that the entire procedure will take at least 20 minutes.

You are the only person to review this version of the speech so please answer the questions carefully and do your best. When finished, please follow the instructions at the bottom of the last page. Thank you again for participating. Please proceed …

Speech to be Reviewed

We stand together on the verge of a great calling! A challenge that draws us forward, not to be galley slaves to hard work—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future before us might test our spirit, but it will not break our resolve or see us fail.

Sadly though, the organisation has been weathering a savage storm over the last three years achieving only mediocre results, which have seen sales fall by 25% and 50 jobs go as we battled the waves. This is a situation we must address and now. To do so, we need to refocus on our strengths, improve the relationship with our customers and launch the profitable suite of new products we have been working on.

Going forward, we have three exciting tasks to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for rescuing the ship, and what it involves. Secondly, we need to implement a high performance culture, with reduced errors. This will mean clear targets for volume and quality, with lots of performance incentives available, so everyone can share in the gains as we make headway against the wind. Lastly, we need to help each other overcome entrenched problems and celebrate our achievements along the way.

We are doing this, in large part, to turn away from the reef; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But earning money is only part of why we come to work. The world needs our new products but it needs them to be efficiently produced and well packaged if we are to maximise our impact on pollution while we control the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.

So let the word go forth from this our darkest hour in the storm that we are coming back, as a daring, renewed and stronger force in the years ahead, to make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.

Together, there is nothing we can’t do! We are an invincible crew, when each of us has the courage to play our assigned part. So let’s make it happen.

Now, please answer the questions on the following page. In doing so you may return to read the speech any number of times. Please proceed …
Appendix 10

Equivalence Comprehension Pre-test

CONSOLIDATED SPEECH

Pre-test Review

Introduction
Thank you for agreeing to participate in this procedure. The box below contains a short speech to be given to 80 employees of a company by the newly appointed General Manager. The company produces pollution control equipment for industry. You are asked to read and then review the speech by answering the questions on the following page. At various places you are also asked to record the current time for assessment purposes. Please read the speech and answer all the questions in one go, without taking a break. It is expected that the entire procedure will take at least 20 minutes.

You are the only person to review this version of the speech so please answer the questions carefully and do your best. When finished, please follow the instructions at the bottom of the last page. Thank you again for participating. Please proceed …

Speech to be Reviewed

<table>
<thead>
<tr>
<th>Do we not stand together on the cusp of a clearly colossal calling? A challenge that draws us from a dismal past to a bright future, not to be galley slaves to hard work—though hard work is required—but to work smarter, because being smarter is how we can all make a real difference. The future before us might test our spirit, but will it break our resolve or see us fail? No!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sadly though, the organisation has been spectacularly unsuccessful in weathering a cruel storm over the last three years, obtaining only ordinary outcomes. This has seen sales fall by 25% and 50 jobs go as we battled the waves. Is this a situation we can ignore? No, it’s one we must address and now. To do so, we need to focus not on our weaknesses but on our strengths, improve the relationship with our customers and launch our latest lucrative line of products we have been working on.</td>
</tr>
<tr>
<td>Going forward, there are three thrilling things to do. Firstly, we all need to understand and embrace our bold new strategy—our plan for rescuing the ship and what it involves. Secondly, we need to implement a high performance and low error culture. This will mean clear targets for volume and quality, with plenty of performance pay possible. And why performance incentives? So everyone can share in the gains as we make headway against the wind. Lastly, we need to help each other overcome the problems that arise and celebrate our achievements along the way.</td>
</tr>
<tr>
<td>So why are we doing this? In large part, we are doing this to turn away from the reef and take the company from decline and likely failure to a new era of growth and renewal; to secure a better future for each of us and to provide a better deal for our customers and shareholders. But do we come to work just to earn money? No! The world needs our new products but it needs them to be proficiently produced and professionally packaged if we are to maximise our impact on pollution while we minimise the cost. A world with cleaner air is a better world—for you, me, our families, and all the generations to come.</td>
</tr>
<tr>
<td>So let the word go forth from this our darkest hour in the storm that we are coming back to the future, as a fearless, fresh and formidable force. Why? To make the world a better place. I would ask each of you to embrace the necessary changes and to make as big a difference as you can.</td>
</tr>
<tr>
<td>Together, there is nothing we can’t do! We are an invincible crew, when each of us has the courage to play our assigned part. Are you fearless enough to play a key role?</td>
</tr>
<tr>
<td>We need not look to others but to ourselves for the courage to do our duty. So be brave, brilliant and bold! And let’s make it happen.</td>
</tr>
</tbody>
</table>

Now, please answer the questions on the following page. In doing so you may return to read the speech any number of times. Please proceed …
## Appendix 10

### Equivalence Comprehension Pre-test

#### Questionnaire

Before answering any questions please record the current time in the boxes below.

**THE CURRENT TIME IS:**

Now, for each of the following, please place an ‘x’ in the box you feel best describes the extent to which you agree that the message contained in the statement was in the speech you have just read.

<table>
<thead>
<tr>
<th>CODE</th>
<th>NOTE: Codes (at left) removed from recipient copies—R=reversed scored, O=foil and F=factual statements</th>
<th>7 Strongly agree</th>
<th>6 Moderately agree</th>
<th>5 Slightly agree</th>
<th>4 Neither agree or disagree</th>
<th>3 Slightly disagree</th>
<th>2 Moderately disagree</th>
<th>1 Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>O 1.</td>
<td>Going forward, the company needs to reduce its costs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 2.</td>
<td>If the company is to have the greatest impact on reducing pollution and containing costs, it needs to design better products</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F 3.</td>
<td>Working smarter is how everyone can make a real difference</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 4.</td>
<td>Addressing the current situation will require everyone to work harder</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>5. The company faces a significant challenge</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 6.</td>
<td>Limited performance incentives may be available</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>7. The situation facing the company needs to be addressed now</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>8. To resolve its predicament the company needs to address three things</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 9.</td>
<td>Earning money is the only reason everyone comes to work</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 10.</td>
<td>The company has been very successful in the past three years</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>11. The company is unbeatable if everyone has the courage to play their part</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F 12.</td>
<td>In going forward, everyone is asked to make as big a difference as they can</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F 13.</td>
<td>A high performance culture will require clear targets</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 14.</td>
<td>To address the current situation, the company does not need to focus on its strengths</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>F 15.</td>
<td>Sales have fallen by 25% and 50% jobs have been lost in the last three years</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>R 16.</td>
<td>Sales revenue in the last three years has increased</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
### Equivalence Comprehension Pre-test

<table>
<thead>
<tr>
<th>CODE</th>
<th>NOTE: Codes (at left) removed from recipient copies—R=reversed scored, O=foil and F=factual statements</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>17. New product launches will need to be postponed</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>18. The challenge facing the company is drawing everyone forward</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>19. Going forward the company needs to improve performance and reduce errors</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>20. Performance incentives will allow everyone to share in the gains made</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>21. Turning the company around could help make the world a better place</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>O</td>
<td>22. The company's performance has fluctuated over the last decade</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>23. The world needs economically produced products that are properly packaged</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>24. The speaker does not expect the company to rebound as a particularly powerful force for the future</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>25. The company needs to address its problems to provide a better deal for its customers and shareholders</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>26. Recent results have not been outstanding</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>27. The speaker does not announce a definite intention to turn the company around</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>O</td>
<td>28. The proposed actions are being taken to turn the company around</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>O</td>
<td>29. Increased investment in new technology will help improve performance</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>30. The future facing the company could break everyone’s resolve</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>31. Not everyone needs to understand the company’s plan for the future</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>R</td>
<td>32. The speaker wants the message to be spread immediately about the intended repositioning of the company</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix 10

Equivalence Comprehension Pre-test

Before proceeding to the last section please record the current time in the boxes below.

THE CURRENT TIME IS: (AM OR PM?)

The following section relates to how much time and strain was involved in the preceding tasks. Please place an ‘x’ in the box you feel best describes the extent to which you agree with each statement.

<table>
<thead>
<tr>
<th>CODE</th>
<th>NOTE: Codes (at left) removed from recipient copies—R=reversed scored, O=foil and F=factual statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>33. I didn’t take a lot of time to answer the questions</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
<tr>
<td>R</td>
<td>34. I was careful about which answer I gave</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
<tr>
<td>R</td>
<td>35. I thought very hard about which answer to choose</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
<tr>
<td>R</td>
<td>36. I put a lot of effort into making each decision</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
<tr>
<td>R</td>
<td>37. I didn’t pay much attention while making each choice</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
<tr>
<td>R</td>
<td>38. I concentrated a lot while doing this task</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
<tr>
<td></td>
<td>39. It was difficult for me to decide which answer to give</td>
</tr>
<tr>
<td></td>
<td>Strongly agree                                    Moderate agree                                  Slightly agree                                  Neither agree or disagree                          Slightly disagree                                  Moderately disagree                                  Strongly disagree</td>
</tr>
<tr>
<td></td>
<td>7                                                6                                               5                                               4                                               3                                               2                                               1</td>
</tr>
</tbody>
</table>

FINAL QUESTIONS:

40. The speech you reviewed contained a number of expressions with a nautical theme. Please place an ‘x’ in the box you feel best describes the extent to which you enjoy things to do with ships and/or the ocean.

<table>
<thead>
<tr>
<th>Dislike</th>
<th>Like</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>…</td>
<td>…</td>
</tr>
<tr>
<td>Q40 &amp; 41  only asked on metaphor speech</td>
<td></td>
</tr>
</tbody>
</table>

41. What is your gender? (please place an ‘x’ in the appropriate box)

- Male
- Female

42. Please place a number in the box to show how many people have been asked to review this version of the speech.

Forwarding the Results

When finished, please save this file and forward it to John.Carruthers@dpc.wa.gov.au. Alternately, if you prefer anonymity in your responses, you may send your email to sandra.kiffin-petersen@uwa.edu.au where the file will be separated from the incoming email, collated with those from other respondents and forwarded in a de-identified form to the researcher. Either way, individual returns will remain confidential.

Also, if you have any concerns or questions about any aspect of this research, you are free to contact the project co-ordinator at the University of Western Australia: Dr Sandra Kiffin-Petersen, on (08) 6488 3070 or via email to sandra.kiffin-petersen@uwa.edu.au

Thank you again for participating.

NOTE: The Human Research Ethics Committee of the University of Western Australia requires that all respondents are informed that, if they have any complaints regarding the manner in which a research project is conducted, it may be given to the researcher or, alternatively to the Secretary, Human Research Ethics Committee, Registrar’s Office, University of Western Australia, 35 Stirling Highway, Crawley, WA 6009 (telephone number 6488-3703).
## Appendix 11

### Comprehension Statements Cross-referenced to Scripts

<table>
<thead>
<tr>
<th>Code</th>
<th>Equivalence Statements</th>
<th>Applies to Which Type of Script?</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td></td>
<td>Alliteration</td>
</tr>
<tr>
<td>R</td>
<td>1. The company is unbeatable if everyone has the courage to play their part</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>2. If the company is to have the greatest impact on reducing pollution and containing costs, it needs to design better products</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>3. The challenge facing the company is drawing everyone forward</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>4. Addressing the current situation will require everyone to work harder</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>5. The company faces a significant challenge</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>6. Limited performance incentives may be available</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>7. The situation facing the company needs to be addressed now</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>8. To resolve its predicament the company needs to address three things</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>9. Earning money is the only reason everyone comes to work</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>10. The company has been very successful in the past three years</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>11. The company is unbeatable if everyone has the courage to play their part</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>12. To address the current situation, the company does not need to focus on its strengths</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>13. Earning money is the only reason everyone comes to work</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>14. New product launches will need to be postponed</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>15. The company is unbeatable if everyone has the courage to play their part</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>16. Sales revenue in the last three years has increased</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>17. The challenge facing the company is drawing everyone forward</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>18. Going forward the company needs to improve performance and reduce errors</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>19. Performance incentives will allow everyone to share in the gains made</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>20. Turning the company around could help make the world a better place</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>21. The world needs economically produced products that are properly packaged</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>22. The speaker does not expect the company to rebound as a particularly powerful force for the future</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>23. Recent results have not been outstanding</td>
<td>✓</td>
</tr>
<tr>
<td>R</td>
<td>24. The speaker does not announce a definite intention to turn the company around</td>
<td></td>
</tr>
</tbody>
</table>

---

272 Appendix 11 – Comprehension Statements Cross-referenced to Scripts
## Comprehension Statements Cross-referenced to Scripts

<table>
<thead>
<tr>
<th>Code</th>
<th>Equivalence Statements</th>
<th>Applies to which type of script?</th>
<th>Alliteration</th>
<th>Antithesis</th>
<th>Rhetorical Question</th>
<th>Metaphor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28. The proposed actions are being taken to turn the company around</td>
<td></td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30. The future facing the company could break everyone's resolve</td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>31. Not everyone needs to understand the company’s plan for the future</td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32. The speaker wants the message to be spread immediately about the intended repositioning of the company</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>

Number of Instances: 8 8 8 8

NOTE: The sequence and numbering of statements reflects that used in the Equivalence Comprehension Pre-test. Missing statements 1, 22 and 29 reflect foil questions, while missing statements 3, 12, 13, 15, and 25 reflect factual questions.

‘R’ = Reversed-scored items
Appendix 12

Results of Equivalence Comprehension Pre-test

The results of the Equivalence Comprehension Pre-test were analysed and evaluated using the IBM SPSS™ Version 18 statistical analytics software (Coakes and Ong 2010; Field 2005). Missing values were first replaced using the mean substitution method. “0” responses to the question about how many people had been asked to review each version of the speech were replaced with “1” responses on the basis that the initial answers most likely reflected the number of people other than the respondents themselves. Reversed-scored questions were also appropriately recoded, after which the normality of the sample was assessed. Logarithmic transformation was attempted to normalise the sample but this was not successful due to the small sample size involved (i.e. only 8 responses per condition). Despite this, it was decided to proceed with the analysis in order to determine whether some overall insights could be achieved.

Cognitive Effort

Firstly, a Total Cognitive Effort variable was created from the source data by totalling the results of the 7-item cognitive effort scale (i.e. questions 33-39). The normality of this new variable and the existing Elapsed Time variable were both assessed and confirmed. A scatterplot followed by a bivariate correlation were then conducted with the results shown at Figure 26. This analysis confirmed a correlation between the Total Cognitive Effort and the Elapsed Time variables, with a moderate Pearson Statistic of .338. However, a similar correlation between the Total Cognitive Effort variable and the Cognitive Effort Manipulation Check could not be confirmed due to problems.

* Correlation is significant at the 0.01 level

---

84 This manipulation check comprised the final question in the pre-test package (i.e. Number 40 generally and Number 42 in the metaphor script). It asked respondents to record their understanding of how many people had been asked to review that version of the speech, in essence crosschecking the effectiveness of the initial
Appendix 12

Results of Equivalence Comprehension Pre-test

with the normality of the manipulation check variable caused by two extreme outliers and a large number of missing values that reduced the final sample size (i.e. N=31, including the extreme outliers).

Figure 27 records the results of the associated scatterplot and bivariate correlation, disclosing a Pearson Statistic of -.222. (Note: without the extreme outliers, a Pearson Statistic could not otherwise be calculated since the remaining responses were all constant).

Accuracy of Responses

To assess the accuracy of responses, two new variables were created: a Total Accuracy of Foil Questions variable and Total Accuracy of Factual Questions variable. The first variable reflected the total score from responses to the three foil statements (i.e. questions 1, 22 and 29), while the second variable reflected the total score from responses to the five factual statements (i.e. questions 3, 12, 13, 15, and 25). The normality of both new variables were assessed and confirmed. Scatterplots followed by bivariate correlations were then conducted between the Total Accuracy of Foil Questions and Total Cognitive Effort, and between the Total Accuracy of Factual Questions and Total Cognitive Effort. The individual results are shown at Figures 28 and 29.
Appendix 12

Results of Equivalence Comprehension Pre-test

This analysis was not able to confirm a correlation between the first pair of variables, indicating that there was no relationship between answers to the foil questions and the professed effort put in.

This outcome was also confirmed by the high mean score of 11.04 (with a high standard deviation of 4.43) for the assessed Total Accuracy of Foil Questions when all the foil questions made plausible but false assertions and the theoretically most-accurate mean was a score of 3 (i.e. each respondent recording the minimum *strongly disagree* score of ‘1’ for each of the 3 statements). The Pearson Statistic for the correlation between the Total Accuracy of Foil Questions to Total Cognitive Effort was -.165. The separate bivariate correlation undertaken to assess the Total Accuracy of Foil Questions to Elapsed Time also disclosed a negative Pearson Statistic of -.109. The correlation analysis undertaken in respect to the second pair of variables (i.e. the Total Accuracy of Factual Questions to Total Cognitive Effort) was able to confirm a correlation between the two, with a modest Pearson Statistic of .162. This outcome was confirmed by the healthy mean score of 31.25 for the assessed Total Accuracy of Factual Questions against a possible 35 for totally
Results of Equivalence Comprehension Pre-test

correct answers (i.e. each respondent recording the maximum strongly agree score of “7” for each of the 5 statements).

Equivalence

A One-way ANOVA was first undertaken to assess the variability in responses to each equivalence statement for each type of script. In all cases the $p$-value was greater than 0.05 indicating that the variance was not significant. Next, summary variables were created based on the mean response (across the whole sample) for each equivalence statement relative to a particular type of figurative expression, and each one’s counterpart: the mean result for the same statement in all the other non-figurative editions (excluding the consolidated speech which contained figurative expressions). The alignment of particular equivalence statements to each figurative form (i.e. in each type of script) was undertaken in line with the analysis shown in Appendix 11.

This resulted in four pairs of summary variables for subsequent equivalence analysis, namely: (1) the Mean of the Alliteration Questions and the Mean of the Non-alliteration Equivalent Questions, (2) Mean of the Antithesis Questions and the Mean of the Non-antithesis Equivalent Questions, (3) Mean of the Rhetorical Question Questions and the Mean of the Non-rhetorical Question Equivalent Questions, (4) Mean of the Metaphor Questions and the Mean of the Non-metaphor Equivalent Questions. In addition three other new variables were also created: the Mean of the Consolidated Speech, Mean of the Literal Speech and Mean of All the Non-literal Speeches. Descriptive statistics were then assessed to check the mean and standard deviation of the eight pairs of summary variables, which disclosed comparable statistics in all cases except for the standard deviation of the alliteration speech, as highlighted in Table 51. In this case the mean of the alliteration equivalence statements showed a significantly higher standard deviation of 1.01 compared with that of the non-alliteration equivalents at 0.59. This indicated that there was greater dispersion or variation in responses to the eight collective alliteration expressions than there was for the equivalent eight non-alliterative expressions in the other scripts.

In exploring this matter, separate descriptive statistics for each alliteration statement showed that the variation in the standard deviation between the alliteration and non-alliteration scripts was greatest for Statement No. 5 (i.e. “The company faces a significant
Results of Equivalence Comprehension Pre-test

Statement No. 5 was jointly aimed at assessing the alliterative phrase “...obtaining only ordinary outcomes” as well as the rhetorical expression “Is this a situation we can ignore. No, it’s one we must address and now” in the rhetorical question script. In hindsight, the rhetorical expression related more directly to the equivalence comprehension statement than the alliterative expression and therefore attracted a tighter response with a lower standard deviation. This effect on the counter variable (i.e. the Mean of the Non-alliteration Equivalent Questions), accounted for the bulk of the observed variance rather than any problem in the relative equivalence of the specific alliterative expression “obtaining only ordinary outcomes” with its non-alliterative counterpart “achieving only mediocre results”. Consequently, no script adjustments were seen as warranted.

The equivalence of the figurative and non-figurative expressions were then checked and confirmed with separate one-sample t-tests comparing the population means of the relative pairs of summary variables. In each case the $p$-value was higher than 0.05 as highlighted in Table 52, indicating that the variation between the pairs was not significant, thereby confirming the equivalence of the statements and the varying expressions in all scripts.

<table>
<thead>
<tr>
<th>TABLE 51 - DESCRIPTIVE STATISTICS FOR SUMMARY VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Mean of the Alliteration Questions</td>
</tr>
<tr>
<td>Mean of the Non-alliteration Equivalent Questions</td>
</tr>
<tr>
<td>Mean of the Antitheses Questions</td>
</tr>
<tr>
<td>Mean of the Non-antitheses Equivalent Questions</td>
</tr>
<tr>
<td>Mean of the Rhetorical Question Questions</td>
</tr>
<tr>
<td>Mean of the Non-Rhetorical Question Equivalent Questions</td>
</tr>
<tr>
<td>Mean of the Metaphor Questions</td>
</tr>
<tr>
<td>Mean of Non-metaphor Equivalent Questions</td>
</tr>
<tr>
<td>Valid N (list-wise)</td>
</tr>
</tbody>
</table>
A further complementary t-test was also conducted as shown in Table 53, comparing the variation between the literal speech and that for the total of all the others (this time including the consolidated speech). Again, the p-value was higher than 0.05 indicating that the variation between the pairs was not significant and reconfirming the overall equivalence of the statements and varying expressions.

###Motivational Resonance

The ‘motivational resonance’ of the nautical theme in the metaphor speech of the script was assessed and confirmed with three separate tests. First an independent-samples t-test was conducted on the results of question 40 of the metaphor script by gender, with the results shown at Table 54. Question 40 asked respondents to rate the extent to which they

---

**Table 52 - One-sample t-test of Summary Variables**

<table>
<thead>
<tr>
<th></th>
<th>Test Values</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean of the Alliteration Questions</td>
<td>5.8359</td>
<td>-.765</td>
<td>7</td>
<td>.469</td>
<td>-.2734</td>
<td>-1.1187 - .5719</td>
</tr>
<tr>
<td>Mean of the Antithesis Questions</td>
<td>5.5242</td>
<td>-.932</td>
<td>7</td>
<td>.382</td>
<td>-.2742</td>
<td>-1.0696 - .4212</td>
</tr>
<tr>
<td>Mean of the Rhetorical Question Questions</td>
<td>5.9336</td>
<td>1.852</td>
<td>7</td>
<td>.106</td>
<td>.3633</td>
<td>-.1005 - .8271</td>
</tr>
<tr>
<td>Mean of the Metaphor Questions</td>
<td>5.7188</td>
<td>-.297</td>
<td>7</td>
<td>.775</td>
<td>-.0440</td>
<td>-.3942 - .3063</td>
</tr>
</tbody>
</table>

*The test values reflect the respective means of the equivalent counter questions – i.e. the non-alliteration equivalent questions, non-antithesis equivalent questions, non-rhetorical question equivalent questions and non-metaphor equivalent questions.

---

**Table 53 - One sample t-test of Literal versus Other Types of Speech**

<table>
<thead>
<tr>
<th></th>
<th>Test Value</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean of the Literal Speech</td>
<td>5.7231</td>
<td>.859</td>
<td>7</td>
<td>.419</td>
<td>.1467</td>
<td>-.2572 - .5505</td>
</tr>
</tbody>
</table>

*The test value reflects the mean of all the non-literal scripts.

---

**Table 54 - Independent-samples t-test of Question 40**

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Question 40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.309</td>
<td>.599</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.017</td>
<td>5.644</td>
</tr>
</tbody>
</table>
Results of Equivalence Comprehension Pre-test

enjoyed things to do with ships and/or the ocean. The $p$-value for Levene’s test disclosed a probability (significance) greater than 0.05 which meant that the variances in the population were relatively equal. Consequently the t-value, degrees of difference (df) and 2-tail significance for the equal variance estimates could be used to determine whether differences actually exist. The 2-tailed significance of .351 (for ‘equal variances not assumed’) shows that the $p$-value is greater than 0.05, meaning that the two groups (i.e. men and women) come from the same population because no significant differences exist. In other words, when asked the direct question about the extent to which they liked things to do with ships and/or the ocean, both male and female respondents gave significantly similar responses indicating the existence of cross-gender ‘motivational resonance’ with the nautical theme.

Next, another independent-samples t-test was conducted to assess the variance in the mean responses by gender to each of the 8 metaphoric expressions used in the metaphor script. The results are shown in Table 55 and again the relative $p$-values for 2-tailed significance (as highlighted) were greater than 0.05, signifying that the mean of the two groups (i.e. men and women) were not significantly dissimilar and consequently there was cross-gender ‘motivational resonance’ with the nautical theme.
Finally, a summary t-test of all the metaphor questions combined, by gender, was also conducted to confirm the results above, with the findings shown in Table 56. Again, the relative p-value for the 2-tailed significance of .270 confirmed the results of previous tests about the existence of cross-gender ‘motivational resonance’ with the nautical theme.

<table>
<thead>
<tr>
<th>Question</th>
<th>Equal variances assumed</th>
<th>Equal variances not assumed</th>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>.051</td>
<td>.829</td>
<td>.000</td>
<td>6</td>
<td>1.000</td>
<td>.00</td>
<td>1.208</td>
<td>-2.955</td>
<td>2.955</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>.024</td>
<td></td>
<td>.000</td>
<td>5.702</td>
<td>1.000</td>
<td>.00</td>
<td>1.208</td>
<td>-2.993</td>
<td>2.993</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>9.000</td>
<td>.024</td>
<td>.000</td>
<td>6</td>
<td>.356</td>
<td>.25</td>
<td>.250</td>
<td>.862</td>
<td>.362</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>1.000</td>
<td></td>
<td>.000</td>
<td>6</td>
<td>.356</td>
<td>.25</td>
<td>.250</td>
<td>.862</td>
<td>.362</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>.000</td>
<td>1.000</td>
<td>.000</td>
<td>6</td>
<td>1.000</td>
<td>.00</td>
<td>.707</td>
<td>-1.730</td>
<td>1.730</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>.145</td>
<td>.716</td>
<td>.000</td>
<td>6.000</td>
<td>1.000</td>
<td>.00</td>
<td>.707</td>
<td>-1.730</td>
<td>1.730</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>2.455</td>
<td>.168</td>
<td>.000</td>
<td>6</td>
<td>1.000</td>
<td>.00</td>
<td>.540</td>
<td>-1.321</td>
<td>1.321</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>12.000</td>
<td>.013</td>
<td>.000</td>
<td>4.523</td>
<td>1.000</td>
<td>.00</td>
<td>.540</td>
<td>-1.433</td>
<td>1.433</td>
<td></td>
</tr>
</tbody>
</table>

Finally, a summary t-test of all the metaphor questions combined, by gender, was also conducted to confirm the results above, with the findings shown in **Table 56**. Again, the relative p-value for the 2-tailed significance of .270 confirmed the results of previous tests about the existence of cross-gender ‘motivational resonance’ with the nautical theme.
### Table 56 - Independent-samples T-test of all Metaphor Questions Combined

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig</td>
</tr>
<tr>
<td>Mean of the Metaphor Questions</td>
<td>Equal variances assumed</td>
<td>.043</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>-1.221</td>
</tr>
</tbody>
</table>
Appendix 13

Focus Group Pre-test—Discussion Questions

(NOTE: The researcher used these questions as the basis for generating a structured group discussion that explored all aspects of the test material other than the scripts. The question and answer block below was not given to respondents; rather it was used by the researcher to facilitate discussion and capture the results of the ensuing conversation)

Section 1: Respondent Instructions
After everyone has read the instructions ask the group the following questions:

Q1. Please briefly explain what you believe the instructions said.

Q2. What have you been specifically asked to do?

Q3. Describe the setting i.e. who is giving the speech, what is the context?

Q4. How many times will you hear the recorded speech?
Appendix 13

Focus Group Pre-test—Discussion Questions

Q5. Is there anything in the instructions that you did not understand or improvements you might suggest?

Q6. What do you think of the questionnaires, i.e. did you experience any problems?

Q7. Do you have any comments about specific questions?

Q8. Could you answer all the demographic questions (i.e. those About Yourself)?

Section 2: Demographic/Thinking Orientation Questionnaires

After everyone has filled-in the questionnaires ask the group the following questions:

Q6. What do you think of the questionnaires, i.e. did you experience any problems?

Q7. Do you have any comments about specific questions?

Q8. Could you answer all the demographic questions (i.e. those About Yourself)?
Focus Group Pre-test—Discussion Questions

Section 3: Final Persuasion Questionnaire

Play a short video of a TV news presenter reading a recent news item. Then ask everyone to evaluate the performance of the presenter using the final persuasion questionnaire. Advise them that the instruction in the questionnaire to “click on the button” should be taken to mean “tick a box”. After they have filled-in the questionnaire ask the group the following questions:

Q9. Did you understand the instructions for each question, were there any issues?

Q10. Were you able to complete the task, i.e. did you experience any problems?

Q11. Do you have any comments about specific questions or issues?

Q12. Is there anything you did not understand or improvements you might suggest?

Section 4: Motivational Resonance of Nautical Metaphors

Distribute copies of Attachment 1 and ask everyone to undertake the associated task in silence. When finished, ask them to pass the completed forms back to you. At this point the focus group exercise is complete. Thank everyone for participating.

ENDS
# Appendix 13

Focus Group Pre-test—Discussion Questions

ATTACHMENT 1.

### SENTENCE REVIEW

*Please read each of the eight sentences below and then write (in the column opposite) what you believe the underlined passage in each is saying.*

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Interpretation of underlined passage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A challenge that draws us forward, not to be galley slaves to hard work—though hard work is required—but to work smarter</td>
<td></td>
</tr>
<tr>
<td>2. The organisation has been weathering a cruel storm over the last three years</td>
<td></td>
</tr>
<tr>
<td>3. Organisational results have seen orders fall by 25% and 50 jobs go as we battled the waves</td>
<td></td>
</tr>
<tr>
<td>4. We all need to understand and embrace our bold new organisational strategy—our plan for rescuing the ship and what it involves</td>
<td></td>
</tr>
<tr>
<td>5. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the gains as we make headway against the wind</td>
<td></td>
</tr>
</tbody>
</table>

6. The organisation is doing this, in large part, to turn away from the reef

7. So let the word go forth from this our darkest hour in the storm that we are coming back

8. We are an invincible crew when each of us in the organisation has the courage to play our assigned part

**FINAL INFORMATION:**

9. The underlined passages in the eight sentences above reflect a consistent theme. Please provide one or two words (below) that you feel best describe that theme.

   … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … …

10. What is your gender? (please place an ‘x’ in the appropriate box)  
    Male    Female

THANK YOU for participating, the exercise is now complete. Please pass your completed form back to John Carruthers.

**NOTE:** The Human Research Ethics Committee of the University of Western Australia requires that all respondents are informed that, if they have any complaints regarding the manner in which a research project is conducted, it may be given to the researcher or, alternatively to the Secretary, Human Research Ethics Committee, Registrar’s Office, University of Western Australia, 33 Stirling Highway, Crawley, WA 6009 (telephone number 6488-3703).
Appendix 14

Results of Focus Group Pre-test

Respondent Instructions

Q1. *Please briefly explain what you believe the instructions said.*
Response: • Being asked to do a three-part survey
• Imagining a scenario to follow

Q2. *What have you been specifically asked to do?*
Response: • Provide response to a speech and reaction to a speaker

Q3. *Describe the setting i.e. who is giving the speech, what is the context?*
Response: • Listening to a speech by the General Manager
• I have been with the company for five years
• New products have recently been developed
• Impact will be managed by the General Manager then my Supervisor

Q4. *How many times will you hear the recorded speech?*
Response: • Once

Q5. *Is there anything in the instructions that you did not understand or improvements you might suggest?*
Response: • There is no indication of what the supervisor will speak to each person about. This generated some nervousness in terms of a perceived threat
• The tone of the second paragraph seemed to imply change and/or layoffs—could be improved by stressing “your role in the future of the company”
• There was no indication of what the General Manager will say
• A typing error was detected—“Imagine” misspelt as “Image” in the second paragraph

Demographic/Thinking Orientation Questionnaires

Q6. *What do you think of the questionnaires, i.e. did you experience any problems?*
Response: • Several respondents didn’t like the descriptors on the thinking orientation scale, they would have preferred ‘agree/disagree’ scale names rather than ‘definitely NOT TRUE/TRUE of myself’ scale names. The existing descriptors were wordy and hard to remember and slowed-down response times. (NOTE: Pacini and Epstein’s (1999) scale, including the descriptors, have been statistically validated in previous research)
• Not too bothered about having labels on all the intermediate points of the thinking orientation scale, as the midpoint was automatically considered neutral, but would have liked clear ‘sometimes/somewhat’ response points
• One respondent felt it was unclear that they were actually being asked for their opinion of themselves and suggested that the instruction should include the phrase “what is true of yourself”. (NOTE: The existing instruction already asked respondents to “…click the button that best reflects your belief about yourself”, in addition to the scale labels attached to the polar extremes reading ‘Definitely Not True/True of yourself’. Also, the personal pronoun ‘I’ was used in most of the questions to ensure that respondents were clear that they were being asked for their assessment of themselves)
• No questions were seen as hard to answer or unclear

Q7. *Do you have any comments about specific questions?*
Response: • Some questions seek the same information, but are asked differently
Results of Focus Group Pre-test

Q8. *Could you answer all the demographic questions (i.e. those About Yourself)?*

**Response:** ● Yes but one respondent felt that the delineation between professional and associated professional (as mentioned in question 45) called for a difficult subjective judgement. (NOTE: This concern is addressed by the fact that respondents mark the same box irrespective of their perspective)

Final Persuasion Questionnaire

Q9. *Did you understand the instructions for each question, were there any issues?*

**Response:** ● The instructions were very clear and no problems were experienced with different instructions for different questions

- One respondent found question two a little complicated, with some of the nominated feelings (e.g. Proud) being perceived as somewhat odd in the circumstances. (NOTE: All the adjectives (i.e. nominated feelings) are an inherent part of Watson et al’s (1988) positive affect scale which has been statistically validated in previous research)
- The ‘forced choice’ format worked okay, everyone was able to answer every question

Q10. *Were you able to complete the task, i.e. did you experience any problems?*

**Response:** ● Yes, all respondents were able to complete the task without any problems

Q11. *Do you have any comments about specific questions or issues?*

**Response:** ● No

Q12. *Is there anything you did not understand or improvements you might suggest?*

**Response:** ● No, except that one respondent felt the word ‘your’ could be placed in question 4 to make it clear whose response was being sought. (NOTE: The word ‘your’ was already in the question)

Motivational Resonance of Nautical Metaphors

*Instruction: Please read each of the eight sentences below and then write (in the column opposite) what you believe the underlined passage in each is saying.*

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>A challenge that draws us forward, not to be galley slaves to hard work</td>
<td>Male: Not to be unthinking, but not to fear hard work</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>The organisation has been weathering a cruel storm over the last three</td>
<td>Male: Going through difficult times</td>
</tr>
<tr>
<td>years</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisational results have seen orders fall by 25% and 50 jobs go as we</td>
<td>Male: Failed to reach targets due to poor structure</td>
</tr>
<tr>
<td>battled the waves</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Results of Focus Group Pre-test

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. We all need to understand and embrace our bold new organisational strategy—our plan for rescuing the ship and what it involves</td>
<td>• Accepting new strategy</td>
<td>• Plan for bouncing back</td>
</tr>
<tr>
<td></td>
<td>• Saving the company</td>
<td>• Strategy for saving business</td>
</tr>
<tr>
<td></td>
<td>• Plan to move organisation forward, bring positive change</td>
<td>• Plan to save our ship going down</td>
</tr>
<tr>
<td>5. This will mean clear targets for volume and quality, with lots of performance incentives available so everyone can share in the gains as we make headway against the wind</td>
<td>• Workers get to keep their jobs</td>
<td>• Everyone will get rewarded for hard work</td>
</tr>
<tr>
<td></td>
<td>• Move forward together despite hard times</td>
<td>• Everyone can benefit as business recovers</td>
</tr>
<tr>
<td></td>
<td>• Everyone can share in the company’s successes along the way</td>
<td>• Everyone who participates in saving the ship will be rewarded</td>
</tr>
<tr>
<td>6. The organisation is doing this, in large part, to turn away from the reef</td>
<td>• Avoiding future problems, looking ahead</td>
<td>• Doing this as a safer option</td>
</tr>
<tr>
<td></td>
<td>• Need to change dramatically otherwise company’s stuffed</td>
<td>• To avoid disaster</td>
</tr>
<tr>
<td></td>
<td>• Moving from risky ventures, keeping to safe waters</td>
<td>• Organisation was heading for a crash</td>
</tr>
<tr>
<td>7. So let the word go forth from this our darkest hour in the storm that we are coming back</td>
<td>• Regrowth and renewal</td>
<td>• Lowest point</td>
</tr>
<tr>
<td></td>
<td>• We will fight them on the beaches, etc.</td>
<td>• From the worst point</td>
</tr>
<tr>
<td></td>
<td>• The worst has passed and the future looks positive</td>
<td>• We have survived the worst</td>
</tr>
<tr>
<td>8. We are an invincible crew when each of us in the organisation has the courage to play our assigned part</td>
<td>• Do what you are told, don’t let others down</td>
<td>• Our team can make it through any challenges</td>
</tr>
<tr>
<td></td>
<td>• We are immortal</td>
<td>• We can overcome, we are a team</td>
</tr>
<tr>
<td></td>
<td>• Personnel are more than adequate to take on what is difficult and succeed</td>
<td>• We are stronger as a result of trials and tribulations</td>
</tr>
</tbody>
</table>

### Summary of Results

Female respondents were arguably better at decoding the intended meaning behind individual metaphors while male respondents were demonstrably better at naming the collective theme. The responses that detracted from the men’s performance in the decoding task included vague and confusing comments such as “failed to reach targets due to poor structure” (in respect to the metaphor as we battled the waves), “move forward together despite hard times” (in respect to the metaphor so everyone can share in the gains as we make headway against the wind) and “regrowth and renewal” (in respect to the metaphor from this our darkest hour in the storm). The responses that detracted from the women’s performance in the theme-naming task included esoteric answers by two of the three respondents such as the “company is struggling but trying to revive itself” and “good metaphor but torturing it”, both of which are comments unrelated to the request to name the theme.
### Rationality Scale

<table>
<thead>
<tr>
<th>Number</th>
<th>Item</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I try to avoid situations that require thinking in depth about something</td>
<td>21st</td>
</tr>
<tr>
<td>2</td>
<td>I’m not that good at figuring out complicated problems</td>
<td>6th</td>
</tr>
<tr>
<td>3</td>
<td>I enjoy intellectual challenges</td>
<td>40th</td>
</tr>
<tr>
<td>4</td>
<td>I am not very good at solving problems that require careful logical analysis</td>
<td>11th</td>
</tr>
<tr>
<td>5</td>
<td>I don’t like to have to do a lot of thinking</td>
<td>24th</td>
</tr>
<tr>
<td>6</td>
<td>I enjoy solving problems that require hard thinking</td>
<td>17th</td>
</tr>
<tr>
<td>7</td>
<td>Thinking is not my idea of an enjoyable activity</td>
<td>34th</td>
</tr>
<tr>
<td>8</td>
<td>I am not a very analytical thinker</td>
<td>30th</td>
</tr>
<tr>
<td>9</td>
<td>Reasoning things out carefully is not one of my strong points</td>
<td>16th</td>
</tr>
<tr>
<td>10</td>
<td>I prefer complex problems to simple problems</td>
<td>39th</td>
</tr>
<tr>
<td>11</td>
<td>Thinking hard and for a long time about something gives me little satisfaction</td>
<td>25th</td>
</tr>
<tr>
<td>12</td>
<td>I don’t reason well under pressure</td>
<td>5th</td>
</tr>
<tr>
<td>13</td>
<td>I am much better at figuring things out logically than most people</td>
<td>20th</td>
</tr>
<tr>
<td>14</td>
<td>I have a logical mind</td>
<td>4th</td>
</tr>
<tr>
<td>15</td>
<td>I enjoy thinking in abstract terms</td>
<td>35th</td>
</tr>
<tr>
<td>16</td>
<td>I have no problem thinking things through carefully</td>
<td>22nd</td>
</tr>
<tr>
<td>17</td>
<td>Using logic usually works well for me in figuring out problems in my life</td>
<td>19th</td>
</tr>
<tr>
<td>18</td>
<td>Knowing the answer without having to understand the reasoning behind it is good enough for me</td>
<td>36th</td>
</tr>
<tr>
<td>19</td>
<td>I usually have clear, explainable reasons for my decisions</td>
<td>2nd</td>
</tr>
<tr>
<td>20</td>
<td>Learning new ways to think would be very appealing to me</td>
<td>3rd</td>
</tr>
</tbody>
</table>

### Experientiality Scale

<table>
<thead>
<tr>
<th>Number</th>
<th>Item</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I like to rely on my intuitive impressions</td>
<td>31st</td>
</tr>
<tr>
<td>2</td>
<td>I don’t have a very good sense of intuition</td>
<td>14th</td>
</tr>
<tr>
<td>3</td>
<td>Using my gut feelings usually works well for me in figuring out problems in my life</td>
<td>37th</td>
</tr>
<tr>
<td>4</td>
<td>I believe in trusting my hunches</td>
<td>7th</td>
</tr>
<tr>
<td>5</td>
<td>Intuition can be a very useful way to solve problems</td>
<td>12th</td>
</tr>
<tr>
<td>6</td>
<td>I often go by my instincts when deciding on a course of action</td>
<td>1st</td>
</tr>
<tr>
<td>7</td>
<td>I trust my initial feelings about people</td>
<td>33rd</td>
</tr>
<tr>
<td>8</td>
<td>When it comes to trusting people, I can usually rely on my gut feelings</td>
<td>15th</td>
</tr>
<tr>
<td>9</td>
<td>If I were to rely on my gut feelings, I would often make mistakes</td>
<td>10th</td>
</tr>
<tr>
<td>10</td>
<td>I don’t like situations in which I have to rely on intuition</td>
<td>28th</td>
</tr>
<tr>
<td>11</td>
<td>I think there are times when one should rely on one’s intuition</td>
<td>38th</td>
</tr>
<tr>
<td>12</td>
<td>I think it is foolish to make important decisions based on feelings</td>
<td>32nd</td>
</tr>
<tr>
<td>13</td>
<td>I don’t think it is a good idea to rely on one’s intuition for important decisions</td>
<td>29th</td>
</tr>
<tr>
<td>14</td>
<td>I generally don’t depend on my feelings to help me make decisions</td>
<td>27th</td>
</tr>
<tr>
<td>15</td>
<td>I hardly ever go wrong when I listen to my deepest gut feelings to find an answer</td>
<td>23nd</td>
</tr>
<tr>
<td>16</td>
<td>I would not want to depend on anyone who described himself or herself as intuitive</td>
<td>26th</td>
</tr>
<tr>
<td>17</td>
<td>My snap judgments are probably not as good as most people’</td>
<td>18th</td>
</tr>
<tr>
<td>18</td>
<td>I tend to use my heart as a guide for my action</td>
<td>8th</td>
</tr>
<tr>
<td>19</td>
<td>I can usually feel when a person is right or wrong, even if I can’t explain how I know</td>
<td>13th</td>
</tr>
<tr>
<td>20</td>
<td>I suspect my hunches are inaccurate as often as they are accurate</td>
<td>9th</td>
</tr>
</tbody>
</table>

**NOTE:** Respondents rated items on a 5-point measurement scale ranging from definitely not true of myself (1) to definitely true of myself (5). 'R' denotes reverse scored items

---

85 Reflects the order in which the items subsequently appear in the Thinking Orientation Questionnaire as a result of the randomising process that followed the Focus Group Pre-test
Persuasion Construct Source Scales

Source Credibility Scale—McCroskey (1966) 12-Item Semantic Differential

Instructions: On the scales below, please indicate your feelings about ___________. Circle the number between the adjectives which best represents your feelings about ___________. Numbers “1” and “7” indicate a very strong feeling. Numbers “2” and “6” indicate a strong feeling. Numbers “3” and “5” indicate a fairly weak feeling. Number “4” indicates you are undecided or do not understand the adjectives themselves. Please work quickly. There are no right or wrong answers.

### Authoritiveness

<table>
<thead>
<tr>
<th>Adjective</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tbody>
<tr>
<td>Reliable</td>
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<td>Uninformed</td>
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<tr>
<td>Intelligent</td>
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<td>Valuable</td>
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<tr>
<td>Inexpert</td>
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<tr>
<th>Adjective</th>
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<th>4</th>
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<th>6</th>
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<td>Informed</td>
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<tr>
<td>Unintelligent*</td>
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<tr>
<td>Worthless*</td>
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<tr>
<td>Expert</td>
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### Character

<table>
<thead>
<tr>
<th>Adjective</th>
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<th>2</th>
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<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>Honest</td>
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<tr>
<td>Pleasant</td>
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<tr>
<td>Selfish</td>
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<tr>
<td>Awful</td>
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<tr>
<td>Virtuous</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Adjective</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tbody>
<tr>
<td>Dishonest*</td>
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<tr>
<td>Friendly</td>
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<tr>
<td>Unpleasant*</td>
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<tr>
<td>Unselfish</td>
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<tr>
<td>Nice</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sinful*</td>
<td></td>
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</tr>
</tbody>
</table>

NOTE: Items are presented here grouped by dimension. Users should randomly order the bipolar adjectives to avoid response set error variance.

* Reverse scoring should be performed for items with asterisks.
## Positive Affect Scale—Watson, Clark and Tellegen (1988)

The PANAS (Positive and Negative Affect Scales)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent [INSERT APPROPRIATE TIME INSTRUCTIONS HERE]. Use the following scale to record your answers.

<table>
<thead>
<tr>
<th>1 very slightly or not at all</th>
<th>2 a little</th>
<th>3 moderately</th>
<th>4 quite a bit</th>
<th>5 extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______</td>
<td>Interested (PA)</td>
<td>_______</td>
<td>Irritable (NA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Distressed (NA)</td>
<td>_______</td>
<td>Alert (PA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Excited (PA)</td>
<td>_______</td>
<td>Ashamed (NA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Upset (NA)</td>
<td>_______</td>
<td>Inspired (PA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Strong (PA)</td>
<td>_______</td>
<td>Nervous (NA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Guilty (NA)</td>
<td>_______</td>
<td>Determined (PA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Scared (NA)</td>
<td>_______</td>
<td>Attentive (PA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Hostile (NA)</td>
<td>_______</td>
<td>Jittery (NA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Enthusiastic (PA)</td>
<td>_______</td>
<td>Active (PA)</td>
<td></td>
</tr>
<tr>
<td>_______</td>
<td>Proud (PA)</td>
<td>_______</td>
<td>Afraid (NA)</td>
<td></td>
</tr>
</tbody>
</table>

We have used PANAS with the following time instructions:

- **Moment**: (you feel this way right now, that is, at the present moment)
- **Today**: (you have felt this way today)
- **Past few days**: (you have felt this way during the past few days)
- **Week**: (you have felt this way during the past week)
- **Past few weeks**: (you have felt this way during the past few weeks)
- **Year**: (you have felt this way during the past year)
- **General**: (you generally feel this way, that is, how you feel on the average)

**NOTE**: *PA* means Positive Affect and *NA* means Negative Affect
Persuasion Construct Source Scales

**Rationality Scale—Hirschman (1986)**

The author did not identify the lead-in question used in her study, nor was it available through other sources (e.g. Bruner and Hensel 1992). However, the lead-in question or stem used to accompany the following scale in the present study was trialled in the Focus Group Pre-test. The direction of this scale was also reversed for the present study in order to be consistent with the direction in the other scales.

<table>
<thead>
<tr>
<th>Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Reverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical</td>
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<td>6</td>
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</table>

**Argument Strength Scale—Zhang (1996)**

The author did not identify the lead-in question used in his study, nor was it available through other sources (e.g. Bruner and Hensel 1992). However, the lead-in question or stem used to accompany the following scale in the present study was trialled in the Focus Group Pre-test.

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See also Bruner and Hensel (1992), pp. 688-689 for use of the 7-point scale.