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**Constructing the Self:
Conversations and Cardiovascular Reactivity**

A thesis presented in partial fulfilment of the requirements for the
degree of Doctor of Philosophy in Psychology at Massey University

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Abstract

This thesis develops a theory suggesting that the cardiovascular reactivity exhibited during language use is explicable in terms of self-construction processes. Social constructionist ideas regarding the constructive nature of language were drawn on to outline the ways in which individuals obtain and maintain a sense of self in conversations and other episodes of language use. Three factors regarding conversations were identified as central to self-construction processes, namely the context in which the conversation occurs, the content of the language used, and the resources the individual brings to any particular talking episode. This conceptual scheme was then used to interpret and integrate many diverse findings regarding cardiovascular reactivity, resting blood pressure and cardiovascular disease.

Based on this theoretical account, it was hypothesized that conversations about the self would be related to greater cardiovascular reactivity than conversations not focused on the self, and further, that conversations about private aspects of oneself would be related to greater cardiovascular reactivity than conversations about public aspects of oneself. The magnitude of differences in reactivity across the three conversations were expected to depend upon various resources the individual brought into the situation, especially their private and public self-consciousness, social competence, tendency to disclose, usual extent of conversations and their usual comfort felt during conversations. To test these hypotheses an experimental procedure was developed where participants had their blood pressure and heart rate monitored every minute (for approximately 35 minutes) by an automatic blood pressure monitor. During this time they were engaged in three conversations with the researcher about private self, public self, and non-self topics. This procedure was subsequently used on 102 women who, following the experiment, completed a questionnaire which included measures of the relevant individual resources.

Results showed that as predicted, blood pressure was most reactive when participants talked about aspects of their private self, and least reactive during non-self talk. Heart rate, however, was most reactive when participants talked about aspects of their public self. Of the individual resource variables, usual extent of conversations and usual comfort of conversations modified the differences in reactivity across the private self, public self and non-self talking conditions, both separately and in combination. Differences in diastolic blood pressure and mean arterial pressure reactivity across the

three conditions depended on both the usual extent individuals engaged in conversations and how comfortable they usually feel doing so. Unexpectedly, when these resources were considered, reactivity observed during public self talk was significantly different from reactivity observed during either private self or non-self talk.

Overall the results broadly supported the present self-construction account of cardiovascular reactivity during language use. They also highlighted the importance of conversational resources, most notably usual extent and comfort of conversations, in affecting cardiovascular reactivity during any specific conversation. The thesis concludes with some reflections on social constructionist ideas, the realist paradigm, and the nature of language in cardiovascular reactivity research.

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Table of Contents

Abstract	ii
Acknowledgements	iv
List of Appendices	ix
List of Tables	ix
List of Figures	xi
Introductory Overview	1
Chapter 1 Language and Self	3
The Nature of Language	4
The Nature of Self	6
The Changing Nature of Self in Western History	7
The Cultural Nature of Self	8
Self and Language	10
Constructing a Sense of Self in Conversation	12
Language Content	15
Language Context	16
Speakers' Differences	19
Chapter 2 Physiological Correlates of Self Construction Processes:	
Cardiovascular Reactivity During Language Use	23
The Cardiovascular System and Cardiovascular Reactivity	24
Cardiovascular Reactivity during Language Use	26
Self-Construction Processes	29
Factors that Influence Cardiovascular Reactivity during Language Use ..	30
Language Content	31
Context	33
Transient Individual Factors	35
Stable Individual Factors	38
Evidence for Self-Construction Processes	43
Engagement-Involvement	43
Self-Construction	45
Language Content	46
Language Context	47
Speakers' Differences	50

Chapter 3 The Reactivity Hypothesis, Resting Blood

Pressure Levels and Cardiovascular Disease	53
Cardiovascular Disease and Hypertension	54
The Reactivity Hypothesis	55
Evidence for Construction Processes	58
Changes in Social Context	58
Migration	58
Modernization	60
Life Events	62
Social Networks and Support	64
Individual Resources	69
Personality	69
Type A and Hostility	72
Self-Reference	75
Sex and Race	76
Language and Health	79

Chapter 4 Self Construction Processes and

Cardiovascular Reactivity: A Theoretical Account	83
Summary of the Argument	83
Important Factors in Self-Construction Processes	85
Conversation Context	86
Language Content	87
Individual Resources	88
Self-Consciousness	89
Social Competence	90
Extent and Comfort of Conversing	92
Disclosure	93
Combined Individual Resources	95
Testing the Theory	97
The Laboratory Context	97
Hypotheses	98
General Effect	99
Main Effect	99
First Order Interactions	99
Second Order Interactions	100
Third Order Interaction	100
Participants	100

Chapter 5 The Pilot Study	102
Introduction	102
Measuring Cardiovascular Reactivity	103
Accustomisation	103
Baseline Measurement and Rest Periods	104
Number of Participants	107
Method	107
Participants	107
Context	107
Language content	108
Equipment	110
Procedure	110
Validity Check and Feedback	112
Results	112
Analytic Strategy	113
Measurement of Reactivity	114
Validation of Language Content Manipulation	115
Verbal Feedback	115
Participants' Ratings of Talking Sections	115
Cardiovascular Levels Across Baselines	116
Baseline Activity: Resting versus Spot the Difference	117
Verbal Feedback	117
Statistical Analyses	117
Cardiovascular Levels During Talking	117
Cardiovascular Reactivity During Talking	118
Effect Sizes and Statistical Power	119
Discussion	119
Chapter 6 The Main Study	124
Method	125
Participants	125
Language Content: Topics	125
Cardiovascular Measures	127
State Measures	127
Psychological Questionnaire Measures	128
Self-Consciousness	128
Social Competence	128
Self-Disclosure	129
Conversational Resources	130
Procedure	131

Chapter 6 Continued	
Results	133
Cardiovascular Variables	133
Psychological, Age, Self-Reference and State Variables	133
Validation of Language Content Manipulation	134
Relationships Among and Between Psychological and Age Variables with Cardiovascular Variables	135
Differences in Cardiovascular Levels Across Talking and Baseline Sections	136
Differences in Cardiovascular Reactivity Across Talking Conditions	137
Interaction Effects Between Talking Condition and Psychological Variables on Cardiovascular Reactivity	138
Analytic Strategy	138
Lower-Order Interaction Analyses	139
Higher-Order Interaction Analyses	142
Chapter 7 Discussion: Conversation Content, Conversational Resources and Cardiovascular Reactivity	147
Conversation Content	147
Private Versus Public Self Talk	148
Self Versus Non-Self Talk	149
Individual Resources	150
Conversational Resources:	
Usual Extent and Comfort of Conversations	150
The Nature of Public Self Talk	152
Private Self-Consciousness, Public Self-Consciousness, Disclosure and Social Competence	155
Support for a Self-Construction Account of Cardiovascular Reactivity?	155
The Present Study: Problems and Future Possibilities	156
Chapter 8 Reflections	161
Social Constructionism	161
The Nature of Cardiovascular Reactivity Language	164
Language and Physiology	165
References	168

List of Appendices

Appendix A	Information Sheet, Letter to Participants and Consent Form	190
Appendix B	Instructions for Each Experimental Section	193
Appendix C	SPSS/PC Commands	194
Appendix D	Blood Pressure and Language Questionnaire	196
Appendix E	Paper Reporting the Development and Psychometric Properties of the Speaking Extent and Comfort Scale (SPEACS)	204
Appendix F	Correlations Between Psychological, Age and Cardiovascular Variables	213
Appendix G	Results of Interaction Analyses	215
Appendix H	Results of Multiple Regression Analyses	217

List of Tables

Table 5.1	Univariate F-Values, Means and Standard Deviations of Each Baseline Section for SBP, DBP, HR and MAP	116
Table 5.2	Differences in Mean SBP, DBP, HR and MAP During Spot the Difference and Resting Baseline Activities	117
Table 5.3	Paired t-Values, Means and Standard Deviations of Talking and Baseline Sections for SBP, DBP, HR and MAP	118
Table 5.4	Univariate F-Values, Means and Standard Deviations of Each Talking Section for SBP, DBP, HR and MAP	118
Table 5.5	F-Values, Means and Standard Deviations of SBP, DBP, HR and MAP Reactivity Across Three Talking Sections	119

List of Tables

Table 5.6	Simple Contrasts of Talking Conditions on SBP, DBP, HR and MAP Reactivity	119
Table 6.1	Correlations, Means and Standard Deviations Among Psychological and Age Variables	135
Table 6.2	Means and Standard Deviations for Cardiovascular Levels Across Individual Baselines and Overall Baseline and Talking Sections ...	136
Table 6.3	Omnibus and Simple Contrast Univariate F-Values, Means and Standard Deviations for SBP, DBP, HR and MAP Levels Across Talking Conditions	137
Table 6.4	Omnibus and Simple Contrast Univariate F-Values, Means and Standard Deviations for SBP, DBP, HR and MAP Reactivity Across Talking Conditions	138
Table F.1	Correlations Between Psychological, Age and Cardiovascular Resting Level Variables	213
Table F.2	Correlations Between Psychological, Age and Cardiovascular Reactivity Variables	214
Table G.1	Linear and Curvilinear Interaction Effect Results of Psychological Variable By Talking Condition on Cardiovascular Reactivity	215
Table G.2	Linear and Curvilinear Interaction Effect Results of Combinations of Psychological Variables By Talking Condition on Cardiovascular Reactivity	216
Table H.1	Multiple Regression Results Showing the Impact of Psychological Variables on Cardiovascular Reactivity Within Each Talking Condition	217
Table H.2	Multiple Regression Results Showing the Combined Impact of Extent and Comfort of Talk on Cardiovascular Reactivity Within Each Talking Condition	218

List of Figures

- Figure 1** Regression Slopes Displaying the Impact of Usual Extent of Conversations on DBP Reactivity During Three Kinds of Talk 141
- Figure 2** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on MAP Reactivity During Three Kinds of Talk 141
- Figure 3** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on MAP Reactivity During Three Kinds of Talk Among People with Low Levels of Conversation Extent 143
- Figure 4** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on MAP Reactivity During Three Kinds of Talk Among People with Medium Levels of Conversation Extent 143
- Figure 5** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on MAP Reactivity During Three Kinds of Talk Among People with High Levels of Conversation Extent 143
- Figure 6** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on DBP Reactivity During Three Kinds of Talk Among People with Low Levels of Conversation Extent 145
- Figure 7** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on DBP Reactivity During Three Kinds of Talk Among People with Medium Levels of Conversation Extent . . 145
- Figure 8** Regression Slopes Displaying the Impact of Usual Comfort Felt during Conversations on DBP Reactivity During Three Kinds of Talk Among People with High Levels of Conversation Extent 145

Introductory Overview

A well-documented psychophysiological phenomenon has become apparent in the previous two decades. Researchers have consistently demonstrated that whenever a person speaks, whether in conversation or alone, the cardiovascular system increases in activity. Blood pressure and heart rate rise as soon as speech is initiated and remain at these higher levels until speech ceases, when they return quickly to their previous levels. However, this phenomenon is not well understood at present. Research shows that the cardiovascular activity is not due to the motor movements required to produce the speech sound. In fact, the same responses occur while deaf people communicate in sign language, and while people write. Why the cardiovascular system is so responsive to speech and communication is currently a matter for speculation.

The aim of my thesis is to focus on this puzzling phenomenon and to suggest a conceptual scheme that is able to integrate diverse empirical findings in the psychophysiological literature regarding cardiovascular changes during talk and communication. The conceptual scheme draws on social constructionist ideas to make sense of the phenomenon. It treats language use as the primary aspect of the physiological findings, and uses the constructionist notion that when people use language they are constructing a sense of self. The constructionist perspective (outlined in Chapter 1) helps to make sense of the cardiovascular reactivity phenomenon with the idea that self-construction processes during language use are reflected in cardiovascular activity. This perspective also makes sense of various empirical findings regarding cardiovascular reactivity, namely the diverse range of psychological and social factors that have been found to influence the extent of cardiovascular activation whenever a person speaks (Chapter 2). The proposed conceptual scheme also receives support through its ability to integrate some of the empirical findings regarding resting blood pressure levels and cardiovascular disease, as well as more general findings on health and illness (Chapter 3).

Following the conceptual outline and theoretical integration of physiological, psychophysiological and epidemiological findings, a number of hypotheses are derived from the theoretical framework. These are outlined and detailed, with theoretical and empirical justification (Chapter 4). The remainder of the thesis concerns the experimental test of these hypotheses.

Prior to carrying out the main study, a pilot study was undertaken to investigate various conceptual and practical issues regarding the research design, the experimental procedure and the measurement of cardiovascular reactivity. These issues are outlined and the method and results of the pilot study are provided and discussed (Chapter 5). The experimental test of the hypotheses derived from the present theoretical account is described, including its method and the results obtained (Chapter 6). These results are discussed in relation to the theoretical framework in Chapter 7, along with possible problems with the study and possibilities for future research. Finally, as this thesis drew on ideas from social constructionism yet tested these ideas in a realist paradigm, a number of issues are raised. These issues, as well as the nature of the current endeavour, are reflected on in the final chapter.