

The Effect of Distraction on Fear Reduction during *In Vivo*
Exposure for Spider-Fearful Individuals: Exploring the
Relationship between Fear Level and Distraction Load

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This thesis is submitted as part requirement for the degree of

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Declaration

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

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2012

Dedication

I dedicate this thesis to my late grandparents, Evans John Raymond Flynn (23.04.1920 - 09.06.1996), and Linda Ellen Flynn (21.06.1924 - 11.02.2011). Your influence on my life has been profound, and I only wish you were here to help me celebrate this achievement as I know you would both be so proud. I miss you both everyday.

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Abstract

Exposure-based therapy is currently the treatment of choice for a number of specific phobias (Antony & Barlow, 2002). While a myriad of studies have been conducted investigating exposure characteristics, such as frequency and duration, or comparing exposure to other forms of treatment, few studies have investigated the mechanisms of change underlying fear reduction. The emotional processing model (Foa & Kozak, 1986, 1998) claims that full attention to the feared stimulus during exposure is required for fear reduction to take place. However, some studies have found that directing attention away from the feared stimulus can facilitate greater and more rapid fear reduction than exposure, where attention is directed toward the phobic stimuli (Johnstone & Page, 2004; Oliver & Page, 2003, 2008; Penfold & Page, 1999). Further, some studies have observed an interaction between fear level and distraction load, whereby high levels of fear benefit more from high-load distracters, while low levels of fear benefit more from low-load distracters or no distraction at all (Johnstone & Page, 2004, 2007c; Penfold & Page, 1999).

Study 1 investigated jointly the roles of distraction load, operationalised using a continuous performance task (CPT) and fear level over time with a sample of spider-fearful individuals. Specifically, it was hypothesised that fear level and distraction load would interact, such that participants with relatively high levels of stimulus-bound fear in exposure one would benefit more from a high-load distracter, while those with relatively low stimulus-bound fear in exposure two would benefit more from a low-load

distracter. Contrary to the emotional processing model's prediction, results demonstrated that treatment was effective for all groups, regardless of distraction load, as evidenced by within- and between-exposure session reductions in fear (as assessed by self-report, behavioural, and physiological measures of fear). Subjective ratings of anxiety demonstrated partial support for the fear level-distraction load interaction. However, results were contaminated by practice effects of the distracter for the groups with constant load across both exposure sessions and by the relatively low anxiety sample used.

Study 2 aimed to overcome the practice effects of the distraction tasks observed in Study 1 for individuals repeating the same counting task for both exposure sessions. A CPT was used to operationalise new counting tasks. These new tasks were confirmed to load equally on working memory, providing a more consistent load than that used in Study 1.

Study 3 applied the newly operationalised counting-based distraction tasks to a higher anxiety sample of spider fearful subjects in a replication of Study 1. It was again predicted that all groups would experience a reduction in fear, further supporting the beneficial effects of distracted exposure, and that the fear level-distraction load interaction would be demonstrated. Support for distracted exposure was found with both within- and between-exposure session reductions on most indices for all groups. The interaction was partially supported, as evidenced by blood pressure ratings. However, this trend did not generalise to other measures, which was attributed to

desynchrony between the physiological, subjective, and behavioural response systems. Results indicated that fear reduction can occur under distracted conditions, but did not offer consistent support for the fear level - distraction load interaction. Results are discussed with respect to both their theoretical contribution to the literature on the processing of phobic stimuli and to their implications for clinical practice.

TABLE OF CONTENTS

Title	i
Declaration of Independent work	ii
Dedication	iii
Acknowledgements	iv
Abstract	v
Table of Contents	viii
List of Appendices	xi
List of Electronic Appendices	xii
List of Tables	xiii
List of Figures	xiv

CHAPTER 1

Theoretical Models of Exposure Therapy and the Changing View on the Use of Distraction in Treatment of Specific Phobia

	1
Frameworks that shed light on the Mechanisms of Change	4
Early (Behavioural) Models	4
Cognitive Models	8
Summary of Behavioural and Cognitive Models	10
Emotional Processing Models	11
Formal Network Theory	17
Review of the Clinical Relevance of the Distraction Literature	20
Distraction as Detrimental to Fear Reduction	25
Mixed Distraction Findings (short-term vs. long-term)	29
Distraction as having no effect or a beneficial effect on Fear Reduction	32
Operationalising Distraction (Factors to consider)	39
Anxiety, Instruction and Attentional Direction	43
Working Memory as a Framework to Operationalise Distraction	45
General Summary of the Distraction Literature	61
Understanding Distraction Literature in the context of existing theories	62

CHAPTER 2

Study 1: Establishing the Relationship between Distraction Load and Fear Level over Time

	68
Introduction	68
Methodological Considerations	70
Hypotheses	76
Method	78
Participants	78
Materials	79
Self Reported Fear of Spiders	79
Behavioural Measure of Fear of Spiders	80
Physiological Measures of Fear of Spiders	81
Phobic Stimuli	82

Experimental Manipulation	82
Manipulation Checks	83
Design	85
Procedure	85
Results	89
Manipulation Checks	89
Dependent Variables Pre-Treatment	91
Fear Activation	91
Analysis of Dependent Variables	92
Within and Between-Exposure Session Analysis	92
Pre-Treatment versus Post exposure session-2	100
Further Investigation of Counting Errors	101
Counting Error Stability for High- and Low-Load Tasks	104
Discussion	106
Findings regarding overall Treatment Effectiveness	107
Findings regarding the Interaction between Fear Level and Distraction Load	110
CHAPTER 3	
Study 2: Using a Continuous Performance Task to establish working memory load of distraction tasks, screen for practice effects, and re-operationalise compromised counting tasks.	121
Introduction	121
Aim 1: Investigate Practice Effects	124
Aim 2: Operationalise New Distraction Tasks	125
Method	125
Participants	125
Materials	126
Experimental Hardware	126
Experimental Software	126
Experimental Design	127
Procedure	128
Results	132
Redefining the Function of Counting Errors in the Context of Study 2	132
Aim 1: Establishing Practice Effects	133
Aim 2: Operationalising new Distraction Tasks	135
Discussion	137
CHAPTER 4	
Study 3: Further Investigating the Relationship between Distraction-Load and Fear-Level over Time in a Higher Anxiety Sample with Re-operationalised Distraction Tasks.	143
Introduction	143
Hypotheses	145
Method	147

Participants	147
Materials	148
Procedure	152
Results	155
Success of Screening Procedure Introduced in Study 3	155
Manipulation Checks	157
Counting Error Stability for High- and Low-Load Tasks	162
Dependent Variables Pre-Treatment	164
Fear Activation	164
Analysis of Dependent Variables	165
Within and Between-Session Analysis	165
Pre-Treatment versus Post exposure session-2	178
Discussion	179
Overall Treatment Effectiveness of Distracted Exposure	181
Interaction between Fear Level and Distraction Load	184
CHAPTER 5	
General Discussion	192
Summary of the Main Findings of the Research Program	193
Methodological Strengths	195
Limiting Further Variability	195
Use of Operationalised Distracters	195
Number and Duration of Exposure Sessions	196
Categorisation of Participants' Anxiety	198
Methodological Limitations	198
Lack of follow-up session	198
Unreliability of Physiological Measures	199
Affective Quality of the Distraction Task	203
Distraction Load Manipulation potentially too subtle	204
Selection of Fearful as opposed to Phobic Sample	205
Discrepancy in Counting Duration between Studies	206
Implications of the Research Program	207
Theoretical Implications	207
Broad Implications for Mechanisms of Change Research	212
Clinical Implications	215
Conclusions	217
REFERENCES	219

APPENDICES

Appendix A: Study 1 Noticeboard Advertisement	235
Appendix B: Newspaper Article (Melville Times)	236
Appendix C: Fear of Spiders Questionnaire (FSQ)	237
Appendix D: Anxiety Disorders Interview Schedule for DSM-IV (ADIS)	238
Appendix E: SUD Visual Analogue Scale	240
Appendix F: Behavioural Approach Task (BAT)	241
Appendix G: BAT Step 1 (Photo of <i>Eurypelma Spinicrus</i>)	242
Appendix H: BAT Steps 3 to 10 (Actual <i>Eurypelma Spinicrus</i> used)	243
Appendix I: Counting Task Instructions (Study 1: High-Load Task)	244
Appendix J: Counting Task Instructions (Study 1: Low-Load Task)	245
Appendix K: Study 1 Manipulation Checks	246
Appendix L: Study 1 Information Letter	247
Appendix M: Study 1 Consent Form	249
Appendix N: Picture of Black House Spider (for pre-intervention FSQ)	250
Appendix O: Study 1 Screening Tool (Similarity of Spiders Scale)	251
Appendix P: Study 2 Information Letter	252
Appendix Q: Study 2 Consent Form	254
Appendix R: Instructions for Verbal CPT (High-Load)	255
Appendix S: Instructions for Verbal CPT (Low-Load)	256
Appendix T: Instructions for Verbal CPT Practice	257
Appendix U: Educational Material (Overcoming Phobias Worksheet)	258
Appendix V: Educational Material (Anxiety Cycle for Spider Fear)	260

ELECTRONIC APPENDIX

Electronic Appendix A: Study 1 Data Set

Electronic Appendix B: Study 2 Data Set

Electronic Appendix C: Study 3 Data Set

LIST OF TABLES

1.1	Review of Studies Investigating Effects of Distraction during <i>In Vivo</i> Exposure for Anxious Populations	23-24
1.2	Various Distracters used to date, in Exposure-Based Research	42
2.1	Four Experimental Groups used in Study 1	86
2.2	Mean Scores for the Four Experimental Conditions at Pre-treatment and Post-treatment for each of the Manipulation Checks	90
2.3	Mean Physiological Reactivity for the Four Experimental Conditions at Baseline, Session 1, and Session 2.	98
2.4	Mean FSQ Scores for the Four Experimental Conditions at Pre-treatment and Post-treatment.	101
3.1	Three Experimental Groups used in Study 2	128
4.1	Four (newly operationalised) Experimental Groups used in Study 3	152
4.2	Mean (+SE) of Pre-treatment FSQ (+subscales) Scores, SUD Scores and BAT Steps achieved for Study 1 and Study 3	156
4.3	Mean Scores for the Four Experimental Conditions at Pre-treatment for each of the Manipulation Checks	158
4.4	Mean Heart Rate Reactivity for the Four Experimental Conditions at Baseline, Session 1, and Session 2	171
4.5	Mean FSQ Scores for the Four Experimental Conditions at Pre-treatment and Post-treatment	179

LIST OF FIGURES

1.1	Example of an emotion network (snake phobia) as proposed by Lang (1984)	13
2.1	Hypothesised performance of experimental groups rated in terms of which will experience greater anxiety reduction	78
2.2	Timeline of the experimental procedure, outlining questionnaire administration, BAT, and exposure sequence	88
2.3	Mean SUD ratings (+ <i>SE</i>) during exposure sessions for each group	94
2.4	The four groups' anxiety reduction, as measured by SUD, over the two exposure sessions	96
2.5	Mean number of steps achieved on the BAT (+ <i>SE</i>) at pre, mid, and post-treatment for each experimental condition	97
2.6	Mean number of counting errors (+ <i>SE</i>) at exposure 1 and exposure 2 for each group	103
2.7	Participants used in one-way ANOVA to determine counting error stability for high-load distracter task	105
2.8	Participants used in two separate one-way ANOVAs to determine counting error stability for low-load distracter task	106
3.1	Timeline of the experimental procedure outlining practice, and experimental CPT trials	131
4.1	Timeline of the experimental procedure outlining questionnaire administration, BAT, and exposure sequence	154
4.2	Mean number of counting errors (+ <i>SE</i>) at exposure 1 and exposure 2 for each group	160
4.3	Participants used in one-way ANOVA to determine counting error stability for high-load distracter task	163
4.4	Participants used in two separate one-way ANOVAs to determine counting error stability for low-load distracter task	164
4.5	Mean SUD ratings (+ <i>SE</i>) during exposure sessions for each group	167

4.6	Mean number of steps achieved on the BATs (+ <i>SE</i>) in Study 3 at pre, mid, and post-treatment for each group	169
4.7	The four groups' anxiety reduction as measured by the rate of BAT steps completed from BAT-1 to BAT-3	170
4.8	Mean systolic blood pressure ratings (+ <i>SE</i>) for both exposure sessions for each group	173
4.9	The four groups' systolic blood pressure reduction from exposure 1 to exposure 2	174
4.10	Mean diastolic blood pressure ratings (+ <i>SE</i>) for both exposure sessions for each group	176
4.11	The four groups' diastolic blood pressure reduction from exposure 1 to exposure 2	177