

Measuring Children's Forgiveness:  
Development of the Children's Forgiveness Card Set

Emma Bronte Kemp

School of Psychology  
University of Adelaide

Thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy

Submitted March 2014



## Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Signed

Emma Bronte Kemp

Date:



## Acknowledgements

There are many people I would like to thank and acknowledge for their contribution to my efforts in writing this thesis.

First I wish to extend my heartfelt thanks and gratitude toward each of my supervisors; my principal supervisor Dr Peter Strelan and co-supervisor Dr Rachel Roberts. I greatly appreciate all the years of encouragement, advice, and support that each of you has given me, despite the various changing circumstances that have accompanied much of my candidature! I particularly value your patience, along with your regard for my ideas and the guidance you have given me in turning them into the final thesis.

I also want to extend this gratitude to academic and professional staff from the University of Adelaide School of Psychology, who I have found to be consistently helpful and supportive throughout my PhD Candidature. Your flexibility and support has been invaluable to me.

Importantly I also wish to thank the children who participated in my research. I am grateful for the time and effort that each child has put in to participating in my studies and I feel privileged that they have shared their perspectives on their social worlds with me. Further, I would like to thank consenting parents and caregivers, and the principals and staff at each participating school, who have gone out of their way to provide me with the opportunity to recruit participants and run studies at their schools despite busy and competing schedules.

I am also grateful to my friends and family who have had important roles in helping me to complete this thesis, from offering child care on awkward days to providing advice, opinions and moral support. I especially want to thank my parents for helping me to become the person that I am and for their ongoing emotional and practical support in all things, this thesis included.

Finally and very importantly, I want to thank my own little family, which has grown considerably bigger during my PhD candidature in more ways than one! For my husband and three beautiful children, I thank you for continuing to encourage me and for putting up with my highs and lows throughout my candidature, which I realise has not always been easy for you. ‘Love is what makes the ride worthwhile’ and you are the inspiration for all that I do. Submitting this thesis marks the beginning of a new era for me, but I will always appreciate the love and support you have shown me, and I hope that you will each feel loved and strongly supported by me in all of your endeavours.

## Abstract

Interpersonal forgiveness has been identified as an important way of overcoming the hurts and offenses that often occur during social interaction, thereby helping to maintain valuable relationships. In adults, it has been associated with greater psychological and even physical health. Because children also experiences hurts and offenses in their social interactions, forgiveness is arguably as important for children as it is for adults. However, studies of children's forgiveness have not flourished to the extent that studies of adults' forgiveness have. This thesis proposes that one reason for the lack of research on children's forgiveness is the absence of appropriate measures of children's forgiveness. Existing measures of preadolescent children's forgiveness are argued to be potentially unsatisfactory for stand-alone use with preadolescent child samples for a variety of reasons, including limitations of self-report methodology, developmental difficulties for children in responding to self-report questionnaires and reporting on emotional responses, the need for child-focused research methods, and uncertainty over children's interpretation of the term 'forgive'. An initial study of children's everyday understandings of the term 'forgive' suggested that they tended to emphasise overt responses to apology and that single-item explicit measures may therefore be unsuitable to measure emotional forgiveness in preadolescent samples. However, children's descriptions of emotional and behavioural aspects of forgiving informed the development of a pictorial measure, the Children's Forgiveness Card Set, designed to overcome potential difficulties children may experience in responding to traditional questionnaire measures. A pilot study examining children's interpretation of Card Set illustrations in response to a hypothetical scenario suggested children generally interpreted illustrations as intended; some adjustments were, however, implemented for some illustrations. A second pilot study tested interpretability

by asking children to categorise illustrations as forgiving, unforgiving, or having nothing to do with forgiving. Children frequently categorised general emotional responses as having nothing to do with forgiving, possibly due to the omission of a hypothetical scenario. An experimental study therefore re-examined validity of the Card Set by assessing children's Card Set responses to a hypothetical scenario with manipulation of transgressor apology (apology vs. no apology). While Card Set responses correlated with an explicit measure, unexpectedly they were not predicted by apology nor correlated with perceived transgressor remorse. A final experimental study comprised a factor analysis and comparison of the Card Set with a latent questionnaire measure and an explicit measure. Following elimination of one card, Card Set responses were found to correlate with both the explicit and latent measure but again were not predicted by apology; however this was also true of emotion-based responses on the latent measure. Interactions were found between apology and participant age and between apology and the order of presentation of the Card Set. Overall, results suggest that the Children's Forgiveness Card Set may be a useful measure of children's underlying emotional forgiveness, as opposed to overt, deliberative or decisional forgiveness. This measure therefore contributes a potential way to assess differences in children's overt forgiveness and underlying emotional responses to transgression, including differential prediction of these types of forgiveness in children.



## Table of Contents

Abstract.....	vii
Table of Contents.....	ix
List of Tables.....	xviii
List of Figures.....	xxi
Chapter 1: Introduction.....	1
Definitions.....	2
Do children forgive?.....	3
The importance of studying children’s forgiveness.....	4
Why is research on children’s forgiveness so limited?.....	6
Measuring children’s forgiveness: existing studies.....	6
Explicit (single-item) measures.....	6
Limitations of explicit (single-item) measures.....	8
Existing research on children’s understandings of forgiveness.....	10
Top-down studies.....	10
Limitations of top-down studies.....	12
Bottom-up analyses.....	13
Latent questionnaire measures.....	15
Limitations of questionnaire measures.....	17
Response bias in self-report measures.....	17
Response bias in forgiveness measures.....	18
Gap between self-report and subconscious attitudes.....	19
Use of self-report methodology with children.....	20
Developmental differences in self-report ability.....	20
Developmental differences in reporting emotions.....	21
Further limitations of self-report formats.....	22
Vocabulary.....	23
Length.....	23
Response scales.....	24
The need for child-focused research methods.....	25
Other-report measures.....	27
Limitations of other-report measures.....	28

Behavioural measures .....	29
Limitations of behavioural measures .....	30
Summary: Questions in the measurement of children’s forgiveness .....	31
Chapter 2: Studies 1 and 1b Examining and utilising children’s understandings of forgiveness to develop the Children’s Forgiveness Card Set .....	34
Study 1: Examining children’s understandings of forgiveness .....	34
Rationale for the present study.....	34
Thematic analysis.....	35
Decisions in thematic analysis .....	35
Method .....	36
Participants.....	36
Materials.....	37
Procedure .....	38
Analysis.....	39
Results.....	41
Themes in children’s understandings of forgiveness .....	41
Cognitive-emotional experience .....	43
Feeling forgiveness .....	43
Forgiving as an increase in positive thoughts and emotions.....	43
Forgiving as a decrease in negative thoughts and emotions .....	43
Being forgiven feels positive .....	44
Forgiveness is difficult.....	44
Relationship restoration .....	44
Forgiveness involves being friends/friendly again .....	45
Forgiveness expressed verbally/explicitly .....	45
Moving on.....	46
Forgiveness as forgetting or denial .....	46
Forgiveness as moving on.....	46
Forgiveness and apology.....	47
Forgiveness confused with apology .....	47
Forgiveness follows apology/compensation .....	48
Apology/remorse facilitates forgiveness.....	48
Forgiveness as accepting an apology .....	49

Forgiveness as interchange .....	50
Balancing risk and benefits .....	50
No repeat transgressions .....	50
Forgiving friends/friendly people .....	51
Reluctance to forgive severe transgressions .....	51
Forgiving for accident/anomaly .....	52
Forgiveness involves communication .....	52
Importance of sincere forgiveness .....	53
Forgiveness as morally good .....	53
Children's examples of forgivable transgressions .....	54
Discussion .....	55
Children's concepts of forgiveness .....	55
Forgiveness as intrapersonal transformation .....	55
Relationship restoration .....	56
Moving on from a transgression .....	57
Forgiveness as apology .....	57
Forgiveness as accepting an apology .....	58
Children's considerations in forgiving .....	59
Apology and remorse .....	59
Other situational variables .....	59
Children's identification of transgressions .....	60
Conflicts in children's forgiveness decisions .....	61
Limitations .....	62
Limitations of the interview format .....	62
Interpretation of themes .....	62
Sample size and selection .....	63
Directions for further research .....	64
Study 1b: Constructing a new latent measure of children's forgiveness .....	66
Existing formats .....	66
The need for a new measure .....	67
Designing a new measure .....	67
Format .....	67

Items .....	69
Method .....	70
Results .....	70
Identifying initial terms .....	70
Item reduction .....	72
Initial illustrations .....	73
Review of card illustrations .....	74
Card response format .....	75
Initial Children's Forgiveness Card Set .....	76
Summary .....	81
Chapter 3: Studies 2 and 3   Examining Interpretability of the Children's Forgiveness Card Set                                 82	
Study 2: Children's Interpretations of the Children's Forgiveness Card Set.....	82
Use of a hypothetical transgression .....	82
Ethical advantages.....	83
Control of situational variables .....	83
Comparison with existing research .....	84
Constructing the hypothetical transgression .....	84
Inclusion of an apology manipulation.....	85
Aims .....	86
Method .....	86
Participants.....	86
Materials.....	86
Card Set.....	86
Scenario.....	87
Response sheet .....	91
Procedure .....	91
Interpreting cards .....	92
Suggesting improvements to cards .....	92
Responses regarding the hypothetical scenario .....	92
Trialling the Card Set.....	93
Results.....	94
Interpretation of Cards .....	94

Suggestions for improvements.....	96
Children’s understanding of the scenario and Card Set instructions .....	97
Card Set Scores .....	99
Line scores .....	99
Sort scores.....	99
Discussion.....	100
Features of the transgression.....	101
Features of the Card Set.....	102
Limitations .....	103
Directions for further research.....	104
Study 3: Examining validity of the Card Set through matching cards to forgiving/unforgiving states.....	104
Method.....	105
Participants.....	105
Materials .....	105
Procedure .....	110
Results.....	111
Scoring the cards.....	111
Frequency analysis of card categories .....	112
Discussion.....	114
Possible reasons for the misinterpretation of cards .....	115
Cards sorted as ‘something completely different’ to forgiving .....	115
Cards sorted into the opposite category .....	117
Summary.....	117
Chapter 4: Study 4 Validity of the Children’s Forgiveness Card Set: Comparison with single-item explicit forgiveness judgments and prediction by apology .....	119
Comparison with an explicit measure.....	120
Comparison with additional measures .....	120
Prediction by apology .....	122
Relationships with perceived remorse .....	123
Adjusting the hypothetical scenario.....	124
Order of cards .....	125
Aims and hypotheses .....	126

Method .....	127
Participants.....	127
Materials.....	127
Hypothetical scenario.....	127
The Children’s Forgiveness Card Set .....	131
Response sheet .....	131
Procedure .....	135
Results.....	136
Reliability analysis.....	136
Hypotheses 1- 3: Relationships between Card Set scores and the single-item explicit forgiveness measure, proxy forgiveness measures, and remorse.....	137
Hypothesis 1: Relation between Card Set scores and the single-item explicit measure .....	138
Hypothesis 2: Relation between Card Set scores and single-item ‘proxy’ measures .....	139
Hypothesis 3: Relation between the Card Set and perceived transgressor remorse .....	139
Hypotheses 4 and 5: Prediction of the Card Set by apology condition and order of cards .....	140
Manipulation checks .....	140
Descriptive statistics .....	140
Testing assumptions: normality and homogeneity of variance.....	141
Hypothesis 4: Prediction of Card Set scores by apology .....	143
Hypothesis 5: Prediction of Card Set scores by order of cards.....	144
Interaction between apology and order of cards conditions .....	144
Influence of background variables .....	151
Discussion .....	152
Internal consistency of the Card Set .....	153
Correlation with other measures of forgiveness .....	153
Prediction by apology and relationships with remorse .....	154
Small or unrepresentative sample .....	155
Features of the Card Set .....	155
Features of the transgression.....	158
Order of cards.....	159

Limitations and directions for further study .....	160
Chapter 5: Study 5 Principal Components Analysis of the Children’s Forgiveness Card Set and further comparison with existing forgiveness measures .....	161
Rationale for the present study .....	161
Apology and remorse.....	162
Differences between cognitive and emotional forgiveness .....	163
Introduction of a latent questionnaire measure.....	163
Confounding factors of a latent questionnaire measure.....	164
Testing for confounding effects of the EFI-C.....	165
Testing for order of measures effects: counterbalancing measures .....	166
Order of Cards Effects .....	167
Structure of the Card Set.....	167
Summary: Aims and hypotheses.....	168
Method.....	170
Participants.....	170
Materials .....	170
Scenario .....	170
Response sheet A: background variables and manipulation checks.....	171
Children’s Forgiveness Card Set .....	171
Enright Forgiveness Inventory for Children.....	171
Pseudo-forgiveness measure.....	172
Single-item explicit measure .....	172
Presentation format .....	172
Proxy forgiveness measures.....	173
Measures of socially desirable responding .....	173
Procedure .....	174
Results.....	176
Principal Components Analysis of Card Set scores.....	176
Line scores .....	176
Sort scores.....	179
Reliability of the Card Set .....	181
Hypotheses 1- 3 and Hypothesis 6: Relationships between Card Set scores, other forgiveness measures, remorse, and socially desirable responding.....	182

Hypothesis 1: Correlation between the Card Set and other forgiveness measures	184
Hypothesis 2: Correlation between Card Set scores and remorse .....	185
Hypothesis 3: Correlation between the EFI-C and remorse and the explicit measure and remorse .....	185
Hypothesis 6: Relationships between forgiveness measures and socially desirable responding .....	185
Prediction of the Card Set by apology, order of measures and order of cards condition .....	186
Manipulation checks .....	186
Descriptive statistics .....	187
Examining assumptions of dependent variables .....	189
Hypothesis 4: Prediction of Card Set scores by apology .....	193
Hypothesis 5: Prediction of EFI-C scores and explicit forgiveness judgments by apology .....	193
Hypothesis 7: Prediction of Card Set scores by the interaction between apology and the order of measures .....	193
Hypothesis 8: Prediction of EFI-C scores and single-item explicit forgiveness judgments by interaction between apology and order of measures .....	194
Hypothesis 9: Prediction of Card Set scores by interaction between apology and order of cards conditions .....	198
Examining covariates .....	199
Discussion .....	209
Structure of the Card Set .....	209
Relationships between the Card Set and other forgiveness measures .....	211
Relations between the Card Set and remorse .....	212
Effects of apology .....	212
Interaction between age and apology in predicting Card Set scores .....	212
Interaction between order of measures and apology in predicting the EFI-C .....	214
Priming Effects .....	216
Limitations .....	217
Conclusions .....	217
Chapter 6: General discussion .....	219
Validity of the Children’s Forgiveness Card Set as a measure of children’s forgiveness .....	219



Concurrent and incremental validity.....	219
Prediction by apology and relationships with remorse.....	220
Implications of differences between children’s emotional and explicit forgiveness.....	224
Theoretical implications.....	224
Applied implications.....	225
Qualifications to differences between children’s emotional and explicit forgiveness.....	226
Priming and validity of the Card Set.....	226
Comparing line and sort scores.....	229
Limitations.....	230
Hypothetical methodology.....	230
Time.....	231
Sampling.....	232
Directions for future research.....	233
Future applications of the Card Set.....	234
Conclusions.....	235
References.....	236
Appendices.....	250
Appendix 2.1.....	250
Appendix 3.1.....	253
Appendix 3.2.....	254
Appendix 3.3.....	257
Appendix 3.4.....	259
Appendix 4.1.....	260
Appendix 4.2.....	262
Appendix 4.3.....	264
Appendix 5.1.....	265
Appendix 5.2.....	266
Appendix 5.3.....	267
Appendix 5.4.....	270

## List of Tables

Table 2.1	<i>Structured interview schedule for Study 1</i> .....	38
Table 2.2	<i>Summary of themes and subthemes in children's understandings of forgiveness</i> .....	42
Table 2.3	<i>Categories of transgressions named by children</i> .....	54
Table 2.4	<i>Collated Study 1 responses representing potential items for a new measure</i> ..	71
Table 2.5	<i>Reduced terms representing potential items for a new forgiveness measure</i> ..	72
Table 2.6	<i>Items represented in Card Set illustrations</i> .....	74
Table 3.1	<i>Participant's interpretations of cards in Study 2</i> .....	95
Table 3.2	<i>Children's suggestions for improving interpretability of problematic cards</i> ..	97
Table 3.3	<i>Frequency analysis of children's understanding of scenario and Card Set instructions, Study 2</i> .....	98
Table 3.4	<i>Descriptive statistics for line scores and sort scores in Study 2</i> .....	100
Table 3.5	<i>Percentages of the sample interpreting cards as in the intended category, opposite to intended category, and as neither forgiving nor unforgiving in study 3</i> .....	113
Table 4.1	<i>Item total correlations for individual cards in Study 4</i> .....	137
Table 4.2	<i>Partial correlations between forgiveness measures, remorse and severity, controlling for apology and order of cards conditions</i> .....	138
Table 4.3	<i>Means (and standard deviations) of Study 4 variables by apology and order of cards conditions</i> .....	141
Table 4.4	<i>Summary of analyses of variance by apology and order of cards conditions for Card Set scores and single item measures</i> .....	143
Table 4.5	<i>Simple effects analysis by apology and order of cards conditions for line scores</i> .....	147

Table 4.6	<i>Simple effects analysis by apology and order of cards conditions for sort scores</i> .....	147
Table 4.7	<i>Simple effects analysis by apology and order of cards conditions for single-item explicit forgiveness</i> .....	150
Table 4.8	<i>Simple effects analysis by apology and order of cards conditions for the 'back to normal' proxy measure</i> .....	150
Table 4.9	<i>Regression analysis examining the interaction between apology condition and severity on Card Set line and sort scores</i> .....	152
Table 5.1	<i>Pattern matrix for second principal components analysis of Card Set line scores</i> .....	178
Table 5.2	<i>Structure matrix for second principal components analysis of Card Set line scores</i> .....	179
Table 5.3	<i>Component matrix for second principal components analysis of the Card Set sort score</i> .....	181
Table 5.4	<i>Internal consistency reliability of Card Set scores, Study 5</i> .....	182
Table 5.5	<i>Partial correlation between Card Set scores, other forgiveness measures, remorse, social desirability, and potential covariates, Study 5</i> .....	183
Table 5.6	<i>Means (and standard deviations) of Study 5 variables by apology condition, order of measures condition and order of cards condition</i> .....	188
Table 5.7	<i>Summary of analyses of variance for apology, order of measures and order of cards conditions on Card Set scores, EFI-C scores, and single-item explicit forgiveness</i> .....	191
Table 5.8	<i>Simple effects analysis by apology and order of measures conditions for EFI-C total score</i> .....	197

Table 5.9	<i>Simple effects analysis by apology and order of measures conditions for EFI-C Thoughts score</i> .....	197
Table 5.10	<i>Examination of potential covariates across apology condition</i> .....	199
Table 5.11	<i>Analysis of covariance by apology condition on Card Set line and sort scores, controlling for severity</i> .....	200
Table 5.12	<i>Linear regression analysis examining the interaction between apology and pseudoforgiveness on Card Set line and sort scores</i> .....	201
Table 5.13	<i>Linear regression analysis examining the interaction between apology and age on Card Set line and sort scores</i> .....	202
Table 5.14	<i>Means (and standard deviations) of Card Set scores split by age group and apology conditions</i> .....	205
Table 5.15	<i>Analysis of variance by apology condition and age group on Card Set scores</i> .....	205
Table 5.16	<i>Simple effects analysis by apology condition and age group for Card Set line scores</i> .....	208
Table 5.17	<i>Simple effects analysis by apology condition and age group for Card Set sort scores</i> .....	208

## List of Figures

Figure 2.1	<i>Cards for the initial (pilot) version of the Children’s Forgiveness Card Set</i>	77
Figure 3.1	<i>Hypothetical scenario and accompanying illustrations for Study 2</i>	88
Figure 3.2	<i>Final illustrations for the Children’s Forgiveness Card Set</i>	106
Figure 4.1	<i>Scenario and illustrations for Study 4</i>	128
Figure 4.2	<i>Response sheet assessing children’s impressions of the hypothetical scenario, Study 4</i>	132
Figure 4.3	<i>Response sheet assessing children’s proxy and single-item explicit forgiveness</i>	134
Figure 4.4	<i>Interaction between apology condition and order of cards condition in predicting Card Set total line scores</i>	145
Figure 4.5	<i>Interaction of apology condition and order of cards condition in predicting Card Set total sort scores</i>	146
Figure 4.6	<i>Interaction between apology condition and order of cards condition in predicting single-item explicit forgiveness</i>	148
Figure 4.7	<i>Interaction between apology condition and order of cards condition in predicting the ‘back to normal’ proxy measure</i>	149
Figure 5.1	<i>Effect of the apology x order of measures interaction on the EFI-C total score</i>	195
Figure 5.2	<i>Effect of the apology X order of measures interaction on the EFI-C Thoughts subscale</i>	196
Figure 5.3	<i>Interaction between apology and age in predicting line scores</i>	203
Figure 5.4	<i>Interaction between apology and age in predicting sort scores</i>	204

Figure 5.5 *Interaction between apology and age group (preadolescent/adolescent) in predicting Card Set line scores* .....206

Figure 5.6 *Interaction between apology and age group (preadolescent/adolescent) in predicting Card Set sort scores* .....207

## Chapter 1: Introduction

Psychological study of forgiveness is commonly recognised as having increased exponentially over recent decades (e.g. Fehr, Gelfland, & Nag, 2010; Karremans & Van Lange, 2008; Strelan, 2007; Zechmeister, Garcia, Romero, & Vas, 2004). Beginning with a handful of studies in the 1980s (e.g. Darby & Schlenker, 1982; Enright, Santos, & Al-Mabuk, 1989; Trainer, 1981, cited by Enright, Gassin, & Wu, 1992), psychological studies of forgiveness now include those from social, personality, clinical, developmental, and organisational perspectives (Fehr, Gelfland, & Nag, 2010).

However, one area of forgiveness research that has remained relatively neglected is the study of children's forgiveness. Studies of children's forgiveness were among some of the earliest empirical research on forgiveness in psychology, including those regularly cited in the context of adults' forgiveness (e.g. Darby & Schlenker, 1982; Enright, Santos, & Al-Mabuk, 1989). Despite this early work, research on children's forgiveness has not flourished in the same way that studies of forgiveness with adult samples have (Denham, Neal, Wilson, Pickering & Boyatzis, 2005; McCullough, Pargament & Thoresen, 2000; Scobie & Scobie, 2000). In particular, published, peer-reviewed studies of preadolescents' forgiveness remain limited despite calls to address several different aspects of children's forgiveness (Christensen, Padilla-Walker, Busby, Hardy, & Day, 2011; Denham et al., 2005; Scobie & Scobie, 2000; Worthington, 2006). This thesis therefore aims to extend psychological research on children's interpersonal forgiveness by addressing one crucial consideration in obtaining data on children's forgiveness; namely, the measurement of children's interpersonal forgiveness.

## Definitions

While interpersonal forgiveness has been given a variety of definitions within psychology, one commonly cited ‘meta-definition’ that aims to encompass common aspects of these definitions is that of forgiveness as ‘intraindividual, prosocial change toward a perceived transgressor that is situated within a specific interpersonal context’ (McCullough, Pargament, & Thoresen, 2000, p. 9). Psychologists generally agree that the changes involved in forgiveness consist of cognitive, emotional, and motivational aspects, and may sometimes include behavioural aspects (e.g. McCullough, Pargament & Thoresen, 2000; Worthington, 2005). As a context-specific process related to a state response, forgiveness is distinguished from forgivingness, which is the disposition to be forgiving (Worthington, Witvliet, Pietrini & Miller, 2007). Additionally, some researchers distinguish between *decisional forgiveness*, which is regarded as the decision to control one’s interpersonal behaviours, and *emotional forgiveness*, which involves prosocial changes in cognition, emotion, and motivation (Worthington, 2005). However, despite some general consensus on the definition of forgiveness, specific operationalisations and emphases vary between researchers (Worthington et al., 2007). Such differences can have important consequences for the study of children’s forgiveness, as will be discussed in the next section.

Preadolescent children can be defined generally as any children less than approximately 12 years of age, since the period of adolescence is generally thought of as ranging from approximately 12 to 17 years of age (e.g. Soto, John, Gosling & Potter, 2008). However, the term preadolescent may also be thought of as referring to the period of childhood immediately before adolescence, late childhood, which spans approximately 8 to 11 years of age (Soto et al., 2008). Because this thesis aims to explore the measurement of forgiveness in preadolescent children, the term ‘children’ will refer to the preadolescent



stage except where otherwise specified. In particular, this thesis will concentrate on the measurement of forgiveness in late childhood, although some discussion of the literature will necessarily refer to children younger than eight years.

### **Do children forgive?**

Forgiveness is often assumed to be an adult capacity because it is regarded as a complex act requiring a degree of cognitive sophistication (Scobie & Scobie, 2000). Specifically, forgiveness has been argued to involve the ability to attend to emotional responses and to regulate and repair these responses (Hodgson & Wertheim, 2007; Rizkalla, Wertheim & Hodgson, 2008). Accordingly, it has been suggested that adolescents are only just developing the capacity to forgive, since it is during the adolescent stage of development in particular that individuals learn emotional management skills such as recognising, reflecting on and repairing their emotions (e.g. Christensen et al., 2011; Flanagan, Vanden Hoek, Ranter, & Reich, 2012). It therefore might be inferred that preadolescent children, who are typically understood as having less ability to regulate emotions (Denham et al., 2005), are not yet capable of forgiving.

However, some researchers have suggested that preadolescent children do forgive, but in such a way that their forgiveness involves less abstract cognitive reflection; emotions are therefore likely to be of primary importance in children's forgiveness (Denham et al., 2005; Worthington, 2006). For example, Worthington suggests that if forgiveness is understood as the replacement of negative emotions with positive emotions, then forgiveness can be seen as more than a function of cognitive development, and children and even infants can be viewed as being capable of emotionally forgiving.

## **The importance of studying children's forgiveness**

Forgiveness has been identified as an important way of dealing with the inevitable hurts and offenses that occur during social interaction, thereby helping to maintain healthy relationships (e.g. McCullough, 2008; Scobie & Scobie, 2000). Although the benefits of forgiveness are not unqualified (e.g. Luchies, Finkel, McNulty & Kumashiro, 2010; McNulty & Fincham, 2012), forgiving has been associated with greater psychological and physical health (e.g. Worthington et al., 2007).

Likewise, forgiveness has been argued to be a beneficial process for children to engage in, because children also experience hurts and offenses in their interpersonal relationships (Denham et al., 2005, Enright & Fitzgibbons, 2000). Forgiveness is therefore a potentially valuable way for children to overcome conflict and maintain relationships, just as it is for adults (Denham et al., 2005).

Additionally, because childhood has been recognised as a crucial time for social development, and because relationships with peers and significant adults are regarded as important influences on this development (Denham et al., 2005; Newcomb & Bagwell, 1996; Parker & Asher, 1987; Semrud-Clikeman, 2007), children's ability to maintain significant relationships through forgiveness is potentially vital to the development of social competence. As such, children's forgiveness may be important not only to childhood well-being, but also to individuals' development into socially competent adults. Therefore forgiveness is arguably important to children's present and future well-being.

Yet, basic questions about children's forgiveness that were outlined a number of years ago (e.g. Denham et al., 2005; Worthington, 2006) are still to be adequately answered in peer-reviewed research. This is particularly the case for preadolescent children's forgiveness; while there has been a recent increase in research on adolescents' forgiveness (e.g. Christensen et al., 2011; Flanagan et al., 2012; Paleari, Regalia, &

Fincham, 2003; Peets, Hodges, & Salmivalli, 2012), research on preadolescent children's forgiveness is generally lacking. Questions that have been identified as requiring further research attention include; when children experience emotional forgiveness, the factors which affect whether children experience emotional forgiveness, and how parents and teachers can facilitate children's emotional experience of forgiveness (Worthington, 2006), along with what children believe forgiveness is, how they display forgiveness behaviours towards peers, parents and themselves, and whether socialisation mechanisms for learning about forgiveness are similar to those for other social behaviours (Denham et al., 2005).

The relative lack of research on children's forgiveness also has practical implications, because children's forgiveness is now appearing in the applied context. For example, forgiveness has been pioneered as an intervention with children, including in group contexts in the United States (e.g. Gambaro, Enright, Baskin & Klatt, 2008; Holter, Magnuson, Knutson, Knutson-Enright, & Enright, 2008), Ireland (e.g. Magnuson, Enright, Fulmer, & Magnuson, 2009) and Hong Kong (Hui & Chau, 2009), as well as in psychotherapeutic contexts (Enright & Fitzgibbons, 2000).

In addition, forgiveness has been recommended to be encouraged within education systems, for example in the United Kingdom (White, 2002), and has been proposed as one way in which children and adolescents might cope with the pervasive problem of school bullying along with other negative peer experiences (Egan & Todorov, 2009; Flanagan et al., 2012). Furthermore, the rise of restorative justice practices involving such concepts as forgiveness and reconciliation in schools (e.g. Ahmed & Braithwaite, 2006; McCluskey et al., 2008; Morrison, Blood, & Thorsborne, 2005) suggests that children's forgiveness interventions may soon be of broad relevance in many countries, if they are not already. Therefore, for the accountability and effectiveness of such practices, it is crucial to answer basic questions about the nature of children's forgiveness.

## **Why is research on children's forgiveness so limited?**

Given the above arguments that children can and do forgive and that research on children's forgiveness is important, what might account for the relative paucity of published material on children's forgiveness within psychology?

While various factors may impact upon the feasibility of research on children's forgiveness, this thesis proposes that one important hurdle in effectively researching children's forgiveness relates to an issue still encountered in research on adults' forgiveness: measurement. From the literature, it appears that the measurement of children's forgiveness involves two problematic aspects: (1) measurement issues (similar to those encountered when measuring adults' forgiveness) and (2) specific considerations that are relevant to child samples, and in particular to assessing children's socio-emotional responses. This chapter will now turn to examining the problematic aspects of measuring children's forgiveness in more detail, by reviewing existing approaches and the limitations inherent in each approach.

## **Measuring children's forgiveness: existing studies**

From the literature, it appears that existing approaches to measuring children's forgiveness mainly consist of direct or explicit measures and latent questionnaire measures, with very little in the way of behavioural or implicit measures. This chapter will now review each of these approaches and their limitations in turn.

### ***Explicit (single-item) measures***

Although psychological research on children's forgiveness is limited, much of what does exist uses a single item directly asking how much the respondent would forgive their

transgressor or how much a transgressor ought to be forgiven. For example, in the first empirical study of children's forgiveness (Darby & Schlenker, 1982), children used an explicit single-item measure to respond to scenarios depicting schoolyard transgressions by a hypothetical character, Pat. Across two studies, a total of 211 primary-school children (kindergarten/first grade, mean age = 6.1/6.3, fourth grade, mean age = 9.3/9.0, and seventh grade, mean age = 12.3/12.1) made several judgments about Pat, including forgiveness judgments. Specifically, the forgiveness item asked, 'Do you think Pat should be forgiven for what happened, and if so, how much do you think Pat should be forgiven?' (p.745). Children responded to the item during individual interviews by physically pointing to a 10-point scale (*0 = no/none at all, 9 = yes/extremely so/a great deal*). Use of the scale was individually taught and practised prior to responding to the scenario.

Overall, children's judgments in this study were made in ways that were consistent with researcher expectations (for example, apology predicted forgiveness). Darby and Schlenker therefore held that school age children make social evaluations, including forgiveness judgments, according to criteria generally considered appropriate by adults, such as responsibility, intentionality, motive and apology. Because these judgements were made in the expected directions on the Likert-type scale, it was also argued that primary school aged children are capable of expressing such judgments quantitatively on multipoint scales.

Explicit single-item measures of forgiveness have since been commonly used in psychological research (e.g. Girard & Mullet, 1997), including further research with children. Examples include a study in which second and fifth grade children (no ages reported) rated forgiveness of a hypothetical transgressor on a six point scale (*1 = absolutely not, 6 = forgive completely*) (Ohbuchi & Sato, 1994), and a more recent study in which autistic and non-autistic children, adolescents and adults rated forgiveness on a

response scale ranging from ‘*Sure I wouldn’t forgive*’ to ‘*Sure I would forgive*’ (Roge & Mullet, 2011). Explicit items asking whether or how much children would ‘forgive’ also have been utilised as part of an interview (Enright, Santos & Al-Mabuk, 1989), as a validity check for a latent questionnaire measure (the Enright Forgiveness Inventory for Children or EFI-C, Enright, 2000). Explicit items asking whether the child or their friend would forgive (no/maybe/yes) and how long it would take for the child or their friend to forgive (right away/later/never) have also been utilised in an inventory assessing children’s propensity to forgive across eight hypothetical scenarios, the Children’s Forgiveness Inventory (CFI; Denham, Neal, Hamada, & Keyser, 2002, cited by Denham et al., 2005). Internal consistency reliability (Cronbach’s  $\alpha$ ) of children’s forgiveness across scenarios in response to specific motives (e.g. on purpose/an accident) and responses (e.g. the perpetrator felt bad) are reported as ranging from .70 to .92 (Mincic, Kalb, Bassett, & Denham, 2004, cited by Bassett, 2007 and by Denham et al, 2005).

### ***Limitations of explicit (single-item) measures***

A single item asking directly how much a child would forgive, or how much the transgressor ought to be forgiven, may initially seem the most parsimonious way to assess children’s forgiveness. However, single-item explicit measures of forgiveness have been noted to be problematic even for adult respondents, because they rely on the assumption that research participants and researchers share an understanding of what it means to ‘forgive’ (e.g. Kearns & Fincham, 2004; Younger, Piferi, Jobe, & Lawler, 2004). That is, for single-item explicit measures to be valid, the construct of forgiveness that the researcher is intending to measure must correspond with the idea of forgiveness in the mind of the participant (Kearns & Fincham, 2004). Put another way, for a question asking directly how much one would ‘forgive’ to be a valid and useful measure, the research

participants and researcher must interpret the question in a similar way. If participants respond to this question with a wholly different concept of what it means to ‘forgive’ to that intended by the researcher, then those participants’ answers will be misinterpreted. Therefore, if researchers do not understand what lay people mean when they say that they ‘forgive’ or do not forgive, then it is difficult to interpret the meaning of measures that ask respondents directly whether or not, or how much, they would ‘forgive’ (Kearns & Fincham, 2004).

Indeed, there is some evidence that a shared understanding of what it means to forgive may not exist between lay adult samples and forgiveness researchers. For example, varying proportions of lay adult samples have been found to view forgiveness as similar to other processes including accepting, pardoning, and reconciling (e.g. Kearns & Fincham, 2004; Macaskill, 2005; Younger, Piferi, Jobe & Lawler, 2004), all of which are specifically distinguished from forgiveness by academics (Enright & Fitzgibbons, 2000; Worthington et al., 2007).

Applied to research with child samples, if a measure including the terms ‘forgive’ or ‘forgiven’ is used with children, then either those children would have to understand these terms as intended by the researcher, or the researcher would have to know which construct of forgiveness was likely to be held by the responding children, in order for the measure to be valid and useful. Should this assumption be incorrect, that is, if children do not interpret the term ‘forgive’ in the way intended or expected by the researcher, then it is difficult to say what explicit measures of forgiveness used with children are actually measuring. It is therefore crucial to the validity of using single-item explicit measures with children that researchers have some knowledge of children’s understandings of forgiveness.

### *Existing research on children's understandings of forgiveness*

Problematically, most studies of children's forgiveness that use an explicit measure do not address the crucial question of what it is that children understand and mean by the terms 'forgive', 'forgiveness' and 'forgiven', even though children's understandings of forgiveness could be reasonably expected to vary from researcher's understandings at least as much as lay adult understandings. In fact, children's understandings might be expected to be even more different from academic definitions than lay adult understandings, given the increases in verbal comprehension that generally occur over the developmental periods of late childhood and adolescence (Soto, John, Gosling & Potter, 2008).

However, few studies explore children's understandings of forgiveness. While existing studies consist of top down and bottom up analyses, so far these studies give a limited picture of children's understandings of forgiveness, as shall be discussed next.

#### *Top-down studies*

Top down analyses studies refer to those driven by a particular theoretical framework rather than being primarily data-driven (Braun & Clarke, 2006). Top-down studies of children's understandings of forgiveness thus tend to compare children's understandings to pre-conceived frameworks defined by researchers.

Results of such studies are mixed. For example, Enright, Santos and Al-Mabuk (1989) assessed children's understandings of forgiveness or forgiveness 'reasoning' according to predefined stages based on forgiveness literature. They found that understandings of forgiveness held by preadolescent children (average age 9.83/9.67 years) tend to be 'restitutional' – that is, their understandings involved forgiving in response to compensation or apology. In comparison, adolescents and adults tend to understand forgiveness as socially expected, as a moral obligation, or as something entered into for



social harmony, with a small proportion of adults seeing forgiveness as an unconditional act based on intrinsic worth, as did the authors (Enright, Santos & Al-Mabuk, 1989). This study therefore suggests that children's understandings of forgiveness may vary from constructs endorsed by adolescents, lay adults, and researchers, and suggests that apology is important to children's understandings of forgiveness.

Conversely, Scobie and Scobie (2003) found no significant differences between children's concepts of forgiveness and those of their teachers when investigating understandings held by two classes of children aged 11.1 to 12.3 years using the Scobie Children's Forgiveness Scale (SCFS), an adaptation of the Scobie Forgiveness Scale (SFS; Scobie, 2000). While the authors conceded this finding may be due to self-presentation response biases (children responding as they thought their teacher would wish them to), results suggested that either children's and adults' concepts of forgiveness as a relational mechanism are similar, or the developmental stages of forgiveness understanding identified by Enright and colleagues are present earlier than originally predicted.

In another study, Hui and Chau (2009) assessed 11 to 12-year old Hong Kong Chinese children's concepts of forgiveness using qualitative methods and a quantitative measure, the Chinese Concepts of Forgiveness Scale, (CCFS; Hui, Watkins, Wong and Sun, 2006), as part of a study assessing the effectiveness of a group-based forgiveness intervention. Post-intervention, children in the intervention group tended to view forgiveness as involving love, compassion, 'having a good heart', and seeing things from the transgressors' perspective, with some also seeing forgiveness as brave and virtuous. They distinguished forgiveness from reconciliation, recognised that it could be difficult and viewed forgiveness as a process that could take time, and had higher scores on the CCFS and on *benefits of forgiveness* and *forgiveness as unconditional* subscales, compared with a control group and with their own pre-intervention scores. At follow-up assessment

they also showed an increase in *forgiveness as compassion* scores and decrease in *forgiveness as moral and religious obligation* scores.

#### *Limitations of top-down studies*

However, each of the top-down analyses described above is limited in its exploration of children's *everyday* understandings of forgiveness.

For example, Enright, Santos and Al-Mabuk (1989) pre-defined stages of forgiveness understanding or 'reasoning' with reference to philosophical and psychological literature. Participants' understandings were then assessed according to these stages via structured interviews based on the Defining Issues Test (Rest, 1974). As such, the study assessed children's understandings of forgiveness against a pre-existing, adult-derived framework, rather than also assessing aspects of children's forgiveness that may have been additional to this framework. Therefore this analysis may not have taken into account other important features of children's everyday understandings of forgiveness.

Correspondingly, although Scobie and Scobie's (2003) design did involve rephrasing and modifying items of the SFS to be appropriate for children, and included consultation with children on the wording of scale items and discussion of personal damage situations and forgiveness scenarios, the content of scale items was still based on the adult scale, with the adaptation involving 'translation' into child-appropriate items. Thus, the actual content of the scale was based on adult understandings of forgiveness; moreover, children's responses were analysed insofar as they were congruent with adult responses. Therefore, aspects of children's understandings of forgiveness that were additional to the adult concepts of forgiveness that informed the original measure (SFS) may not have been captured by the analysis.

Meanwhile, Hui & Chau's (2009) study does not indicate much about children's *everyday* understandings of forgiveness, except that they may be less likely than post-intervention understandings to include ideas of forgiveness as beneficial, unconditional, and compassionate, and more likely to include understandings of forgiveness as a religious or moral obligation.

In summary, 'top down' studies of children's understandings of forgiveness give only a limited picture of children's everyday understandings of forgiveness because they concentrate on how well children's understandings fit with pre-existing concepts of forgiveness informed by adults' perspectives. This approach therefore risks overlooking the richness and variability that may exist in children's understandings of forgiveness.

#### *Bottom-up analyses*

In contrast to top-down analysis, bottom-up or inductive analysis refers to analysis that is data-driven rather than relying on a pre-existing theoretical framework (Braun & Clark, 2006). Such analysis is considered appropriate where either not much is known about a topic or, as in this case, not much is known about a particular sample's understanding of a topic (Braun & Clarke, 2006). Bottom-up analysis may therefore be more helpful in examining children's everyday understandings of forgiveness, compared with the top-down analyses described above.

Unfortunately, few analyses of children's understandings of forgiveness appear to be bottom-up or data-driven. Existing studies (which appear to be unpublished in peer reviewed journals) suggest that children may not have a consistent understanding of the terms 'forgive', 'forgiven' or 'forgiveness'. For example, Pickering and Wilson (2003, cited by Denham et al., 2005 and Pickering, 2007) found that using the standard CFI with six year olds presented difficulties, because children of this age did not consistently

understand the term ‘forgive’ even though they understood the process of forgiveness in terms of accidents and apologies. This finding contrasts with Darby and Schlenker’s (1982) assumption that explicit single-item methodology was appropriate even for a kindergarten age group.

In another study, more than half of an adolescent sample defined forgiveness as reconciliation, forgetting or justification (Middleton, 1997, abstract only), which is clearly at odds with the concept of forgiveness held by the children involved in Hui and Chau’s (2009) intervention and therefore further suggests that children’s everyday understandings of forgiveness may differ from post-intervention understandings, even in adolescence.

Meanwhile, Yamaguchi (2009) found that main themes in children’s understandings of forgiveness included forgiving in relation to receiving an apology, and forgiveness as forgetting about the past and moving on.

Overall, the only real consistency in research on children’s understandings of forgiveness is the emphasis on apology found in several studies (Enright, Santos and Al-Mabuk, 1989; Pickering & Wilson, 2003; Yamaguchi, 2009). Therefore, existing research is not conclusive with respect to an overall picture of children’s understandings of forgiveness, as some studies have been limited by top-down design while bottom-up analyses of children’s understandings of forgiveness are few and far between. The general lack of peer-reviewed bottom-up analyses of children’s understandings of forgiveness suggests the need for more data-driven research in this area. Without this research, it cannot be assumed that children’s understandings of the term ‘forgive’ or ‘forgiveness’ are sufficiently similar to researcher understandings for single-item explicit measures of forgiveness to be valid or appropriate for use with child samples.

### *Latent questionnaire measures*

One way of avoiding the potential difficulties inherent in an explicit measure of children's forgiveness is to use a latent questionnaire measure. Latent questionnaire measures of forgiveness typically consist of items that ask respondents to indicate their agreement with cognitions, emotions, motivations and/or behavioural orientations that are supposed to be related to forgiveness. Well-known examples used with adult samples include the Transgression-Related Interpersonal Motivations Inventory (TRIM, McCullough et al, 1998; TRIM-18, McCullough, Root, & Cohen, 2006) and the Enright Forgiveness Inventory (EFI, Subkoviak et al., 1995). However, multiple-item measures of children's forgiveness are less well-known and not as prolific as those used with adult respondents.

One of the more frequently used latent questionnaire measures of children's forgiveness is the Enright Forgiveness Inventory for Children (EFI-C, Enright, 2000), which has been used with preadolescent children across several peer-reviewed studies (e.g. Enright, Knutson-Enright, Holter, Baskin & Knutson, 2007; Magnuson, Enright, Fulmer, & Magnuson, 2009). Based on the Enright Forgiveness Inventory for adults (EFI, Subkoviak et al, 1995), the EFI-C consists of 30 items; 10 items (five positive, five negative) each measuring the three domains of affect, behaviour and cognition (Magnuson, Enright, Fulmer & Magnuson, 2009). Participants respond to items on a four point Likert scale (*1 = Yes, 2 = A little bit yes, 3 = A little bit no, 4 = no*), which is also represented by a visual aid consisting of red and green circles (large green for strong yes, small green for weak yes, small red for weak no, large red for strong no) (Enright et al., 2007). The measure is administered as a verbal interview but can be administered in a written format for proficient readers (Enright, 1993; e.g. Flanagan et al., 2012) and has been used

successfully with elementary school children with high internal consistency reliability (e.g.  $\alpha = .94$  in Enright et al, 2007;  $\alpha = .96$  in Magnuson et al., 2009).

Other examples of latent questionnaire measures of children's forgiveness are sparse. Hui and Chau (2009) assessed forgiveness in Hong Kong Chinese primary school students (mean age 11.8 years, range 11-12 years) using the adult Taiwan Chinese version of the EFI (Huang, 1990), with internal consistency reliability ( $\alpha$ ) reported at 0.98 overall, and at 0.95, 0.93, and 0.96 for Affect, Behaviour and Cognition subscales, respectively.

Meanwhile, one unpublished study used a five-item measure with a sample ranging from preadolescent children to college students (Goss, 2006). This measure asked participants to rate how likely they would be to (1) approach their friend and try to make amends, (2) avoid their friend, (3) hold a grudge against their friend, (4) get revenge against their friend by gossiping or doing something else equally hurtful and (5) forgive their friend. Internal consistency reliability (Cronbach's  $\alpha$ ) was reported at .76.

Finally, one unpublished study developed the Children's Forgiveness Measure to assess forgiveness in children aged 6 to 7 years (Pickering, 2007). The measure consisted of six scenarios with the type and severity of the transgression systematically varied across scenarios. For each scenario, children responded to six items; two items each aiming to assess children's motivations toward aggressive, avoidant and prosocial goals toward the transgressor. Children rated the importance of each goal and selected one of the six items as their most important goal on a 5-point scale (*1 = Not at all important, 4 = Really important, 5 = Most important of all*). Internal consistency reliability (Cronbach's  $\alpha$ ) for the aggressive, prosocial and avoidant subscales after factor analysis was high (.92, .89 and .81, respectively) although support for concurrent validity was mixed. The same six items were also used to assess children's changes in motivation following a recalled transgression (Children's Forgiveness Interview, Pickering, 2007).

## *Limitations of questionnaire measures*

### *Response bias in self-report measures*

One limitation of the latent measures reviewed above is that all employ self-report methodology. This is potentially problematic because self-report measures have been noted to be susceptible to response biases, such as socially desirable response bias (the tendency for respondents to modify their responses to make a socially desirable impression) or acquiescence bias (the tendency for respondents to agree with items irrespective of content) (Dorn, Hook, Davis, Van Tongeren, & Worthington, 2014; Hoyt & McCullough, 2005).

This problem is not specific to the measurement of children's forgiveness; forgiveness research generally has been criticised for its over-reliance on self-report measures, with particular concern that over-reliance on self-report increases the likelihood of mono-method bias in forgiveness research (Hoyt & McCullough, 2005; McCullough, Hoyt & Rachal, 2000). Mono-method bias refers to the phenomenon by which error variance inherent in a particular methodology (such as self-report methodology) tends to remain undetected, and is instead included as part of the variance in the construct of interest (such as forgiveness) (Hoyt & McCullough, 2005; McCullough, Hoyt & Rachal, 2000). Findings that include this systematic error variance therefore tend to be accepted as legitimate findings within a given field because they are consistent across the overall body of research. As noted by Hoyt & McCullough (2005), the existence of response biases means that self-report measures assess an unknown degree of construct irrelevant variance – that is, variance that is produced by the method of measurement, and is not relevant to actual variance in whichever construct the researcher is attempting to measure.

### *Response bias in forgiveness measures*

The degree to which response biases actually affect self-reports of forgiveness is uncertain, particularly for research with child samples. While acquiescence can be minimised by including reverse scored items (Hoyt & McCullough, 2005), socially desirable response bias in particular may be of concern in forgiveness research, because forgiveness is traditionally valued by major religions (Lawler-Row, Scott, Raines, Edlis-Matityahou, & Moore, 2007) and is generally regarded as a prosocial response (McCullough, Pargament & Thoresen, 2000). It is therefore arguably a valued response and may be socially desirable to report (DeShea, 2008; Fehr, Gelfland & Nag, 2010). Conversely, forgiveness has been argued by some thinkers to be a weak act (e.g. Nietzsche, 1987, cited by Enright & the Human Development Study Group, 1994), with some lay conceptions of forgiveness also including ideas of forgiveness as a sign of weakness (Kearns & Fincham, 2004). Forgiving could thus be undesirable to report (i.e. may be under-reported).

One recent meta-analysis suggested that measures of socially desirable response bias tend not to be related to responses on self-report forgiveness measures (Fehr, Gelfland & Nag, 2010); however, this analysis specifically excluded studies that were done with children, who may be more likely to display response biases as will be discussed further on. Moreover, another meta-analysis (Uziel, 2010) suggests that measures of socially desirable responding do not actually assess response bias but rather ‘interpersonally oriented self-control’, a genuine trait of high self-control in social contexts. It could thus be argued that studies attempting to assess the influence of socially desirable responding on forgiveness measures by using measures of socially desirable responding may not have controlled for socially desirable response bias at all.



### *Gap between self-report and subconscious attitudes*

A second concern for self-report methodology involves not the conscious misrepresentation of attitudes, but the potential inability to report on attitudes that exist at the subconscious level (Greenwald & Banaji, 1995). Written self-report questionnaires assume a level of cognitive involvement and self-reflection, which is at odds with studies suggesting that at least some aspects of forgiveness occur at an automatic or subconscious level (e.g. Karremans & Aarts, 2007; Karremans & Van Lange, 2008). The premise that forgiveness is not solely cognitive is well recognised by researchers who distinguish between *decisional forgiveness* and *emotional forgiveness* (Worthington, 2005; Worthington et al., 2007) and by studies suggesting that certain patterns of physiological arousal are associated with forgiving and with not forgiving (e.g. Lawler-Row, Karremans, Scott, Edlis-Matityahou, & Edwards, 2008; Whited, Wheat, & Larkin, 2010; Witvliet, Worthington, Root, Sato, Ludwig, & Exline, 2008). As noted earlier, an emotional rather than cognitive emphasis is likely to be particularly relevant for children's forgiveness.

While it is true that most latent questionnaire measures recognise the non-cognitive aspects of forgiveness by including items on emotions, motivations, and/or behaviours (e.g. EFI-C, Enright, 2000; TRIM, McCullough et al., 1998; EFI, Subkoviak et al., 1995), even questionnaire items intended to assess affective responses still require the respondent to cognitively reflect on their emotional processing in order to report accurately on such processing. Thus, responding to self-report forgiveness measures requires a certain level of ability to accurately reflect and report on one's emotions in response to a transgression, not all of which may be consciously accessible.

In summary, self-report questionnaire formats assume that respondents are able and willing to report on internal states. However, this assumption has been questioned even for adult self-report measures, as responses to such measures may be related to socially

desirable response bias (i.e. individuals may not be willing to report on their internal states) and are unable to access subconscious responses (i.e. individuals are unable to report on internal states). Moreover, while these problems are not specific to children, they may be particularly marked with children, as will be discussed next.

### *Use of self-report methodology with children*

#### *Developmental differences in self-report ability*

Soto, John, Gosling and Potter (2008) consider the impact of developmental differences between children and adults in using self-report personality scales from age 10 to age 20. They note that late childhood (age 8-11) and adolescence (age 12-17) involves considerable changes in biological, social and psychological development, and that the impact of these changes on individuals' capacity to respond to self-report formats may be a crucial consideration for researchers of childhood emotional and social development.

Among the changes that may impact on self-report abilities, Soto and colleagues consider changes in cognitive capacities, including fundamental reasoning (e.g. the ability to evaluate the logical consistency of statements) and the capacity to use abstract reasoning. Additionally, development in late childhood and adolescence include changes in the ability and motivation to reflect upon the self; for instance, adolescents are more likely than younger children to consider themselves in abstract and psychological terms, to differentiate and recognise consistencies and inconsistencies between multiple aspects of the self, and to organise these differing aspects clearly (Soto et al., 2008). Thus, responding to self-report questionnaires is likely to be more challenging for a preadolescent child than it is for an adolescent, who will typically have a better organisation of self-concept.

Further changes in late childhood and adolescence include changes in verbal comprehension, including growth of vocabulary and reading comprehension. For example,

adolescents typically have increased ability, compared to preadolescent children, to self-monitor for comprehension and take corrective action in order to fully understand a text. Moreover, adolescents tend to have more experience completing questionnaires (such as in magazines) than younger children do (Soto et al., 2008). The experience of filling out a self-report questionnaire is therefore likely to be easier and more familiar for an adolescent, while preadolescent children on the other hand are likely to experience higher levels of uncertainty in completing questionnaires. Such uncertainty has been argued to increase the likelihood of systematic response styles, such as acquiescent or socially desirable responding (Soto et al., 2008).

#### *Developmental differences in reporting emotions*

Self-report formats may be particularly difficult for children when assessing emotion-based phenomena, because the task of accurately reflecting and reporting on emotional responses may again be more difficult for children compared to adolescents or adults. As noted earlier, adolescents are just developing skills in observing, considering and regulating their emotional reactions (Flanagan et al., 2012), whereas preadolescent children are arguably less able to undertake such reflection and tend instead to act out emotions in their behaviour (Denham et al, 2005). Given that reporting on forgiveness typically involves reflecting on emotional experiences, and forgiveness has been argued to be particularly emotion-focused for children, the need to consciously recognise, consider and verbalise emotions may impact upon the children's ability to respond to self-report questionnaire measures of children's forgiveness. It may therefore be even more difficult for children to reflect accurately on their underlying emotional forgiveness than it is for either adolescents or adults, who as noted above may already experience some difficulty in reflecting and reporting on non-cognitive aspects of forgiveness. As such, a written or

verbal questionnaire assessing emotional forgiveness may be particularly unsuitable for children, regardless of whether they have the necessary reading and comprehension skills to understand items and understand the questionnaire format.

This difficulty may also compound the potential for children to respond to self-report formats with response biases (Soto et al., 2008). For example, in one study children aged five to 12 responded with more prevalent extreme scores as tasks became more subjective and emotion-focused (i.e. questionnaire measures of emotion compared to questionnaire measures of physical judgments); while this tendency was more pronounced for younger children it existed to some degree across all age groups in the sample (Chambers & Johnston, 2002). Moreover, the tendency persisted despite the objective ‘truth’ being established by the experimenters. There may therefore be something specific about rating emotions that contributes to extreme scoring (Chambers & Johnston, 2002), which again suggests that it may be especially difficult for children to accurately respond to questionnaires measuring emotional aspects of forgiveness, as opposed to less emotion-focused concepts.

#### *Further limitations of self-report formats*

As can be seen, self-report format in itself may be a significant limitation of the latent questionnaire measures reviewed above. However, the difficulty children experience in responding to self-report formats may be increased in several of the measures reviewed due to factors causing additional difficulties, namely the vocabulary used in the questionnaire, its length, and the type of response scale used in the measure.

### *Vocabulary*

Several of the questionnaire measures reviewed above utilise complex vocabulary that may increase the difficulty of accurate responding for preadolescent samples. For example, questionnaires using such terms as ‘amends’, ‘grudge’, and ‘condemn’ (e.g. Goss, 2006) are arguably inappropriate for preadolescent respondents, considering that children’s verbal comprehension tends to increase significantly during adolescence (Soto et al., 2008). In contrast, some of the other measures reviewed above appear to be more appropriate; notably the EFI-C (Enright, 2000) uses simple vocabulary likely to be appropriate to the recommended ages of 6 to 12 (Enright, 1993). As such, difficulty in responding to items on this measure ought to have been minimised.

### *Length*

Several of the questionnaires reviewed above may also be limited by their length. While young children in particular have been noted to require interesting, enjoyable tasks that can be completed in a short space of time (Eiser, Mohay & Morse, 2000), children generally have been noted to regard traditional measures such as questionnaires as intimidating and/or boring (Barker & Weller, 2003). Thus, even in late childhood individuals can be reasonably expected to be more engaged in, and therefore respond more accurately on, interesting and easily completed tasks.

Long questionnaires in particular may decrease accurate responding. One study developing a scale to assess children’s experiences of critical illness found that children aged under nine years were fatigued after completing approximately half of a 36 item questionnaire, while respondents aged 9-12 years also complained of scale length and some had to complete the questionnaire over two sessions (Rennik, McHarg, Dell’Api, Johnston, & Stevens, 2008). Although children in that study may have experienced

additional difficulty due to illness, it seems likely that even healthy children may experience difficulty in completing longer measures such as the 60-item EFI used by Hui & Chau (2009), and perhaps also the 30-item EFI-C. This is possible regardless of the high internal consistency typically reported with these measures, because high reliability might also be obtained as a result of the systematic response biases that are arguably more likely when children experience difficulty in responding to a measure (Soto et al., 2008). Shorter measures, such as the CFM (Pickering, 2007), may therefore be more appropriate.

### *Response scales*

Both questionnaires and single-item measures may also be limited by the type of scales on which children are required to respond to items. As noted above, children are likely to have difficulty in reporting accurately on Likert-type scales when reporting on subjective or emotional content. However, almost all of the questionnaire and explicit measures reviewed above utilise multiple-point scales with the assumption that children will be able to respond accurately on these scales. The only exception to this is single-item measures that have utilised a line on which respondents can make a mark at any point (e.g. Roge & Mullet, 2011); such a line-type scale was suggested by Scobie and Scobie (2003) to be preferred to a multiple point scale by children aged 11 to 12. As an alternative approach to this problem, the CFI uses a very simple scale (no/maybe/yes), while the EFI-C provides a visual aid consisting of large and small green and red circles to represent strong and weak agreement and disagreement with questionnaire items; this aid might also help to simplify the task of responding on Likert-type scales. Additionally, the EFI-C can be administered as a verbal interview, with items read out and children being able to simply point to their preferred response.

However, there is the potential that responding in an interview might lead to more, rather than less, socially desirable responding. This is because children may feel pressure to please a researcher who, because of their greater experience, physical presence, and social standing may be perceived by children as an authority figure with greater power than the child (Barker & Weller, 2003; Eiser, Mohay, & Morse, 2000); moreover, if it is the case that children's early learning about forgiveness stems from learning about apology and making up in early childhood (Scobie & Scobie, 2000), it is likely that children are aware that forgiving is a valued response and may therefore feel pressured to respond forgivingly in front of a researcher.

#### *The need for child-focused research methods*

One final but important limitation of the questionnaire measures reviewed above is that while each measure aims to assess children's responses, none is designed according to a 'child-focused' approach. 'Child-focused' or 'children-centred' research is an increasingly recognised approach to child assessment that includes children's perspectives in the research process, including measurement (e.g. Barker & Weller, 2003; Fattore, Mason & Watson, 2007). Proponents of child-focused research argue that including children's perspectives in the design of measures is important to the meaning and accuracy of these measures. For example, in measuring children's wellbeing, it has been argued that traditional research has not addressed whether the domains and measures identified by adults and used in traditional measures of wellbeing are meaningful to children. Therefore, the importance (or otherwise) of adult-determined items to children is often overlooked (Fattore, Mason, & Watson, 2007). Moreover, the practice of adjusting adult scales for use by children tends to construct children's competencies as 'lesser than', rather than different to, adult competencies (Fattore, Mason, & Watson, 2007). Recent attempts to measure

children's wellbeing have therefore attempted to take into account those aspects that children themselves identify as being important to wellbeing, and to use approaches other than traditional questionnaires (e.g. Crivello, Camfield, & Woodhead, 2009; Eiser, Mohay, & Morse, 2000; Fattore, Mason, & Watson, 2007).

Similarly, forgiveness is one area in which children's experiences may be different to, as opposed to lesser than, adults' competencies – for instance, as noted above children's forgiveness may be more emotion-based and less cognitive than adults'. The measurement of children's forgiveness may therefore stand to benefit from more child-focused research methods and measures, as these methods may yield different results to methods based on adult assumptions about forgiveness.

However, none of the measures reviewed above appear to be based specifically on children's perspectives on forgiveness. The EFI-C is a simplification of an adult measure, thus could be argued to implicitly assume that children's forgiveness is similar to adults' forgiveness, with adjustment for children being an adjustment to less items and simpler terms. Hui and Chau (2009) simply used the Taiwan Chinese version of the 60-item EFI.

Meanwhile, Goss (2006) and Pickering (2007) based their measures on McCullough and colleagues' conceptualisation of forgiveness as involving vengeful/aggressive, benevolent/prosocial, and avoidant motivations (McCullough, Worthington, & Rachal, 1997; McCullough et al., 1998). While this model is arguably applicable to children's forgiveness due to its evolutionary basis (e.g. McCullough, 2008, Pickering, 2007), neither of these measures appears to have incorporated children's actual perspectives on what happens when forgiving or not forgiving, although Pickering's measure was partially informed by prior research on children's social goals and may therefore be 'closer' to a real-life approximation of children's aggressive, avoidant, and prosocial motivations. (Moreover, because this measure was for use with 6 and 7 year olds



and children of this age group had been found to have difficulty defining forgiveness, the inclusion of their perspectives may not have been possible).

Arguably however, a child-focused assessment of children's forgiveness ought to include responses that children themselves identify as being involved in forgiveness, rather than responses that adults have assumed to constitute children's forgiveness. Overall then, the questionnaires reviewed above may not actually reflect or assess the ways in which children experience forgiveness in their everyday interactions.

### ***Other-report measures***

One way to address self-report bias in forgiveness research generally is to develop other, non-self-report ways to assess forgiveness. At least one study has attempted to measure children's forgiveness by assessing adult perspectives of children's forgiving behaviour. Pickering (2007) included parent and teacher reports of children's forgiveness, which consisted of their responses to seven items theoretically related to children's forgiveness, e.g. 'engages in play quickly with his/her friends after they have a fight'. The measure utilised a seven-point Likert-type scale ( $1 = \textit{never}$  to  $7 = \textit{always}$ ) and was found to have adequate to high reliability (parent form  $\alpha = .70$ , teacher form  $\alpha = .88$ ). The study also used an unlimited nomination procedure in which peers nominated which of their classmates was forgiving ('who forgives you when you have done something wrong or you know things are okay after you've had a fight?') and grudge-holding ('who holds grudges or stays mad at you when you do something mean?').

Pickering (2007) helped to address the mono-method bias often found in forgiveness research. However, the suitability of other-report measures as alternatives to self-report questionnaires (rather than useful additions to multi-modal research) can be

questioned from the perspective of forgiveness research and from the perspective of research with children.

### ***Limitations of other-report measures***

From the perspective of forgiveness research, most definitions indicate that forgiveness is at least partially an intrapersonal process (McCullough, Pargament & Thoresen, 2000), and that intrapsychic processes may in some contexts be sufficient (Worthington, et al., 2007). Therefore, although other-report measures are arguably useful as part of a multimodal approach to forgiveness measurement (McCullough, Hoyt & Rachal, 2000), the intrapersonal nature of forgiveness may preclude these measures from being accurate measures of forgiveness when used on their own, as some aspects of forgiveness may not be openly observable. For example, Pickering (2007) considers that because avoidance could be indicated by the lack of a behaviour, rather than the presence of an overt behaviour, it may be difficult for observers to identify and report avoidance behaviours. In Pickering's study, other-report measures by parents in particular were not significantly correlated with the avoidance, aggression or prosocial motivations used to assess forgiveness. Teacher-report and peer-report measures appeared more successful with respect to relationships with self-report, particularly with aggression motivations, which are arguably more observable than, for example, avoidant motivations as discussed above.

The lack of consistency between observers points to another problem with using other-report for measuring children's responses, namely, consistency between sources. Kazdin (2005) points out that in clinical child psychology there is a tendency toward low levels of agreement between multiple informants including parents, teachers, clinicians and children. Moreover, the reporting of intrapersonal aspects of forgiveness could be

compared to the reporting of internalising behaviours, which have been suggested to be assessed more accurately through self-report than observer-report formats, such as parent reports (Eiser, Mohay & Morse, 2000).

In summary, while other- and observer-report formats may be useful *additions* to the multimodal measurement of children's forgiveness, further alternatives to self-report questionnaires are still necessary in order to capture the intrapersonal aspects of children's forgiveness.

### ***Behavioural measures***

Another way in which forgiveness has been measured in adults is through the use of behavioural measures (e.g. Carlisle et al., 2012; Dorn et al., 2014; Zechmeister, Garcia, Romero, & Vas, 2004). Behavioural measures of forgiveness generally infer forgiveness from behaviours that are seen to be indicative of forgiveness-related motivations; for example, behaviours that imply a prosocial or cooperative response, or the absence of aggression, hostility, or avoidance (Dorn et al, 2014; McCullough, Hoyt, and Rachal, 2000). Often, behavioural measures involve observation of responses following a laboratory-contrived transgression; for example, distribution of ballots or tickets to the transgressor for a draw to win money (Carlisle et al, 2012; Struthers, Eaton, Santelli, Uchiyama, & Shrivani, 2008), co-operative behaviour following transgressions in computer simulations such as Cyberball (Dorn et al., 2014) or the Prisoner's Dilemma Game (Axelrod, 1980a, 1980b, cited by McCullough, Hoyt, & Rachal, 2000), and hours volunteered to do a favour to help the transgressor (Zechmeister et al., 2004). Behavioural measures have also been used to assess forgiveness of a recalled transgression; Dorn and colleagues (2014) used the number of positive qualities a respondent was able to list about their transgressor as a behavioural measure of forgiveness. Because these measures assess

actual behaviour, it has been considered that they may be less susceptible to response bias than self-report items (Dorn et al., 2014).

Behavioural measures of children's forgiveness appear to be limited to one series of studies in which children's willingness to forgive was assessed by means of behavioural responses in hypothetical sharing, caring and trusting tasks administered during verbal interviews (Yamaguchi, 2009). Specifically, in the sharing task, children were given cardboard replicas of small, medium and large slices of cake and were asked to choose which slice would be appropriate for the transgressor in a hypothetical scenario. In the caring task, children judged whether or not the child in the scenario would help a transgressor who had dropped something and may have hurt him or herself, while in the trusting task, children decided whether or not the child in the scenario would lend their transgressor a precious game or DVD. Children also nominated and rated their emotional responses to the transgression during the interview.

### ***Limitations of behavioural measures***

The supplementation of self-report of emotions with a behavioural measure as in Yamaguchi's study appears to be a developmentally appropriate approach to measuring children's forgiveness. However, regardless of age group, behavioural measures are limited by the problem of whether or not they actually indicate forgiveness or indicate other motivations. For example, prosocial responses may be due to other factors, including social norms and instrumental reasons for the response; one instance of this in Yamaguchi's work is that responses to the 'caring' task of helping an injured transgressor produced overwhelmingly prosocial responses in a pilot study, and needed to be adapted for consequent studies (Yamaguchi, 2009). Thus, for behavioural measures to be valid measures of children's forgiveness, it must first be established whether or not the

behaviour in question is likely to reflect a forgiving response. Moreover, because ‘behavioural’ responses to sharing, caring and helping tasks were self-reported to the researcher, concerns over response bias in self-report measures may simply have been replicated by behavioural reports.

Laboratory-based behavioural measures may also be limited in the ability to generalise to forgiveness in real life situations because laboratory transgressions tend to be weaker than some real-life transgressions for ethical reasons (Carlisle et al., 2012), and because they tend to involve transgressions by strangers or authority figures (i.e. researchers). Thus, they may not generalise to children’s real life interactions with peers or significant others (Pickering, 2007).

As noted by Dorn and colleagues (2014), given that forgiveness is largely an intrapsychic process, behaviours can provide corroboration for self-report measures, but cannot replace self-report measures. Self-report and behavioural measures have even been found to be differentially predicted, leading to suggestions that distinct mechanisms appear to underlie verbal versus behavioural expressions of forgiveness. Thus, while behavioural measures are likely to be useful in the multi-modal measurement of children’s forgiveness, further alternatives are still needed to help address the limitations of self-report measures in assessing intrapersonal aspects of children’s forgiveness.

### **Summary: Questions in the measurement of children’s forgiveness**

The above review suggests two particular issues are outstanding in the measurement of children’s forgiveness.

First, an examination of children’s everyday understandings of forgiveness is needed, for several reasons. Because single-item explicit measures are often used due to their brevity and apparent face validity, it is important to establish whether or not they are

valid for use with children. That is, it is important to ascertain whether children's understandings of terms such as 'forgive', 'forgiven' and 'forgiveness' are sufficiently similar to the definitions or constructs of forgiveness likely to be held or recognised by researchers seeking to employ single-item forgiveness measures with child samples for such measures to have meaning. Moreover, examination of children's understandings of forgiveness will go some way toward designing alternative measures that are child-focused with respect to children's actual experiences of forgiveness, whether these are self-report or behavioural measures.

Secondly, it is debatable whether traditional questionnaires are an appropriate way to assess children's forgiveness. In light of recommendations for multimodal measurement in forgiveness research (Hoyt & McCullough, 2005) and potential difficulties for children in responding to questionnaires, there needs to be much more research on developing alternative measures of children's forgiveness. Given the largely intrapersonal nature of forgiveness, in particular emotional forgiveness, it is likely that such measures still need to assess children's internal responses; however, alternatives to traditional questionnaires for measuring these responses ought to be developed in order to give more viable alternatives for the assessment of children's forgiveness. In particular, the observation that children tend to act out their emotions in their behavioural responses suggests that a measure assessing children's emotional and/or behavioural motivations may be well worth pursuing as part of a multimodal approach to measuring children's forgiveness. If found to measure unique variance or even to be simpler and easier for children to use, then such measures would be a useful addition to more traditional measures.

With these needs in mind, this thesis aims to develop research on the measurement of children's forgiveness through

1. A qualitative examination of children's descriptions and understandings of forgiveness, in order to provide both an indication of whether explicit single-items may be a valid measure of children's forgiveness, and a basis for the development of latent or behavioural measures (Chapter 2)
2. The development of an alternative to questionnaire measures of children's forgiveness, specifically an emotion-oriented pictorial measure informed by children's own descriptions of their emotional and behavioural responses when forgiving and not forgiving (Chapters 3, 4 and 5).

## Chapter 2: Studies 1 and 1b

### Examining and utilising children's understandings of forgiveness to develop the Children's Forgiveness Card Set

#### **Study 1: Examining children's understandings of forgiveness**

##### **Rationale for the present study**

The introductory chapter to this thesis identified the question of children's everyday understandings of the terms 'forgive', 'forgiven' and 'forgiveness' as an outstanding issue in the measurement of children's forgiveness. As noted in that chapter, several of the existing studies on children's understandings of forgiveness assess only the extent to which children's understandings match pre-existing frameworks informed by adults. Such 'top-down' analyses preclude a bottom-up, data driven analysis reflecting children's everyday experiences and understandings, and are therefore arguably inappropriate as bases for a child-focused measure of children's forgiveness. Meanwhile, data-driven analyses of children's understandings of forgiveness are very few and do not yet give a conclusive picture of children's understandings of forgiveness.

This initial study therefore aims to provide a data-driven analysis of children's understandings of the term 'forgive'. In doing so, this study will provide some indication of the extent to which single-item explicit measures of forgiveness might be considered valid or effective ways in which to measure children's forgiveness. Additionally, such a bottom-up analysis of children's understandings of forgiveness will also be important with respect to the validity and usefulness of latent and behavioural measures of children's forgiveness, as it will give some indication of the extent to which these measures reflect how forgiveness is actually played out for children in their everyday lives.



Importantly, because previous studies have noted that children may have difficulty in articulating their understanding of the term ‘forgive’ but are able to give examples and understand the process of forgiveness through their everyday experiences (e.g. Pickering, 2007; Yamaguchi, 2007), the current study will explore both children’s explicit understandings of forgiving and their experiences of forgiveness, with a view to informing the development of a new measure of children’s forgiveness over subsequent studies. Specifically, children’s understandings and experiences of forgiveness will be examined by means of an inductive thematic analysis, described next.

### **Thematic analysis**

According to Braun and Clarke (2006), thematic analysis is a process of finding repeated patterns of meaning (themes) across a data set, in order to organise and describe the data in rich detail. Unlike some other varieties of qualitative analysis that assume a constructionist paradigm, thematic analysis is a flexible form of analysis, compatible with both essentialist/realist paradigms (i.e. those which aim to describe the experiences, meanings, and reality of participants) and constructionist paradigms (i.e. those which examine the way in which experiences, meanings and realities are constructed by discourse within society). Thematic analysis was therefore considered suitable to examine children’s understandings of forgiveness in a flexible yet systematic way.

### ***Decisions in thematic analysis***

Braun and Clarke (2006) outline decisions to be made when conducting thematic analysis, including whether to make a description of the overall data set or a detailed account of one particular aspect of the data, whether to use inductive or theoretical thematic analysis, whether to look for themes at a semantic (explicit) or latent

(interpretative) level, and whether to analyse the data according to an essentialist/realist perspective or a constructionist perspective.

For the present study, these decisions were made according to the need for an open examination of children's understandings of forgiveness with which to inform further studies. Due to the study's preliminary nature and the aim of exploring the variability in children's everyday understandings of forgiveness, it was important to make a general but rich description of the entire data set using an inductive or bottom-up approach so that themes would be strongly linked to the data and not necessarily related to themes that may have been identified in previous research. Meanwhile, because this study aimed to inform further realist studies on measuring children's forgiveness, it was considered more suitable to examine themes at a semantic level, reflecting an essentialist/realist paradigm.

## **Method**

### **Participants**

Participants were 29 primary school students; 11 boys (38 %) and 18 girls (62 %), from four public primary schools in metropolitan Adelaide, South Australia. The schools came from three different metropolitan regions as listed by the Department for Education and Child Development, and were considered to have a socioeconomic mix roughly representative of the population of Adelaide. Participants' ages ranged from 9 to 12 years, thus mainly falling in the 'late childhood' age range (Soto et al., 2008). The mean age of participants was 10 years, and both the median and modal ages were 10 years. Out of all potential participants in the approached classes, 27.36% gained parental consent and participated on the day of the study (participation rates for individual schools ranged from 19.35% to 38.46%).

## **Materials**

Materials consisted of 13 questions to guide a structured interview. While it was important for the study to be driven as much as possible by children's own understandings of forgiveness, a structured interview format was chosen in order to facilitate the inclusion of varying possible aspects of children's experiences forgiveness, as opposed to simply asking for children to define or describe forgiving, which may have been difficult for them (e.g. Yamaguchi, 2009). Because the literature generally defines forgiving as including cognitive, emotional and motivational/behavioural aspects (e.g. Worthington et al., 2007), the interview schedule included questions about feelings, thoughts and behaviours that might occur as part of forgiveness, framed both from the point of view of forgiving someone else and of being forgiven. Additional questions asked children how they knew forgiveness had occurred, to define forgiveness, and to describe situations in which forgiveness might occur and factors that might make forgiving difficult. All questions are presented in table 2.1.

Table 2.1

*Structured interview schedule for Study 1*

- 
1. What is it like to forgive someone?
  2. What does it feel like to forgive someone? / When you forgive someone, how do you feel about that person?
  3. What do you do when you forgive someone/ What kinds of things do people do when they forgive someone?
  4. What do you think when you forgive someone? / What kinds of things do people think when they forgive someone?
  5. How do you know when you have forgiven someone?
  6. What is it like when someone forgives you?
  7. How does it feel when someone forgives you?
  8. How could you know if someone had forgiven you? How can you tell?
  9. What does it mean to forgive (someone)? What does 'forgive' or 'forgiveness' mean to you?
  10. Can you think of some things that you (or kids/people like you) might forgive someone for?
  11. What kinds of things make it easier to forgive someone?
  12. What kinds of things would it be hard to forgive someone for?
  13. Can you tell me anything else about forgiveness?/Is there anything else you would like to say about forgiveness/forgiving?
- 

**Procedure**

Ethical approval for the study was sought from the University of Adelaide School of Psychology and from the Department for Education and Child Development in South Australia. Participants were then recruited by first contacting schools to seek agreement to participate in the study, then sending information and consent forms (Appendix 2.1) to parents/guardians via the school.

Participants were interviewed individually in a quiet room or area at their school. The same researcher interviewed all participants. At the beginning of the interview the researcher emphasised to participants that the interview was not a test, that the study simply aimed to find out about children's thoughts about forgiveness, and there were no right or wrong answers. The researcher also explained that recordings would be kept confidential, and explained the general, anonymous and non-identifying nature of reports

that would be produced from the data. In many cases reminders of these conditions were repeated during the interview (e.g. *'remember it's just about what you think/just about your opinion'*). Participants were informed that they were free to withdraw at any stage of the interview.

Interviews began with 'practice questions' about benign themes such as favourite foods and holiday activities. This phase was explained to participants as a way to get used to the situation and equipment, but was also intended to build familiarity and rapport between the researcher and participants. After the introductory questions, participants were asked about forgiveness using the list of interview questions as a guide; if one version of a question seemed to make the child uncomfortable or did not generate much response (e.g. *'What do you do when you forgive someone?'*) an alternative version of the question was asked (e.g. *'What kinds of things do people do when they forgive someone?'*). Frequently both versions were asked as a matter of course (e.g. *'What kinds of things might you, or students your age, forgive someone for?'*) Children were free to take time to think about questions and to ask for clarification, and could skip any question that was difficult or uncomfortable for them.

## **Analysis**

The data obtained from the interviews were analysed according to the procedure for thematic analysis described by Braun and Clarke (2006). This included (1) familiarisation with the data through transcribing, reading and rereading the taped data and noting initial ideas; (2) producing initial codes for interesting features of the data and collating the data relevant to each code; (3) collating coded material into potential themes; (4) reviewing the coherence of the themes and producing a 'thematic map'; and (5) refining the specifics of each theme in order to define and name them clearly.

Familiarisation began during transcription of the interviews, which involved listening to each entire interview at least three times. Once raw transcripts had been typed, each instance in which a participant had said something about forgiveness was made into an easily readable phrase or statement, for ease of coding. For example, the question-and-answer format ‘How do you feel when you forgive someone?’ ‘Happy’ was transformed into ‘[When I forgive someone I feel] happy’ (Phase 1).

The list of transformed statements from each transcript was then read through and ideas for initial codes were noted. Next, statements were collated according to these initial codes, then codes and extracts were reviewed. Similar codes were combined with each other, while codes with minimal input were removed (Phase 2).

Codes were then organised into potential themes, which consisted of several codes examining different aspects of the theme, such that the codes became ‘sub-themes’ (Phase 3). A thematic map was then generated, which outlined the themes and sub-themes (Phase 4), and themes and sub-themes were each defined formally. Each extract in the themes and sub-themes was then checked for coherence with the relevant theme/sub-theme definition (Phase 5).

A second postgraduate researcher in the forgiveness field then separately reviewed the transcripts for themes. As the two interpretations were found to be compatible, the original interpretation was able to be adjusted in the final phases of analysis to capture all aspects of the second interpretation. Finally, initial transcripts were reviewed to ensure that meaning had not become obscured during coding, and to re-clarify any links between themes that were more obvious in the raw transcripts than in the isolated extracts.

## **Results**

### **Themes in children's understandings of forgiveness**

The analysis resulted in seven themes, five of which were further categorised into subthemes to produce a total of 19 subthemes. This large number of themes and subthemes was retained because the study aimed to obtain a rich description of children's understandings of forgiveness; therefore, it was important to fully describe the majority of the data set. Moreover, the themes and subthemes related well to each other, so further exclusion of codes seemed unnecessary and arbitrary. A summary of themes and subthemes is shown in Table 2.2, followed by a full description each theme and subtheme.

Table 2.2

*Summary of themes and subthemes in children's understandings of forgiveness*

Theme	Subtheme	Number of participants
Cognitive-emotional experience	Feeling forgiveness	4 (14%)
	Forgiving as an increase in positive thoughts and emotions	17 (59%)
	Forgiving as a decrease in negative thoughts and emotions	6 (17%)
	Being forgiven feels positive	23 (79%)
	Forgiveness can be difficult	12 (41%)
Relationship restoration	Forgiveness involves being friends/friendly again	25 (86%)
	Forgiveness expressed verbally/explicitly	8 (28%)
Moving on	Forgiveness as forgetting or denial	5 (17%)
	Forgiveness as moving on	9 (31%)
Forgiveness and apology	Forgiveness confused with apology	15 (52%)
	Forgiveness follows apology/compensation	4 (14%)
	Apology/remorse facilitates forgiveness	5 (17%)
	Forgiveness as accepting an apology	5 (17%)
	Forgiveness as interchange	6 (21%)
Balancing risks and benefits	Need for trust in no repeat transgressions	9 (31%)
	Forgiving friends/friendly people	11 (38%)
	Reluctance to forgive severe transgressions	21 (72%)
	Forgiving for accident/anomaly	10 (34%)
	Forgiveness involves communication	6 (17%)
Importance of sincere forgiveness	No subthemes	9 (31%)
Forgiveness as morally good	No subthemes	6 (21%)

Note: participants responded in multiple categories; therefore, percentages sum to over 100%



### *Cognitive-emotional experience*

The first theme, ‘Cognitive-emotional experience’, contained five sub-themes in which participants described emotions and cognitions they experienced during, or as an outcome of, forgiving and being forgiven. Notably, most subthemes referred to emotional responses, and particularly to the increase in positive or decrease in negative emotions. Cognitive responses were generally limited to thinking about specific aspects of the transgression and considering whether or not one was willing to forgive.

#### *Feeling forgiveness*

This small subtheme contained instances in which participants simply referred to knowing forgiveness from ‘feeling’ it, without saying whether the feeling was negative or positive, for example,

*‘(If someone forgives you) it feels like they’ve forgiven you.’ (boy, 10)*

*‘I usually feel, feel when I’ve forgiven someone’ (girl, 9)*

#### *Forgiving as an increase in positive thoughts and emotions*

This subtheme included references to forgiveness involving positive emotions and/or thoughts for the forgiver, for example,

*‘You’ll probably feel guilty if you don’t forgive someone but when you do, you’ll feel, like, happy. Sort of free.’ (boy, 10)*

#### *Forgiving as a decrease in negative thoughts and emotions*

Children’s descriptions of forgiveness also included statements inferring a decrease in negative thoughts and/or emotions when forgiving another, for example;

*'I don't hate them anymore' (boy, 11)*

*'You don't need to be still angry at them.'* (boy, 12)

### *Being forgiven feels positive*

This subtheme contained references to the positive emotional experience of *being* forgiven, for example:

*'(It) feels really good that I've been forgiven so that I can still, like, be with them and all that' (girl, 9)*

Two extracts also contained references to a decrease in negative emotions upon being forgiven, i.e. relief of fear and of guilt, but this was not frequent or salient enough to create a separate subtheme.

### *Forgiveness is difficult*

This subtheme referred to instances in which participants said that forgiving was a difficult or negative experience, or that it involved hesitation or uncertainty. Examples include,

*'It's usually really hard' (boy, 10)*

*'When you're forgiving someone it's a lot more complicated [than being forgiven] because you have to think about everything that they've done, and what they've said and stuff' (girl, 11)*

### ***Relationship restoration***

The second theme, 'Relationship restoration', consisted of five sub-themes, all of which emphasised an association between forgiveness and restoration of a friendship or a positive relationship norm.

*Forgiveness involves being friends/friendly again*

This subtheme included extracts in which the participant described forgiveness as involving restoring a friendship or returning to friendly or prosocial behaviour, for example;

*'I think I know if they've forgiven me if they start talking to me a lot, like getting in conversations, asking me to play when I may not have anyone to play with'* (boy, 11)

*'They're not just... ignoring you all the time for just what you did, they're being nice to you and hanging out with you and then you know that they're still friends with you'* (girl, 12)

*'...they kind of show that they've forgiven you, as in, like, body movements.'* (boy, 10)

*Forgiveness expressed verbally/explicitly*

A few participants also described knowing forgiveness when it was expressed explicitly;

*Well, you either say it out like, like say out loud 'I forgive you', you can usually know it by that, or...(participant then talked about body language)* (boy, 10)

*Well, you usually say something... (participant then talked about feeling better)*  
(girl, 9)

*'(if) they started saying, like, I forgive you and stuff. They'd tell you, maybe.'*  
(girl, 12)

## ***Moving on***

Forgiveness was also conceptualised as moving forward after the transgression, as captured in the third theme 'Moving on'. This consisted of two sub-themes.

### *Forgiveness as forgetting or denial*

This subtheme contained extracts in which participants specifically described forgiveness as involving forgetting or behaving as if the transgression had not occurred, for example;

*'If someone's done something bad, you've acknowledged it, and then it means that you can forget about it, and like, move on, and so there's no hard feelings.'* (boy, 10)

*'What do I do when I forgive someone - I just say...forget about it, just pretend it never happened, get on with our friendship, something like that.'* (boy, 11).

### *Forgiveness as moving on*

This subtheme contained references to forgiveness as moving on from the transgression, without referring to forgetting or denying the transgression. For example, in describing forgiveness, participants said;

*'It means like, saying that they're not blaming you now; like, they're over it; they don't mind anymore, too much, even though they didn't like it, they don't mind too much now.'* (girl, 11)

*'If someone does something wrong, then you don't just hold it against them forever, you just...forgive them'* (girl, 12)

### ***Forgiveness and apology***

This theme was made up of five sub-themes that demonstrated the participants' close association of apology and forgiveness.

#### *Forgiveness confused with apology*

One unexpected sub-theme was 'Forgiveness confused with apology'. This was made up of extracts in which participants seemed to confuse forgiveness with apology, or believe that forgiveness and apology were synonymous, for example;

*'I think it's just like apologising for a bad act you've done' (boy, 10 years)*

*'If you need to forgive someone, then you've obviously done something wrong' (girl, 11 years)*

*'Normally [when forgiving] you just say sorry, and if it's really bad you'd probably write a note, or if it's a family member you'd give them a hug' (boy, 12 years).*

Fifteen out of the 29 participants, (52%) gave replies in this category, with ages ranging from nine to 12 years. After consideration, it was concluded excluding these participants from the analysis would not be useful for several reasons.

First, this 'confusion' was an important aspect of children's understandings of forgiveness, as it would clearly impact both on research and practice (e.g. counselling). It was therefore important to retain and report this common tendency.

Second, participants who confused forgiveness and apology could not be usefully separated from the other participants, as most students who showed confusion also showed evidence of a more mature understanding in other instances. For example, one participant demonstrated confusion when describing the kinds of things people do when forgiving:

*'You could write an apology, or say sorry. Something like that.'* (boy, 10 years)

However, the same participant also showed evidence of a not-confused stance, as in the following extract:

*'You get some sort of satisfaction, you get a feeling like, they've done something wrong, and you know that, but you forgave them for it.'*

Of the fifteen participants who confused forgiveness and apology, ten also showed clear evidence of a 'not confused' stance, and the remaining five all gave ambiguous statements that could be interpreted as referring to either forgiveness or apology. In any case, an authentic inductive analysis of children's understandings of forgiveness ought to report their actual understandings and responses to the term 'forgiveness' rather than censor their understandings according to adult ideas of appropriateness. This analysis therefore acknowledges the tendency of students in the sample to confuse forgiveness and apology, but analyses all data as these responses represent legitimate understandings of 'forgiveness' by children.

#### *Forgiveness follows apology/compensation*

Extracts in this subtheme demonstrated an assumption or norm that forgiveness follows an apology from the transgressor, for example;

*'You would forgive someone usually after they'd said sorry'* (boy, 10)

*'They say sorry, or, what can I do to make it up to you, and they try and make something better so then you're okay with it, and so then you can forgive them'*  
(girl, 11)

#### *Apology/remorse facilitates forgiveness*

This subtheme referred to instances in which participants said forgiveness is more likely or easier following apology or remorse, without assuming that forgiveness must

necessarily be preceded by apology. For example, students who were asked what makes it 'easier to forgive someone' replied;

*'If they say sorry, and like, show that they wish they hadn't done it' (girl, 11)*

*'If they say that they've done something wrong and they know they've done it wrong and they shouldn't have done that, so they're really sorry' (girl, 11)*

This subtheme also included extracts in which students noted that absence of sincere apology made forgiveness difficult;

*'If they didn't actually seem to care that they'd done it... So if they just seem to think – if they just seem to say 'I don't really care but I'm just saying sorry so you'll get over it'' (girl, 11)*

*'If they don't mean it, it just doesn't mean anything to me, I just think, why bother doing it if you're not going to mean it? Actually say it and mean it, don't just say it' (girl, 11)*

These extracts suggest that sincerity of an apology or actual remorse was a more important factor in determining forgiveness than the simple presence of a stated apology.

#### *Forgiveness as accepting an apology*

This subtheme referred to instances in which the participant appeared to conceptualise forgiveness specifically as the process of accepting or allowing an apology.

Examples include;

*'It's sort of giving, like, saying, that you accept their apology, whatever they've done' (girl, 11)*

*'I think it might be kind of like, the opposite of sorry. If they do something to you, they'll say sorry, but if you do something, you say I forgive you, so you're saying it' (boy, 11)*

*'It's kind of like saying that they've done something wrong and you're trying to make it get better... or make them, like, feel better for apologising or something... like, I let them apologise' (boy, 10)*

#### *Forgiveness as interchange*

This subtheme referred to descriptions of forgiveness as an interchange of both sides apologising, forgiving and/or making up. For example,

*'You say sorry to each other, properly, like, 'I'm sorry for doing this'' (girl, 11)*

*'[you know when you've forgiven someone] 'cos they forgive you back' (boy, 12)*

Another participant, in describing how he *wouldn't* forgive someone for a certain transgression, said;

*'If they said sorry, I wouldn't really feel sorry, like, that they've said sorry' (boy, 12)*

#### *Balancing risk and benefits*

This theme included five sub-themes, all of which were associated with the balance of trust and risk or vulnerability in making a forgiveness decision and restoring the relationship.

#### *No repeat transgressions*

This subtheme included instances in which participants referred to forgiveness as involving the hope, trust, belief or condition that the perpetrator would not repeat the transgression or do something similarly offensive. Examples of extracts in this subtheme include;



*'It's just like gaining trust again, just to gain the person's trust or them to gain your trust again, so you can be friends again' (girl, 12)*

*'I think it means to let someone know that you don't think they'll do it again and, like, you don't think that they really meant it' (girl, 9)*

### *Forgiving friends/friendly people*

This subtheme included extracts in which participants spoke of finding it easier or more likely to forgive a friend or a friendly individual, or conversely suggested forgiveness was more difficult, or less likely, if the perpetrator was not a friend or well liked.

Examples include;

*'If you've been friends for like, three years, well, of course you have to forgive each other coz you know each other for way too long just to break that friendship.' (girl, 10)*

*'It won't be that hard for a friend, ah, but if it's not really like your friend, it's going to be a little bit hard' (boy, 11)*

It also included extracts that suggested that forgiving was easier if the perpetrator was acting in a friendly or prosocial manner, for example;

*'What things make it easier? Oh, probably like, not a big present like a bike or something, but just something like, they'll play with you' (boy, 10)*

### *Reluctance to forgive severe transgressions*

This subtheme included participants' comments on reluctance, hesitation or difficulty in forgiving in the context of a perceived severe or personal transgression. It also included extracts that suggested that less serious or personal transgressions are easier to

forgive. For example, in discussing the kinds of things that would be more difficult to forgive, participants said;

*'Sometimes if they've done something really bad, you sort of hesitate, and think why should I forgive them?' (boy, 10)*

*'Hurting me and my friends, most likely. Or lying to me about something that means a lot to me.' (boy, 11)*

Importantly, for an extract to be included in this theme the participant gave some indication that he or she thought the transgression was severe, regardless of what others' point of view of the transgression might be.

#### *Forgiving for accident/anomaly*

This subtheme included comments suggesting that forgiveness is easier or more likely for an accident or a perceived anomaly in the transgressor's behaviour, that is, something that person 'wouldn't usually do'. Extracts in this subtheme included the following examples;

*'It makes it easier to forgive someone if maybe they did something that they didn't mean to do, but they just did it and you know that – if you know that they didn't do it on purpose (girl, 12)*

*'It means that you think the other person didn't mean to do it, or, if they did...that they don't usually do that' (boy, 10)*

#### *Forgiveness involves communication*

This subtheme emphasised the role of communication in order to bring about a degree of resolve. Examples include;

*'Well, forgiveness means, you just have to be the first one to step out, and just start...explaining things, why it happened and what, what the resolution, the solution, should be.'* (girl, 10)

*'To forgive is like, you have to be able to listen to them and take it in, so then you can try to forgive them I guess'.* (girl, 11)

### ***Importance of sincere forgiveness***

This theme contained extracts which referred to the importance of forgiveness being sincere in order for it to be real or effective. For example, when asked how he could tell if someone had forgiven him, he responded;

*'...saying it seriously without, like, laughing or going off and like, just never talking to you, like –they have to mean it, so it feels like they've forgiven you.'* (boy, 10)

Within this theme, three students specifically mentioned teacher or authority intervention in the apology-forgiveness process as having implications for the sincerity of forgiveness, as illustrated by the following example;

*'If the teacher says come on, you've got to forgive this person for doing something, it just gets annoying 'cos you don't actually feel that you need to, and then you get all proud and, you don't want to have to swallow your pride, and that's when it gets really difficult.'* (girl, 10)

### ***Forgiveness as morally good***

This final theme included references that participants made to forgiveness being a good thing or the right thing to do, for example,

*'I know that I've forgiven someone when, like, in your heart, it feels like, well, I've done something right.'* (boy, 10)

*Forgiveness is something people should use, like they should forgive people, because then there'll be less fighting and everything and it'll be better.'* (girl, 11)

### **Children's examples of forgivable transgressions**

In most interviews children named specific transgressions in response to the question of what the participants thought that they, or students in their age group, might forgive someone for. These responses were considered useful for informing valid, realistic scenarios of transgression and forgiveness in further research with primary school children, and were analysed separately to the more general descriptions of forgiveness above. Of the 29 children in the sample, 20 named one or more specific transgressions that they might forgive. These were placed into categories, displayed in table 2.3.

Table 2.3

*Categories of transgressions named by children*

Category	Example	Number of children naming transgression in this category
Social exclusion/rejection	Not including in a game, 'ditching' someone	4
Meanness/abuse	Teasing, calling names, hurting	7
Confidentiality breach	Breaking promises, telling secrets or rumours	4
Property breach	Stealing, taking without asking	3
Argument	Being 'in a fight'	4

As can be seen, children described a variety of transgressions: while the most common category was not surprisingly that of general meanness or abuse, other more specific transgressions such as social rejection or confidentiality breaches also featured in children's discussions of forgiveness.

## **Discussion**

Study 1 involved interviewing 29 primary school students aged nine to 12 years about their understandings of forgiveness. Participants' responses were thematically analysed in an inductive style; informed as much as possible by the participants' actual responses rather than by preconceived frameworks. Analysis resulted in seven themes and 19 subthemes. While the number of students making responses in each subtheme ranged from four to 25, suggesting that not all subthemes were endorsed by all children, the analysis gave an overall picture of children's understandings of what forgiveness involves, the situational variables that were important to them when forgiving or not forgiving, and commonly experienced transgressions for which forgiveness might be a consideration.

### **Children's concepts of forgiveness**

On the one hand, children in this sample conceptualised forgiveness as an overt response to apology; that is, as the acceptance or sometimes even reciprocation of apology. On the other hand, the sincerity of the apology and the sincerity of forgiveness were both important in order that forgiveness was experienced as meaningful. Sincere forgiveness was understood to have both intrapersonal (affective, cognitive) and interpersonal (behavioural) aspects, as well as being understood by the more general concept of 'moving on'.

### ***Forgiveness as intrapersonal transformation***

On an intrapersonal level, forgiveness was associated with increased positive, and decreased negative, emotions and cognitions for the forgiver ('Forgiveness and cognitive-emotional experience' theme). This understanding of forgiveness as involving a transition to less negative and more positive emotions and cognitions toward the transgressor is

congruent with most academic definitions, including the ‘meta-definition’ offered by McCullough, Pargament and Thoresen (2000, p.9), namely, ‘intraindividual, prosocial change toward a perceived transgressor in the context of a specific interpersonal relationship’.

### ***Relationship restoration***

Children’s understandings of forgiveness went further than the intrapersonal level, as children in this sample also understood forgiveness as involving restoration of the relationship. This involved outward, behavioural expressions of forgiveness such as becoming friends again, using prosocial or conciliatory behaviour and body language, and/or verbally expressing forgiveness. Although this understanding contradicts academic definitions that distinguish forgiveness from reconciliation and argue that forgiveness does not necessarily involve behavioural components, it supports Denham and colleagues’ suggestion that children tend to rely on behavioural displays of thoughts and feelings (2005). That is, behaviour plays an important social function as a cue to internal transitions for children, and displays of reconciliation are therefore an important aspect of children’s experience of forgiveness.

It is difficult to tell from the present data whether children saw forgiveness as *meaning* reconciliation, counter to dominant academic definitions (McCullough, Pargament & Thoresen, 2000), or whether reconciliation was simply described in the same context as forgiveness by virtue of being an immediate consequence. However, this sample’s understanding of forgiveness as closely associated with reconciliation is similar to tendencies of proportions of lay adult populations (e.g. Kearns & Fincham, 2004, 21% of participants thought that reconciliation was an important feature of forgiveness) and adolescent populations (e.g. Middleton, 1997). Moreover, some academics recognise that

forgiveness may be expressed on a behavioural level (e.g. Worthington et al., 2007), with McCullough (2008) arguing that forgiveness is an evolved adaptation that allows the maintenance of valuable relationships. Comments made by several participants in the current study supported this argument, as they referred to having or wanting to forgive close friends and to finding it easier to forgive friends and friendly or well-liked people. Thus this sample's tendency to see forgiveness as involving restoration of a relationship is comparable with adult tendencies to forgive in order to maintain valuable or close relationships (Girard & Mullet, 1997; McCullough, 2008).

### ***Moving on from a transgression***

Children also understood forgiveness as moving on from or 'getting over' the transgression ('Forgiveness and moving on' theme), with a smaller proportion also referring to forgiveness as 'forgetting about' the transgression or pretending it hadn't happened. The tendency to associate forgiveness with forgetting has been found in proportions of adolescent (Middleton, 1997) and adult lay samples (e.g. Younger, Piferi, Jobe & Lawler, 2004), but contradicts dominant academic definitions which emphasise that the transgression must be acknowledged, not forgotten or denied (Worthington et al., 2007). However, as some extracts from the present sample referred to acknowledging the transgression and then 'forgetting' about it, it is likely that the use of 'forgetting' reflected a colloquialism referring to moving on, rather than actual denial or difficulty recalling the transgression.

### ***Forgiveness as apology***

One particularly important departure from adult conceptualisations of forgiveness was children's confusion of the concepts of forgiveness and apology. Such confusion was

unexpected considering that only one study has reported children confusing apology and forgiveness (Pickering, 2007); moreover, children in that sample were aged 6 to 7 years and so were younger than the current sample. Despite this, approximately half of the current sample confused forgiveness with apology at least some of the time. Such a conceptualisation of forgiveness is clearly problematic for the use of an explicit self-report measure of forgiveness with child samples.

### ***Forgiveness as accepting an apology***

Even where forgiveness was not confused with apology, apology was given so much emphasis that children often conceptualised forgiveness as accepting or returning an apology. On the one hand, the close association of forgiveness with apology was not surprising, as it is consistent with research finding that apology is an important predictor of forgiveness in child samples (e.g. Darby & Schlenker, 1982, Ohbuchi & Sato, 1994) and in lay adult samples (e.g. Girard & Mullet, 1997; McCullough, Worthington & Rachal, 1997). However, the understanding of forgiveness as apology, or as a response to apology, appears to take this one step further.

One reason for this conceptualisation may be that children recognise that apologies and regret on both sides of the transgression are sometimes appropriate ('Forgiveness as interchange' subtheme), such as when each side is partially at fault. As such, the tendency to mention apology and forgiveness as part of the same process may in some cases be indicative of children's everyday experience, rather than confusion between terms.

Additionally, children may be socialised to see apology and forgiveness as part of the same process. Scobie & Scobie argue that informal learning about apology and making up is likely to be a precursor to learning about forgiveness in early childhood (2000). Children often learn forgiveness in the context of apology, a process which is often



directed by significant adults such as parents (in family disputes) and teachers (in school disputes). It is therefore not surprising that children find it usual to discuss forgiveness in terms of apology, because in their experience, a response to apology is what forgiveness *is*.

## **Children's considerations in forgiving**

### ***Apology and remorse***

Forgiveness was not always associated with apology; for example, some children showed awareness that forgiveness without apology could occur, albeit mostly in the context of children stating that apology made forgiveness 'easier'. Thus, when forgiveness was not specifically conceptualised as a response to an apology, apology still remained an important situational variable.

Several children also emphasised the importance of a sincere apology and remorse, as opposed to a perfunctory stated apology. Such findings suggest that apology per se may not be as important as remorse. Children's apparent reliance on apology may come about as a result of their reliance on behavioural cues (Denham et al., 2005); that is, apology is important as an accepted behavioural display of remorse, which is in turn important to the restoration of relationships and thus to forgiveness from a child's point of view. Therefore, studies seeking to evaluate the impact of apology on forgiveness or to manipulate apology should also evaluate whether or not the apology is perceived as sincere.

### ***Other situational variables***

Children in this sample identified several additional situational variables likely to influence their forgiveness. Children hesitated to forgive severe or intentional transgressions, whereas accidental or out of character transgressions were seen as easier to forgive. It was also important to children in this sample that forgiveness involved the

hope, trust, or belief that the perpetrator would not repeat the transgression or a similar transgression, with some participants emphasising the importance of explanation and communication regarding the transgression in order to build trust and facilitate forgiveness. Results were therefore consistent with studies suggesting adults are more likely to forgive when the transgression is less severe or when it is accidental (e.g. Boon & Sulsky, 1997; Girard & Mullet, 1997). Moreover, at least one study has found a relationship in an adult sample between trust and forgiveness, albeit at a dispositional level; Ross and colleagues (2004) found that trait trust, compliance and tender-mindedness were the strongest predictors of the tendency to forgive others out of all the NEO-PRI facets.

Overall, children's consideration of situational variables is consistent with McCullough's (2008) argument that forgiveness evolved in order to facilitate the maintenance of cooperative relationships that increase the survival chances and evolutionary fitness of the organism. Thus, relationships in which there was more investment (closer friends), more trust, more remorse, less severe transgressions, better resolution of transgressions and less chance of the transgression being repeated were more likely to prompt forgiveness.

### **Children's identification of transgressions**

Notably, when children named specific transgressions, they tended to name transgressions between peers, with little mention of transgressions committed by adult perpetrators. This may be both a reflection of children's everyday experience and of the fact that the study was done in a school context; children may therefore have assumed that the researcher was interested in hearing about experiences at school. Most of the transgressions were social (e.g. teasing, not including), although physical abuse and property breaches were also mentioned.

Children's naming of specific transgressions in this study may be particularly useful in informing further studies using hypothetical transgressions to examine children's forgiveness. Although children's forgiveness is frequently assessed in response to scenarios depicting hypothetical transgressions (e.g. Darby & Schlenker, 1989, Denham et al., 2005; Ohbuchi & Sato, 1994; Roge & Mullet, 2011), some studies have been criticised for assessing children's forgiveness in response to hypothetical scenarios that would be unfamiliar to most children (e.g. Enright, Santos & Al-Mabuk, 1989, see Mullet & Girard, 2000). As such, children's descriptions of transgressions in this study may assist in designing hypothetical scenarios that depict familiar transgressions relevant to children's everyday experiences of forgiving or not forgiving, which will then be able to be used in further studies of children's forgiveness.

### **Conflicts in children's forgiveness decisions**

The sample's emphasis of the importance of sincerity, in both apology and forgiveness, conflicts with several children's experiences of authority insistence on apology and forgiveness after a transgression. This was recognised by a few participants who commented that an apology offered by the transgressor for the satisfaction of their teacher did not help their experience of forgiveness or have any meaning to them. While children's concern over feeling pressure from a teacher to forgive may be particularly relevant to children's experience in school, it may be considered similar to some other concepts representing forgiving under expectation from social or moral authority that have been explored with adult samples (e.g. Expectational/ Lawful Expectational Forgiveness, Enright et al, 1989; role-expected forgiveness, Trainer, 1981, cited by Enright & Gassin, 1992). Regardless, it is important to note that children may experience conflict between other's expectations of forgiveness and their own need for forgiveness to be sincere.

Likewise, it is important to recognise that children may experience internal conflict between the need to ‘really feel’ or ‘really mean’ forgiveness, and the understanding that forgiveness is a morally good thing to do (‘Forgiveness as morally good’ theme).

## **Limitations**

### ***Limitations of the interview format***

Limitations of this study included the inability to extensively probe children’s understandings of forgiveness, as ethical requirements meant that previously reviewed questions and a time limit needed to be adhered to in order to minimise stress or sensitivity in the participants. Although it would have been useful in some cases to ask unplanned questions as prompted by children’s responses, such questions were not reviewed by the relevant ethics authorities and therefore could not be included.

Additionally, children may have had difficulty in thinking of or articulating their opinions or understandings (this is clear, for example, in transcripts in which children have difficulty defining what it means to forgive), and also may not have wanted to share all of their opinions on forgiveness. However, the interview format still showed advantages compared with, for example, a written format, which would have required a fair amount of written work and therefore may have resulted in even less articulation of opinions about forgiveness.

### ***Interpretation of themes***

Another limitation of this study was that the identification of themes was dependent on one researcher’s interpretation of interviews with one sample, and therefore may not have been reliable. Although qualitative research tends to emphasise that there is more than one legitimate interpretation of the data (e.g. Braun & Clark, 2006), the present study

was designed to inform further realist studies and the design of a new measure; it was therefore important that the interpretation of the data was able to be generalised.

However, confidence in the reliability of the interpretation was improved due to its compatibility with the interpretation of a second researcher. Moreover, many of the themes and subthemes identified in the current interpretation were consistent with themes and variables identified in other research on children's and adults' forgiveness, such as reconciliation, forgetting, apology, relationship proximity, transgression severity, and intent, such that it could be assumed this interpretation was relevant to further research. Notwithstanding, further study of children's understandings of forgiveness will no doubt improve the ability to generalise from these findings.

### *Sample size and selection*

The moderate sample size (29 participants) and low to moderate rates of participation of eligible students may be seen as a further limitation to the present study. However, the sample size was sufficient to allow repetition of the salient themes, so that by the end of data collection the interviews were covering ground already familiar from previous interviews. Data could therefore be regarded as reaching saturation, that is, the point where no new themes were observed (e.g. Guest, Bunce, & Johnson, 2006). Moreover, although the study utilised a convenience sample, responses included negative and positive attitudes toward forgiveness as well as complex and less complex understandings, which suggested that participation was not due to students (or their parents) self-selecting for a particular interest in, or attitude toward, forgiveness.

## **Directions for further research**

In spite of limitations, the current study identified several important directions for further research in the measurement of children's forgiveness.

First, a single-item self-report measure using the term 'forgive' or 'forgiven' is unlikely to be an appropriate measure of children's forgiveness when used on its own, because children may be referring to the process of overtly accepting an apology or even giving an apology when they are asked about 'forgiving'. At the same time, their responses suggest that a genuine change in both intrapersonal responses and interpersonal motivations is important to them in the experience of sincere forgiveness. Thus, a single-item explicit measure of forgiveness may not assess all aspects relevant to children's forgiveness. This study therefore confirms the need for caution in interpreting findings obtained through using single-item explicit measures with children, and provides further evidence for the need for further research on the multimodal measurement of children's forgiveness.

Second, any further research on children's forgiveness, including that on measurement, needs to pay attention to the possible influence of situational variables as identified in this study. Of particular importance are apology and remorse, but studies may also consider other factors identified such as relationship value, trust, severity, intent, and the likelihood of a repeat transgression.

Third, children clearly experience some conflict between the need to experience sincere apology and forgiveness and pressure to forgive, either due to expectation from authority figures or their own recognition of the 'moral goodness' of forgiveness. As well as having practical implications for forgiveness intervention and education programs, the possibility that children may respond to forgiveness measures according to social

expectation needs to be considered in further studies of the measurement of children's forgiveness.

Fourth, the current study has identified a range of schoolyard transgressions for which forgiveness may be a relevant consideration for primary school aged children, which will be useful for further research in primary school settings including in the construction of realistic scenarios for studies employing hypothetical transgressions.

Finally, the current study not only identified the need for a new latent measure of children's forgiveness, but also the ways in which children experienced forgiveness and therefore, the kinds of responses that might be usefully assessed by a latent measure of children's forgiveness. Specifically, the study confirmed that despite children's emphasis of apology, they do experience forgiveness as both intrapersonal (particularly emotional) transformation and as motivational or behavioural change. Therefore, researchers who are interested in aspects of children's forgiveness beyond their overt responses to apology would benefit from a measure that assesses children's forgiveness with reference to emotional change and behavioural change. However, because this study necessarily took a broad, thematic approach to exploring children's understandings of forgiveness in order to produce a data-driven analysis, it did not identify specific terms upon which to base items of a further measure. Identification of specific terms for a latent measure of children's forgiveness therefore became the aim of Study 1b.

## **Study 1b: Constructing a new latent measure of children's forgiveness**

Initial exploration of children's understandings of forgiveness in Study 1 suggested that single-item explicit measures of forgiveness may be insufficient in assessing the underlying emotional and motivational aspects of children's forgiveness. However, existing latent measures are also arguably insufficient for measuring forgiveness in child samples, as discussed in Chapter 1.

Therefore, Study 1b aimed to identify specific terms that could be used as 'items' and to adapt these terms into a new latent measure of children's forgiveness while seeking to avoid the potential limitations identified in existing latent measures.

### **Existing formats**

As discussed in Chapter 1, existing alternatives to explicit measures of children's forgiveness mainly consist of self-report questionnaires, which measure forgiveness as a latent construct. However, such scales potentially create problems even when children have the necessary reading and comprehension skills for responding to a questionnaire, because reporting on forgiveness in a questionnaire format requires children to report verbally on internal emotional responses. Questionnaires therefore assume that children are able to reflect on, verbalise, and quantify emotions, which is at odds with arguments that children can have difficulty in cognitively reflecting on emotional experiences and abstracting them (Flanagan et al., 2012), and that their responses to emotion-based questionnaire items therefore may not be accurate representations of their internal states (Chambers & Johnston, 2002; Soto et al., 2008). Latent questionnaire measures may therefore be unsuitable as measures of children's forgiveness. Meanwhile, other-report questionnaire formats may not be accurate reflections of the intrapersonal aspects of



forgiveness, and behavioural measures may reflect motivations other than forgiving motivations.

### **The need for a new measure**

Overall, the limitations discussed above indicate the need for an easy to use, child-friendly measure of children's forgiveness, which ideally requires minimal reading, writing and verbal expression. Such a measure would provide an additional resource in the multimodal measurement of children's forgiveness, and may give some indication of how much variability measured by explicit items and existing latent questionnaire measures is related to measurement, rather than forgiveness per se.

### **Designing a new measure**

#### ***Format***

In reviewing alternatives to the measures reviewed above, several methodologies stood out. One was the use of pictorial questionnaires (e.g. Rennik et al., 2008) representing items with depictions of emotions or behaviours, rather than with words. Although this methodology is often used with younger respondents (i.e. non-proficient readers), it has the advantage of avoiding the need for reading comprehension and verbal abstraction even with older respondents. However, pictorial questionnaires still require the use of rating scales.

Alternative methodologies that avoid the need for response scales include the sorting of cards into categories (e.g. Family Relations Test; Anthony & Bene, 1957), or the forced-choice selection of cards depicting responses pictorially (e.g. Challenging Situations Task; Denham & Bouril, 1994). Such tasks avoid the need to use rating scales

and may be more engaging for children than a traditional questionnaire format, given they involve 'doing' rather than reading (Barker & Weller, 2003).

In particular, the Challenging Situations Task presents a precedent of pictorial assessment of children's emotional and behavioural responses. Designed to assess links between emotion and behavioural responses in preschool children's social information processing, the CST involves presenting children with three hypothetical instances of peer provocation, then offering children a choice between illustrated options of happy, sad, angry and neutral emotional responses, as well as choice between prosocial, aggressive, manipulative, and avoidant behavioural response options for each provocation.

Thus, although the CST was not specifically designed to assess forgiveness and was designed in particular for preschool children, it could be seen as relevant to a forgiveness context, considering that forgiveness has been operationalised as being comprised of vengeful, avoidant and benevolent motivations (e.g. McCullough et al., 1998; McCullough, Root, & Cohen, 2006) and that emotional and behavioural responses were emphasised by children in Study 1. A similar methodology focusing on the specific forgiveness-related responses identified by the older children in Study 1 may therefore be a useful way to assess children's forgiving responses.

Altogether, a new measure of children's forgiveness could combine the methodologies of sorting cards, pictorial questionnaires, and pictorial representation of emotional and behavioural responses, such that children could sort cards depicting forgiving and unforgiving responses in accordance with whether or not the child endorsed these responses to a transgression. Depicting responses in illustrations would avoid the need for children to respond verbally, while sorting the cards would avoid the need for using a response scale while hopefully also providing an engaging hands-on task (Barker

& Weller, 2003). Study 1b therefore aimed to identify terms that could be represented pictorially as items on a pictorial card-sorting task measure of children's forgiveness.

### *Items*

Study 1 examined children's understandings and experiences of forgiveness with a view to informing items for such a measure. Children's own descriptions of forgiving responses emphasised both emotional reactions (the change from negative to more positive, or less negative, internal states) and behavioural responses (becoming friends again, behaving in a friendly manner). Notably, children's discussion of cognitive aspects of forgiveness tended to be limited to considerations that they made when deciding whether or not to forgive.

Thus, children's descriptions in Study 1 were consistent with Denham and colleagues' (2005) assertion that affective transformation is of primary importance in children's forgiveness and that children tend to use less abstract cognition in their forgiveness decisions than adults, and with Worthington's (2006) argument that children's forgiveness could be understood as the replacement of negative emotions with positive emotions toward a transgressor.

Further, children's emphasis of behavioural responses in Study 1 was consistent with Denham and colleagues' (2005) observation that while behaviours may be considered consequences of, rather than part of, forgiveness, children's inner lives tend to be played out in their 'outer' behaviour (p.130). Thus, it might be expected that children's behaviours tend to reflect changes in emotional and motivational orientations toward a transgressor.

Overall then, Study 1 responses describing changes in emotions and behaviours appeared a sensible starting point for item development for a new measure, described next.

## **Method**

Participants, materials and procedure for Study 1b were all as described for Study 1, because the data was the same data as obtained for Study 1. However, analysis in Study 1b aimed to identify specific terms, as further described in the results section.

## **Results**

### **Identifying initial terms**

The first phase of analysis involved reducing children's descriptions of forgiveness to terms that could potentially become items on a new measure. Of all the themes identified in Study 1, three themes included descriptions of what forgiveness *is* that were additional to considerations of overt responses to apology; namely, cognitive-emotional experience, relationship restoration, and moving on. Responses in these themes were therefore analysed for descriptions that referred specifically to what happened when forgiving, (as opposed to, for example, factors that made forgiveness easier). Collating these responses led to a list of possible items, which were then categorised as shown in table 2.4.

Table 2.4

*Collated Study 1 responses representing potential items for a new measure*

Forgiving			
<i>Feelings</i>	<i>Behaviours</i>	<i>Getting over it</i>	<i>Not doing</i>
Good	Friends again	It's OK	Not angry
Better	Build friendship	Forget about it	Not ignoring
Happy	Get on with	Act like it never	Not saying nasty
Liberating	friendship	happened	things
Free	Still friends	Over it	Not arguing
Joyful	Friendliness	Move on	No more grudge
Warm	Hanging out	No hard feelings	Not hating
Glad	Playing with each	Take away (the	No put-downs
Satisfaction	other	transgression)	Not in a fight
Awesome	Talking to each other	Let them go	Not so awkward
Relieved	Body language	Don't mind any more	Not mad with them
	Walk up to them	OK with it now	Not mean
	Say I forgive you	Normal again	
	Help them	Forget about it	
	Shake hands	Accept	
	Look in the eye	All clear again	
	Hug	Don't hold it against	
	Talk nicely	them	
	Nice to each other	Resolution/solution	
	Talk and explain	Another chance	
	Do nice things		
	Respect each other		
	Trust		
Unforgiving			
<i>Feelings</i>	<i>Behaviours</i>		
Hate	Ignoring		
Angry	Saying nasty things		
Don't want to talk to	Arguing		
them	Put-downs		
Upset	In a fight		
Insecure	Awkward		
Weird/awkward	Mean		
Grudge	Not hanging out with		
Mad with them	them		
	'Stay away from me'		
	'Don't talk to		
	me/don't touch me'		

## Item reduction

In the next phase of item development, the terms identified in the table above were reduced such that terms with similar meanings were represented by one item. This was done not only with respect to whether items had the same meaning, but also whether they might be represented by the same illustration (e.g. an illustration of friendly responses might also depict respect). Moreover, descriptions of ‘not’ doing something or ‘not’ feeling a certain way in the forgiving condition (e.g. ‘not angry’) that were the opposite of behaviours or feelings in the unforgiving condition (e.g. ‘angry’), were collapsed such that they were represented only by the feeling/behaviour in the unforgiving condition. Reduced terms are presented in table 2.5.

Table 2.5

*Reduced terms representing potential items for a new forgiveness measure*

Forgiving		
<i>Feelings</i>	<i>Behaviours</i>	<i>Moving on</i>
Good (OK, better) Happy (glad, satisfaction, relieved, awesome) Warm Joyful (liberating, free)	Friendly (body language, respect for each other) Playing/hanging out (friends again, talking nicely with each other again) Helping (do nice things)	Moving on (get over it, give another chance, act like it never happened)
Unforgiving		
<i>Feelings</i>	<i>Behaviours</i>	
Hate Angry Upset Weird/confused	Arguing/fighting Not talking/listening Ignoring ‘Get away from me’ (‘don’t touch me’)	

## **Initial illustrations**

A first attempt was then made to depict each of the terms identified as an illustration. Illustrations were kept as simple as possible in order facilitate interpretation and universality; therefore, emotions were depicted using simple cartoon-like faces with essential features for depicting emotions (eyes, eyebrows, nose and mouth), while behaviours were depicted using two simple figures.

Details such as hairstyles, earrings and details on clothing were not included, as it was considered that such details might prevent some children from identifying with the illustrations when asked to imagine whether or not they would respond as shown on the card. Some consideration was given to whether the characters ought to be filled in with any colour or shading. The original illustrations were black outlines on a white background; characters in the illustrations might therefore be interpreted as white, which might exclude children of non-white ethnicities. However, as all objects (including clothing and furniture) were depicted by black lines on a white background, shading might draw unnecessary attention to skin colour or ethnicity and might still mean that some children did not identify with the illustrations. Therefore the original black and white format, without shading of any object in any illustration, was retained for initial studies.

After trial and error, the process of illustrating the responses in table 1.5 resulted in 16 illustrations, representing the items in Table 2.6.

Table 2.6

*Items represented in Card Set illustrations*

Forgiving emotions	Forgiving behaviours
Happy	Playing/hanging out
Joyful	Being friendly (waving hello)
Warm	Helping
Good/OK	Moving on
Unforgiving emotions	Unforgiving behaviours
Sad/upset	Fighting/arguing
Angry	Not talking/listening
Hate	Ignoring
Weird/confused	'Get away from me'

**Review of card illustrations**

Cards were then reviewed for interpretability and suitability by a panel of three academic psychologists including one child clinical psychologist, and four graduate psychology students undertaking research in the forgiveness field.

Several suggestions were made for improving interpretability, including;

- Making the 'angry' illustration appear more angry (by adjusting eyebrows, eyes, mouth)
- Placing a 'thought' bubble containing an illustration of the transgressor in the 'hate' illustration, to distinguish it from general anger
- Placing a horizon on the 'good/OK' illustration, which depicted a 'thumbs up' sign, in order that it wasn't misinterpreted as 'thumbs down'



- Changing the 'moving on' illustration to a child inviting the transgressor to join in a game
- Distinguishing the transgressor from the child who had experienced the transgression by placing initials on their shirts (assuming that children would respond to scenarios or stories describing the transgression).

### **Card response format**

Further consideration was also given to the way in which children would use the cards to indicate their responses. One concern was that the task of sorting cards would not assess the magnitude or strength with which children endorsed each item. Moreover, such a task might lead to extreme responses, as children might strive to maintain consistency in their responses and reduce cognitive dissonance by either endorsing all forgiving responses, or endorsing all unforgiving responses.

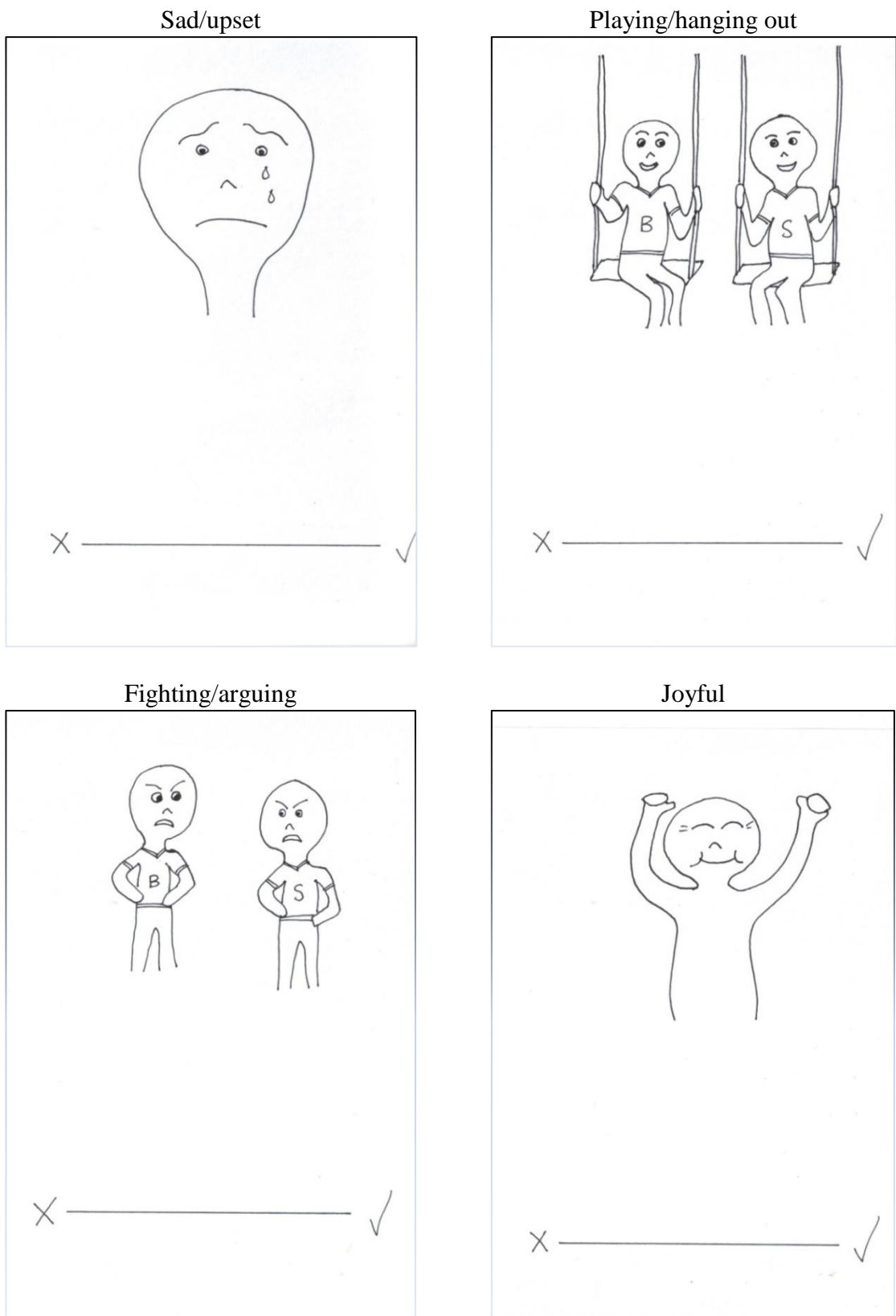
It was therefore decided that a rating scale ought to be included, at least as a comparison with the score from the sorting task in initial studies. The type of response scale to be included was informed by Scobie and Scobie's (2003) comment that children in their study indicated that they would prefer a line on which they could make a mark at any point to a Likert-type scale. Accordingly, a 10 centimetre horizontal line was added to each card underneath the illustration. To maintain the non-verbal nature of the measure, anchor points at each of the line were also pictorial, consisting of a cross depicted on the left end of the horizontal line and a tick depicted at the right end of the horizontal line. Participants were thus provided with a way to visually represent the strength of the response depicted on each card.

### **Initial Children's Forgiveness Card Set**

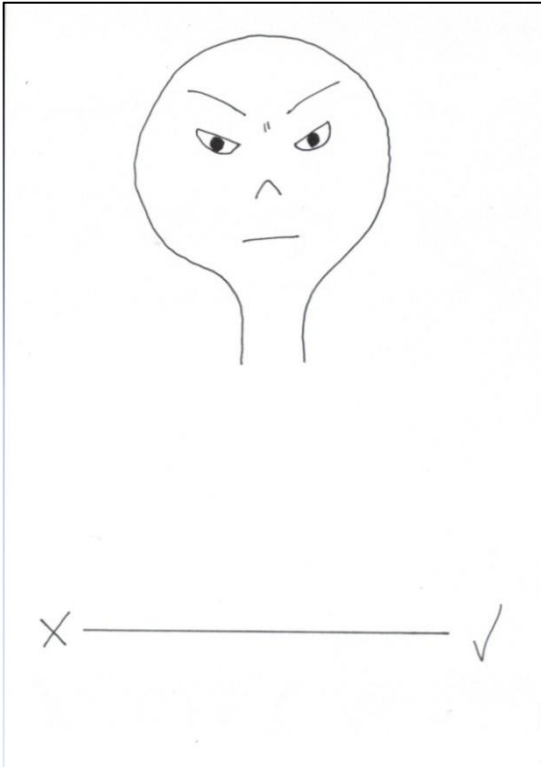
Overall, the process of designing illustrations and the response scale led to the development of 16 illustrated cards, which comprised the initial version of a measure hereafter referred to as the Children's Forgiveness Card Set. Cards for the initial version are presented in figure 3.1 below (reduced in size from A5 cards). (Later adjustments to the Card Set are presented further on in this thesis).

Figure 2.1

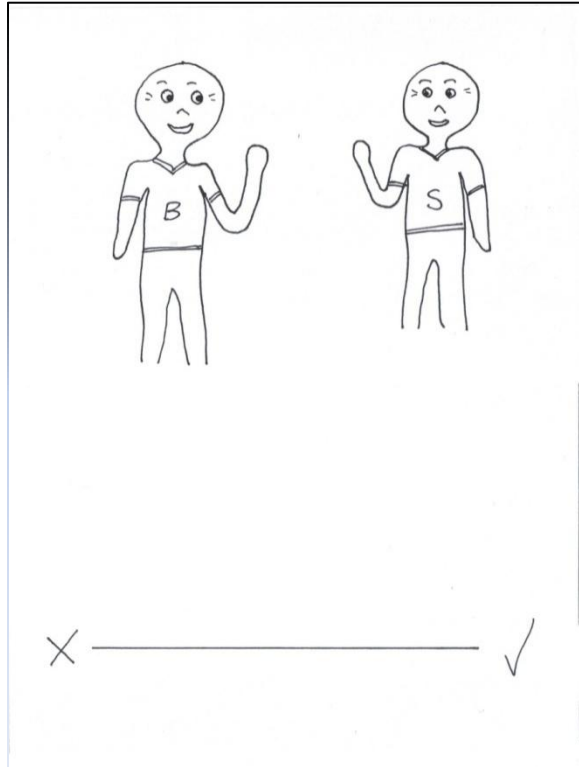
*Cards for the initial (pilot) version of the Children's Forgiveness Card Set*



Angry



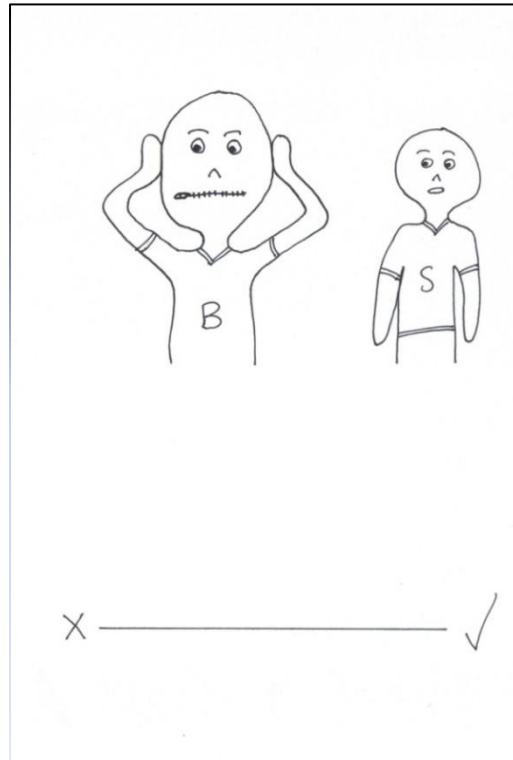
Being friendly (waving hello)



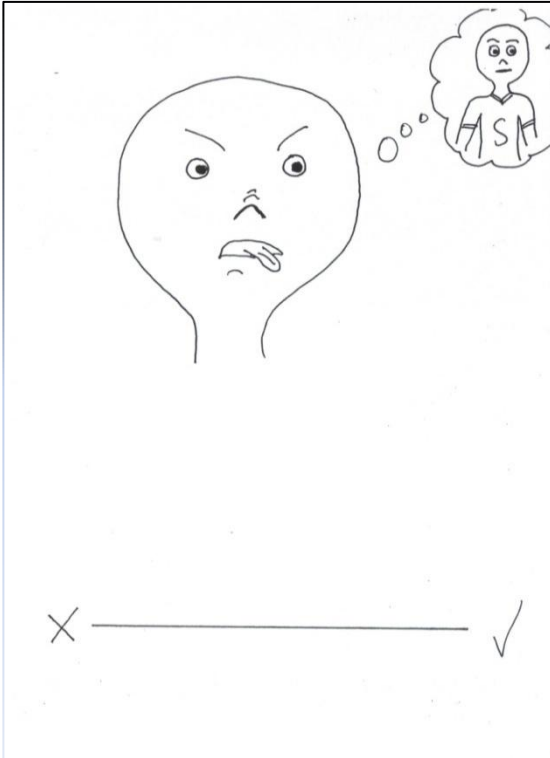
Warm



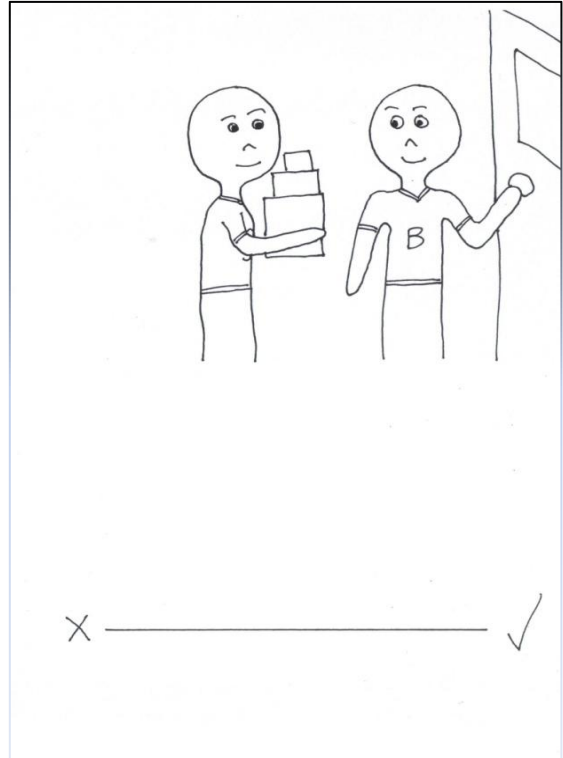
Not talking/listening



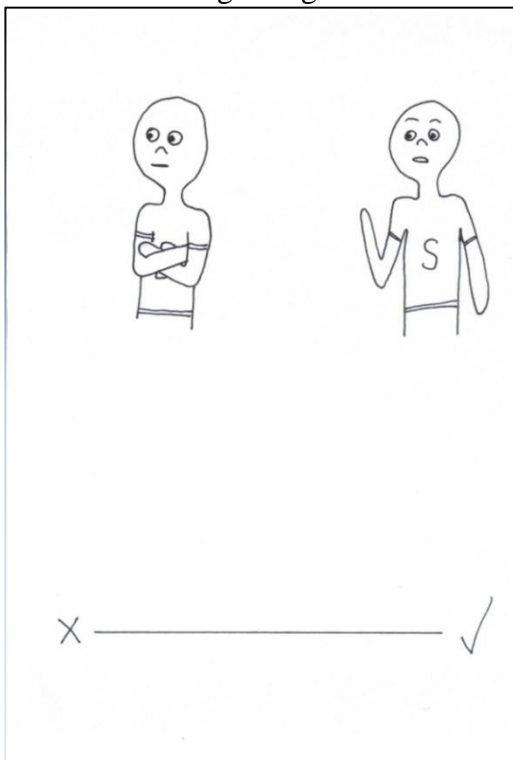
Hate



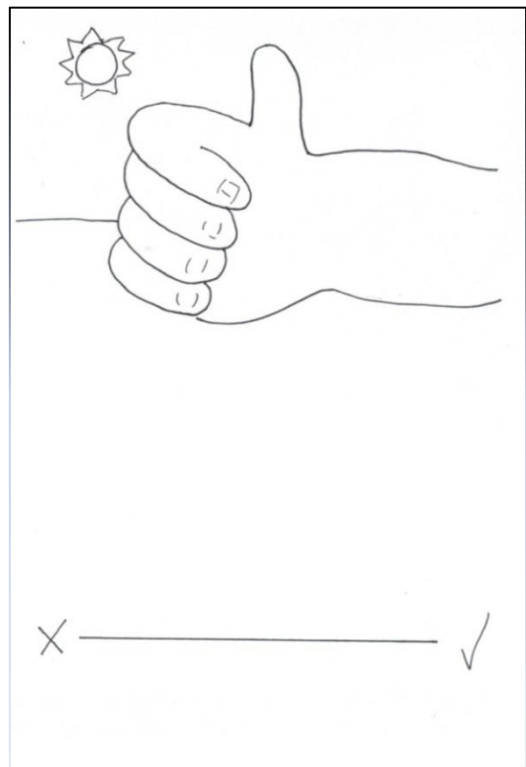
Helping



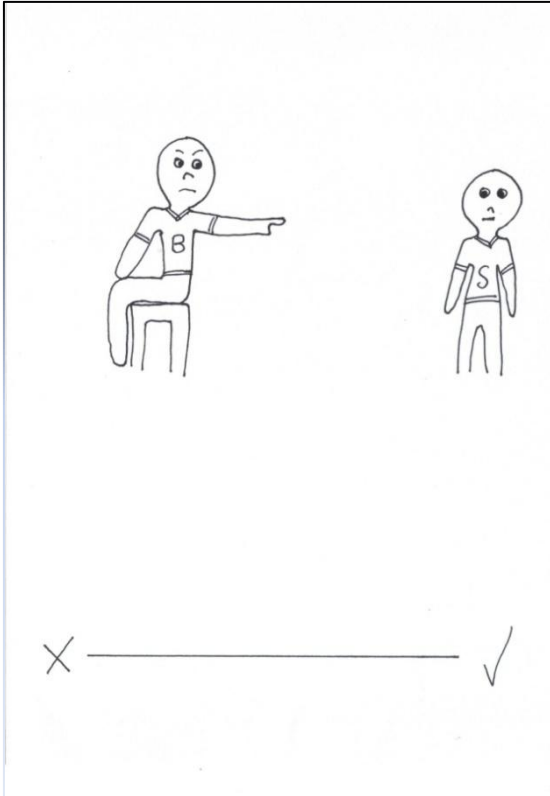
Ignoring



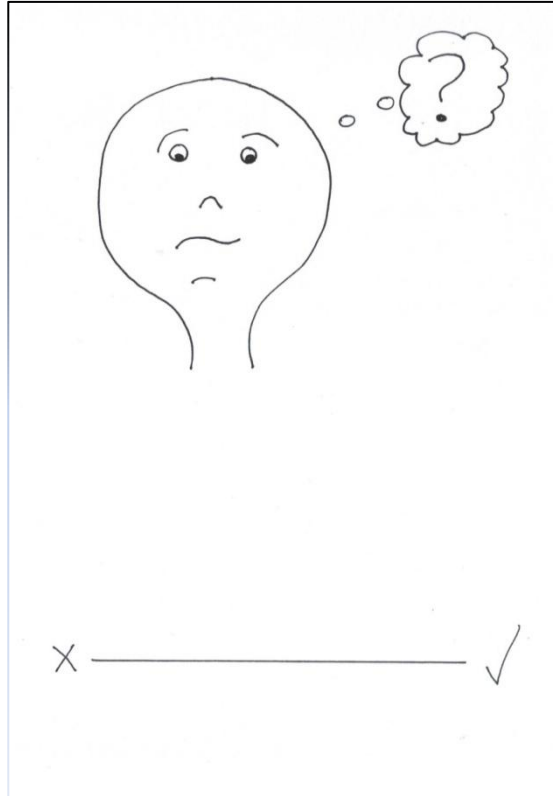
Good/OK



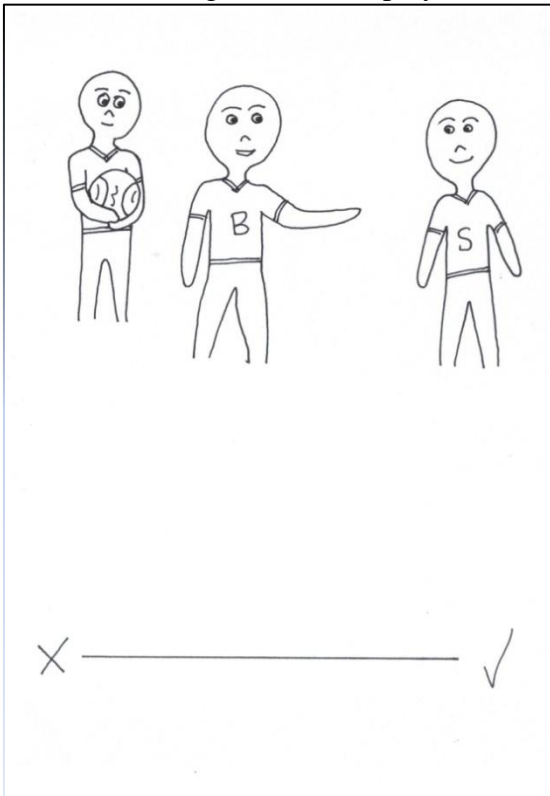
'Get away from me'



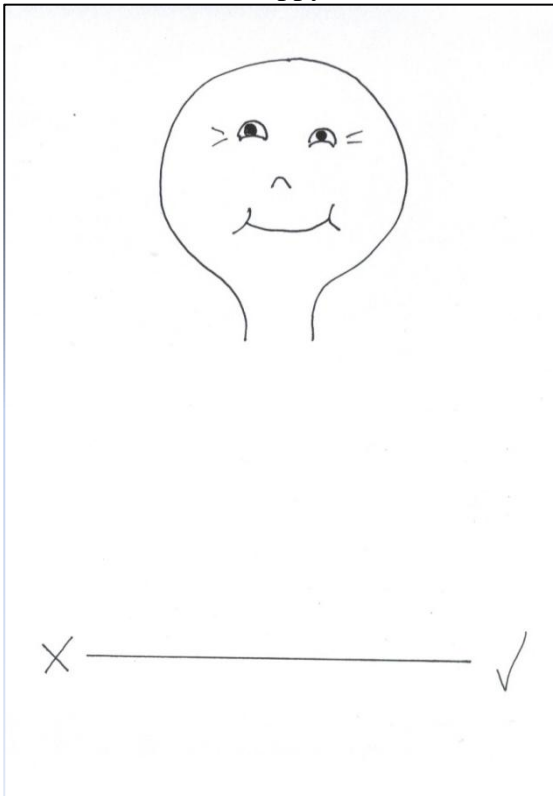
Weird/confused



Moving on/invite to play



Happy



Instructions for children to respond to the Card Set and details for score derivation are described further in the method section of Chapter 3.

### **Summary**

Study 1b involved the reduction of children's descriptions of forgiving emotional and behavioural responses obtained in Study 1 and illustrations of the reduced terms in order to produce the Children's Forgiveness Card Set, which was designed as a pictorial measure of children's underlying emotional forgiveness. However, the effectiveness of each card in depicting the intended emotional or behavioural responses and whether or not the cards and response scale were easy for children to use remained to be examined. Examining the interpretability and ease of use of the Card Set therefore became the primary aims of Study 2 and Study 3, described in Chapter 3.

## Chapter 3: Studies 2 and 3

### Examining Interpretability of the Children's Forgiveness Card Set

#### **Study 2: Children's Interpretations of the Children's Forgiveness Card Set**

Study 2 was a pilot study that aimed to examine whether illustrations in the Children's Forgiveness Card Set were interpretable by children in the middle to upper primary age range, and whether the Card Set, including the response scale, was easy for children to use in order to report their responses to a transgression.

#### **Use of a hypothetical transgression**

As forgiveness is a response to a perceived transgressor, its occurrence requires a perceived hurt or transgression (Baumeister, Exline, & Sommer, 1998; Scobie & Scobie, 1998). Testing of the Card Set therefore required that a transgression be included in the study, in order that children might respond to this transgression on the Card Set.

One simple way of including a transgression was to present a hypothetical scenario, then ask children to respond as if they were the victim experiencing the transgression in the scenario. Hypothetical scenarios have commonly been used in studies of children's social responses, including their forgiving responses (Darby & Schlenker, 1982; Denham et al., 2005; Ohbuchi & Sato, 1994) and responses to apology (e.g. Smith, Chen & Harris, 2010). While it is true that hypothetical methodology does have limitations, such as requiring more perspective-taking abilities than personally experienced transgressions (Smith & Harris, 2012), it also has several advantages.



### ***Ethical advantages***

One advantage of a hypothetical transgression is that it avoids the ethical limitations of a personally experienced transgression, whether the personally experienced transgression was a laboratory-contrived or recalled transgression. Because forgiveness is commonly conceptualised as a reaction to a hurtful event (Scobie & Scobie, 1998), the transgression presented in the study needed to be severe enough to be considered hurtful. However, there are obvious ethical limitations on presenting children with a serious laboratory-contrived transgression; such a transgression must necessarily be quite mild in order to avoid overly distressing children.

Likewise, there are ethical concerns over asking children to recall a hurtful transgression, since when children are able to recall such a transgression, this could be reasonably expected to be distressing, particularly if the transgression were ongoing (e.g. bullying, abuse). Although some studies have asked children to recall transgressions, these studies typically include forgiveness interventions or coping interventions (e.g. Enright, Holter, Baskin, & Knutson, 2007). In comparison, asking children to recall a hurtful transgression for the purposes of validating the Card Set without offering any intervention might be particularly ethically problematic.

In contrast, a hypothetical transgression is a simple way to present a ‘severe enough’ transgression while adhering to ethical obligations.

### ***Control of situational variables***

Additionally, a hypothetical transgression would allow for control of situational variables that have been suggested by Study 1 and previous studies to influence forgiveness. That is, not only would a hypothetical transgression allow for control of the level of severity of the transgression, which is important for the reasons noted above, but it

could also control for apology (Denham et al., 2005; McCullough et al., 1998), remorse (Denham et al., 2005), intentionality (Denham et al., 2005) and closeness of the relationship with the transgressor (Girard & Mullet, 1997; McCullough et al., 1998).

### ***Comparison with existing research***

Finally, because much of the research that has studied the impact of situation-specific variables on children's judgments of forgiveness has used hypothetical scenarios (e.g. Darby & Schlenker, 1982; Denham et al., 2005; Ohbuchi & Sato, 1994; Roge & Mullet, 2011), use of a hypothetical scenario in initial studies of the Card Set will minimise methodological confounds when comparing responses on the Card Set to results obtained on other measures.

### **Constructing the hypothetical transgression**

The hypothetical transgression used for this study was informed by the interviews with children in Study 1. Because children in Study 1 almost uniformly talked about peer-based transgressions, either explicitly or implicitly in a school context, the transgression for this study was described as occurring between friends at school.

Many of the transgressions described by the participants in Study 1 were social transgressions, including breaking trust or confidence, breaking a promise, telling secrets, spreading nasty rumours, saying mean things, or embarrassing someone. Therefore, for this study a hypothetical scenario was constructed in which one child (the victim) told their best friend (the transgressor) an embarrassing secret, which the transgressor promised not to tell. The transgressor then told a group of classmates who all laughed about the embarrassing secret, overheard by the victim. As such, the transgression included breaking a confidence, breaking a promise, telling a secret, and saying mean or embarrassing things.

The secret in the scenario was not specified, since it was thought most effective if the children were able to imagine something embarrassing to them; this might vary depending on the age and circumstances of the child. The transgressor was described as the victim's best friend because it made sense to tell a secret to a close friend; likewise it made sense for the secret to be told intentionally rather than constructing an account of how it might be told accidentally; thus telling of the secret was not described as an accident. These two circumstances (best friend and non-accidental transgression) were hoped to balance each other since an intentional transgression was described by participants in Study 1 as more difficult to forgive whereas a transgression by a close friend was described as more likely to be forgiven. It was therefore hoped that the transgression was neither unforgiveable, nor negligible or very easily forgivable, so as to provide a realistic context for forgiveness and a range of responses for analysis.

### ***Inclusion of an apology manipulation***

As mentioned above, one way of examining the validity of the Card Set as a measure of forgiveness would be to examine whether responses on the Card Set are predicted by the same situational variables suggested to predict children's forgiveness in previous studies. One such variable is apology. Both Study 1 and previous studies have suggested that children's forgiveness is predicted by apology, such that children who receive an apology are more forgiving than children who do not receive an apology (e.g. Darby & Schlenker, 1982; Denham et al., 2005; Ohbuchi & Sato, 1994). Such findings are in accordance with research in adult samples suggesting the importance of apology in predicting forgiveness (e.g. McCullough et al, 1998; Mullet, Riviere, & Sastre, 2007), including a meta-analysis suggesting apology to be one of the most important variables in predicting forgiveness of a single transgression (Fehr, Gelfland, & Nag, 2010).

A hypothetical scenario therefore provides the opportunity to further examine the validity of the Card Set in later studies by manipulating apology. To this end, two versions of the scenario were constructed for pilot testing; one in which the transgressor apologised, and one in which they did not.

## **Aims**

Study 2 had several aims:

1. To assess the interpretability of each card in the Card Set, and generate suggestions for improvement to the interpretability of the cards
2. To trial the use of the Card Set to measure forgiveness in response to a scenario
3. To test the suitability of the hypothetical transgression scenario, including manipulation of apology (yes/no) and use of illustrations to accompany the scenario.

## **Method**

### **Participants**

Participants were 12 primary school students (six girls and six boys) aged nine to 11 years ( $M = 10.17$ ,  $SD = 0.58$ ), recruited from one public primary school in metropolitan Adelaide, South Australia.

### **Materials**

#### ***Card Set***

The Card Set for this study consisted of the 16 cards depicted in Chapter 2 (Figure 2.1), including the 10 centimetre response scale on each card. Cards were presented inside

a large (C4) envelope, with each set presented in the order of cards 1-16 above, such that positive/negative and emotion/behaviour based cards were dispersed throughout the pile.

In addition to the cards and large envelope, participants were provided with two C5 sized envelopes. On the front of one envelope a green tick was depicted, while on the front of the other envelope a red cross was depicted. Those cards which depicted an emotional or behavioural responses that participants thought they would 'feel, or feel like acting' were to be sorted into the 'green tick' envelope and those depicting responses which participants did not think they would 'feel, or feel like acting' were to be sorted into the 'red cross' envelope.

### ***Scenario***

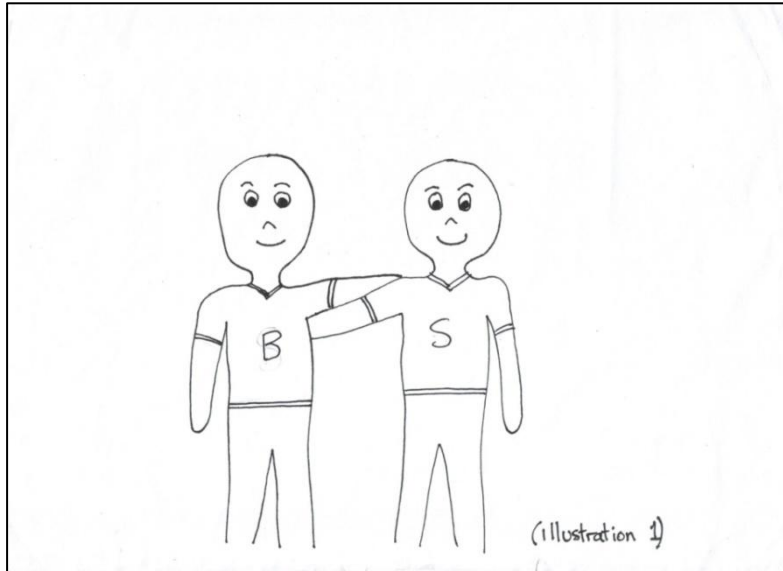
In order to increase identification with the hypothetical characters, boys responded to a scenario featuring a boy victim and transgressor (Ben and Sam) and girls responded to a scenario featuring a girl victim and transgressor (Beth and Sophie). In order to help participants to imagine the scenario, it was accompanied by illustrations featuring the same characters depicted in illustrations on the Card Set. The scenario was therefore worded and accompanied by illustrations as depicted in figure 3.1. (Illustrations are presented reduced in size from original A4 size).

Figure 3.1

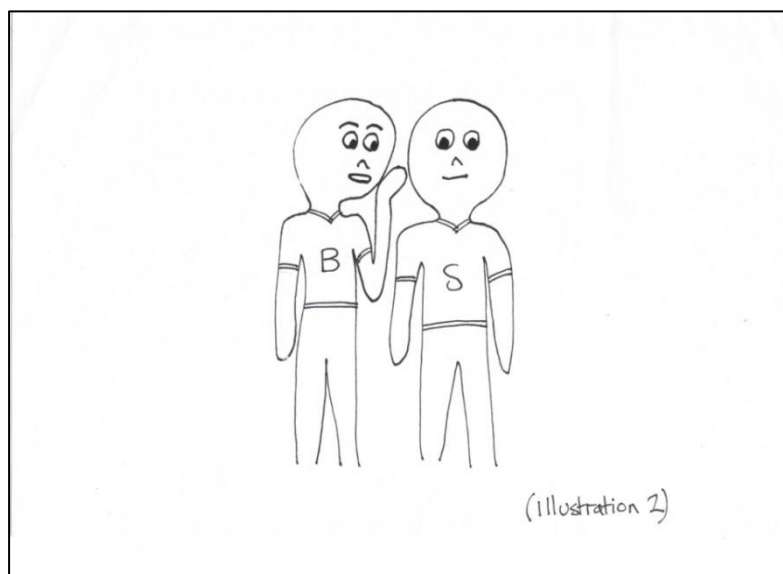
*Hypothetical scenario and accompanying illustrations for Study 2*

---

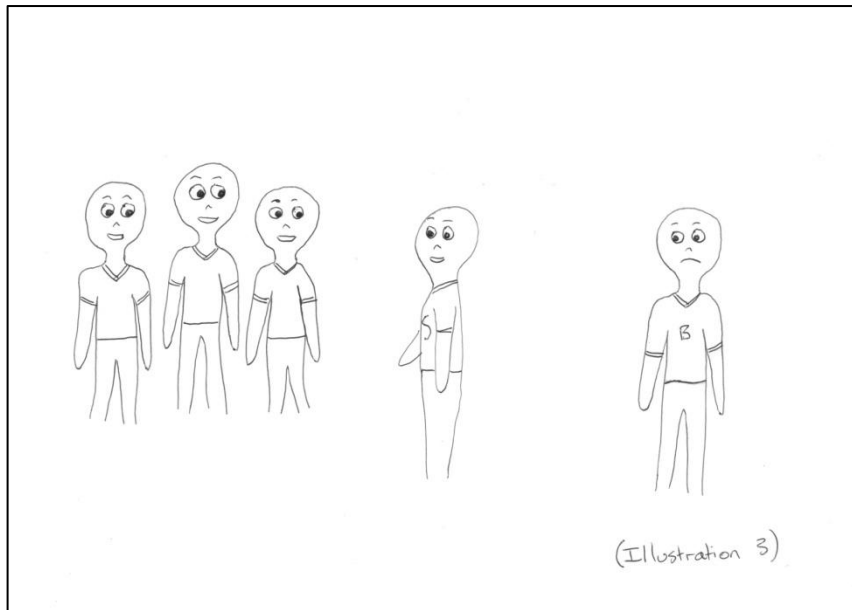
Ben (Beth) is a student at primary school, just like you. His (her) best friend at school is Sam (Sophie). Ben and Sam usually tell each other everything (Illustration 1).



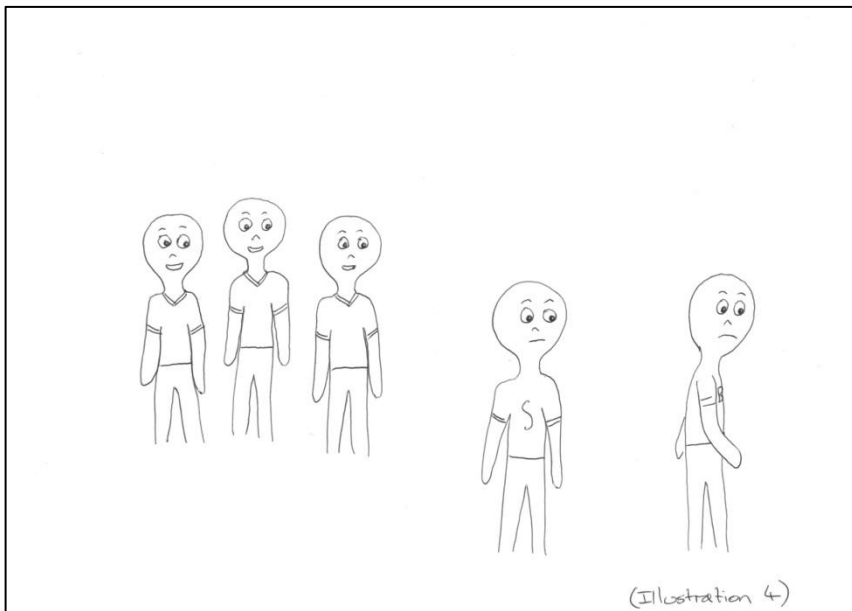
One day Ben wants to tell Sam a secret, but he doesn't want anyone else to know because it would be really embarrassing if everyone else knew. Sam promises not to tell, so Ben tells Sam the embarrassing secret (Illustration 2).



The next day, Ben hears Sam tell the secret to some other kids in their class. The other kids all laugh when they hear about it (Illustration 3).

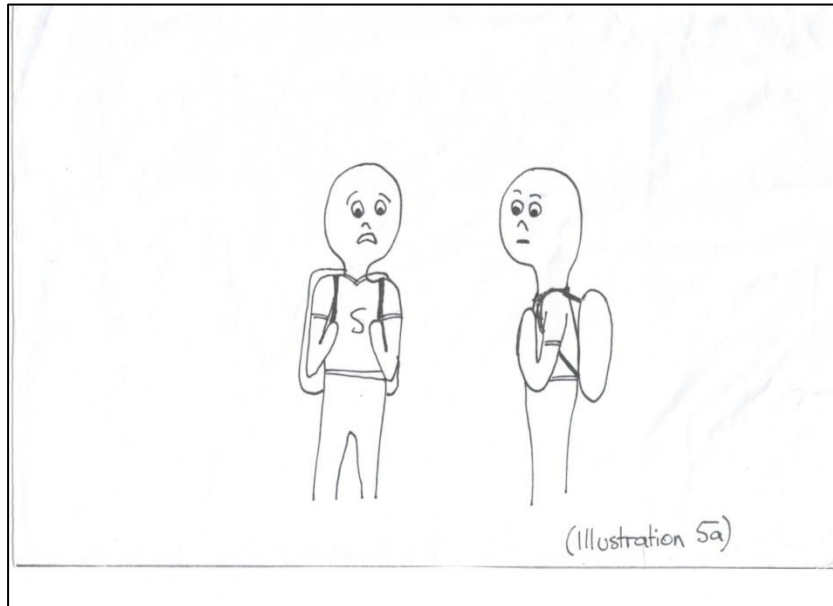


Ben feels bad and walks away from the group. Sam sees Ben walking away. (Illustration 4).



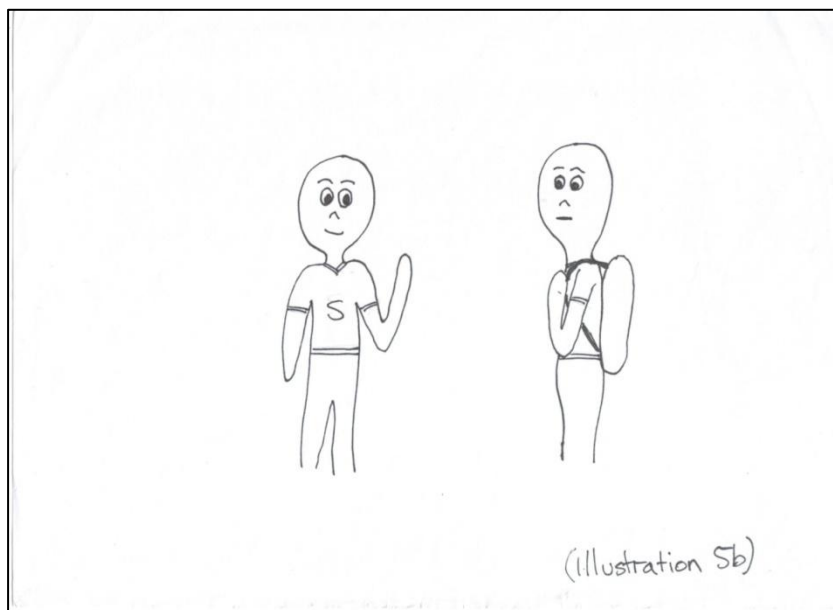
*Apology condition:*

Later when Ben sees Sam after school, Sam says he is sorry for what happened. Sam says he feels really bad about what he did, and his face looks sad (Illustration 5a).



*No apology condition:*

Later when Ben sees Sam after school, Sam says nothing about telling the secret and acts like nothing happened (Illustration 5b).





### ***Response sheet***

In addition to the Card Set, students were provided with a response sheet containing several questions about their impressions of the hypothetical scenario, illustrations and card task. Specifically, participants were to record (1) How hard or easy it was to understand the scenario (*hard/OK/easy*); (2) whether the pictures helped to imagine the scenario (*yes/no*); (3) how ‘realistic’ the scenario was, in terms of whether participants could imagine something similar happening to themselves or someone they knew (*no way/maybe/for sure*); (4) the severity of what happened in the scenario (*really bad/a bit bad/ not bad at all*); (5) ‘how sorry’ they thought the transgressor felt, i.e. perceived level of remorse (*really sorry/a bit sorry/not sorry at all*) and (6) how hard or easy it was to understand the instructions for the card task (*hard/OK/easy*). They were also asked to record any other comments they might have about their experience, as well as demographic information (age and gender). Questions and response options were read aloud and response options for all items apart from age and comments were accompanied by small illustrations to aid interpretation (see Appendix 3.1).

### **Procedure**

Ethical approval was obtained from the University of Adelaide School of Psychology and the Department for Education and Child Development in South Australia.

Participants were recruited by first contacting the school principal for consent to participate in the study, then sending information and consent forms (Appendix 3.2) home to parents via the class teacher. Participants were informed before beginning the study that they could withdraw at any time without penalty; none declined to participate.

### ***Interpreting cards***

Participants worked in a total of four focus groups (2-4 participants) to give their interpretation of the emotion or behavioural response depicted on each card. In order to orient participants to the transgression and characters, each focus group first listened to either the apology scenario or the no apology scenario, such that two groups were in the apology condition and two groups were in the no apology condition.

Participants were reminded that there were no right or wrong answers, and that the study was not testing whether they could guess the ‘right’ answer, but how good the cards were at showing a feeling or behaviour. The researcher displayed each card and asked ‘What is happening in this picture? What feeling do you get from this picture?’. The researcher then continued to display the card while participants called out their responses. Responses were recorded in written format by the researcher, with further responses being prompted (e.g. ‘any other ideas?’) until no more responses were given.

### ***Suggesting improvements to cards***

Each focus group was presented with each card. For each card, the researcher asked for suggestions for improvement by saying ‘This card is supposed to be about (*emotion/behaviour item*). Do you have any ideas about how to draw a better picture about (*emotion/behaviour item*)?’ Participants’ spoken responses were recorded in written form by the researcher until no more responses were given.

### ***Responses regarding the hypothetical scenario***

Participants then responded individually to questions pertaining to the scenario and illustrations (questions 1-5), each on their own individual response sheet.

### ***Trialling the Card Set***

Participants then used the Card Set to respond to the scenario. In order to do so, they were asked to imagine how they might feel if they were the protagonist in the scenario, according to the following instructions:

---

Remember that Ben (Beth) is a boy (girl) in primary school, just like you. Take a minute to think about how Ben would feel about Sam (Sophie) after what happened.

Now, you each have some cards that show different ways people might feel, or feel like acting toward someone. I want you to sort the cards into two piles. One pile is for how you think Ben (Beth) *would* feel toward Sam (Sophie), you should put that pile on top of the envelope with the tick on it. The other pile is for how you think Ben (Beth) *wouldn't* feel toward Sam. That pile should go on top of the envelope with the cross on it. So 'would feel' cards go on the tick pile, and 'wouldn't feel' cards go on the cross pile.

Also, each card has a line to show how *strongly* you think Ben would feel that way. So, if you think 'no way' Ben (Beth) would feel or act like that, you would put a mark right next to the cross (*show on large example*), but if you think *just a bit* that he (she) wouldn't feel like that, you would put a mark a bit further away from the cross, toward the middle (*show again*). And if you think that maybe he (she) *would* feel a bit like that, you might put a mark closer to the tick, and if you think he would *definitely* feel like that, you could put a mark right near or on the tick. So I want you to first make a mark, and then sort the card into the 'would feel' pile with the tick, *or* the 'wouldn't feel' pile with the cross.

When you've finished, put your hand up in the air.

---

---

(After sorting): If everyone has finished sorting the cards, put the piles INTO the envelopes: so ‘would feel’ cards go into the *tick* envelope, and ‘wouldn’t feel’ cards go into the *cross* envelope.

---

After completing the card task, participants answered the item on the ease/difficulty of the card task instructions and demographic information. Individual participants’ cards and response sheets were then placed in large envelopes and collected by the researcher.

## **Results**

### **Interpretation of Cards**

Children’s interpretations of the Card Set were analysed qualitatively by inspecting the terms that participants used to describe each card, as presented in table 3.1 below. The frequency with which each term was mentioned by an individual participant was not counted, because the focus-group style of participation meant that once one child had mentioned the term, the other children in that group were unlikely to mention it again, but generated other terms/ideas instead. However, terms mentioned by more than one group were noted, with the number of groups represented in brackets in table 3.1. Because illustrations represented an emotion or feeling for which there might be more than one term, no one response was considered the ‘correct’ answer for any illustration; rather, responses were scanned for terms which were opposite or problematic given the intended valence (forgiving/unforgiving) and general meaning of each card. Responses that were considered problematic are denoted by an asterisk.

Table 3.1

*Participant's interpretations of cards in Study 2*

<b>Card</b>	<b>Children's descriptions</b>
1. Upset	Sad (4), upset (3), crying, really upset, worried, terrible feeling, not very happy
2. Playing/hanging out together	Happy (4), having fun (2), playing on swing (2), friends (2), kind (2), enjoyable, enjoy each other's company, playing together, joyful.
3. Fighting/arguing	Angry/angry with each other (4), having a fight/fighting (3), arguing (2), annoyed, don't want to be around each other, maybe need time apart from each other, not feeling nice, cross, hatred.
4. Joyful	Happy (4), excited (2), cheerful (2), dancing, jumping up and down, something really good happened, joyful, playful, celebrating
5. Angry	Angry (4), cross (2), moody/not in a good mood (2), grumpy, not enough sleep, something happened, frustrated, not getting own way, not as mad as other ones*, maybe disappointed*, annoyed*
6. Friendly/saying hi	Saying hi/hello (2), happy (2), happy to see each other, friendly/friends (2), excited to be with each other, joyful, friends again, just made friends
7. Warm	Love/loving (4), happy (3), warm/warm and fuzzy (2), joyful, kind, hugging
8. Not talking/listening	Something happened not good, mouth shut, not saying something to other person, blocking out other person, other person upset, turning away from someone, be quiet, silenced, frustrated, annoyed, trying to keep secret*, doesn't really want to tell*, doesn't want to talk, frustrated
9. Hate	Annoyance/annoyed (3), hatred (2), angry (2), not very happy with them, enemy, argument, cross, mad, disgusted, doesn't like other kid, thinking something bad
10. Helping	Helping each other (3), happy (3), friends (2), kind (2), helpful (2), co-operating, best friends, joyful, boxes*, becoming friends, sharing, having a sleep-over*

11. Ignoring	Ignoring (2), having day when you want to be on your own, don't feel like other people's company, annoyed, Ben doesn't care, doesn't want to talk, Sophie can't find any way to say that she made Beth upset*, saying hi*, trying to be friends*, trying to speak*, trying to pretend nothing happened*, wondering what's happening*
12. Good/all OK	Good/all good (2), thumbs up (2), good work/good job (2), joyful (2), good day, everything's good, friends again, everything going as you want it to, happy, good time
13. 'Get away from me'	Angry (3), telling off (2)*, annoyed, being a meanie, frustrated, mad, disappointed, angry because she knows Sophie told, blaming*, accusing*, pointing at someone*, sorry*
14. Weird/confused	Confused (3), puzzled, thinking, not sure, don't know, not working out, doesn't know what to do, little bit frustrated, bit worried, scared, doesn't know what he's thinking about
15. Invite to play	Joining in (3), happy (2), asking someone/each other to play (2), including/Beth including Sophie (2), forgiveness, letting Ben join in, friends, helpful, joyful, playful, cheerful, talking and listening, left out*
16. Happy	Happy (4), glad, joyful, smiling

Note: interpretations considered problematic are denoted by an asterisk.

### Suggestions for improvements

As shown above, cards receiving problematic interpretations included the 'angry' card, the 'not talking/listening' card, the 'helping' card, the 'ignoring' card, the 'get away from me' card, and the 'invite to play' card. Improvements suggested for these cards are displayed in table 3.2 below.

Table 3.2

*Children's suggestions for improving interpretability of problematic cards*

<b>Card</b>	<b>Suggestions for improvement</b>
Angry	Look like a devil, showing teeth
Helping	Tidying someone else's mess/desk
Not talking/listening	Draw protagonist walking away, closing his/her eyes, turning away, crossed arms, putting something in ears. Mixed reaction to zipped mouth.
Ignoring	Not putting hand up, protagonist walking away
'Stay away from me'	Door behind transgressor should be open, transgressor walking away when protagonist points, transgressor more sad, protagonist standing up to point
Invite to play	Have transgressor standing closer, make beckoning gesture of protagonist more obvious, smile on third party bigger

**Children's understanding of the scenario and Card Set instructions**

Due to the pilot nature of the study and the small sample size, responses to the items on children's understanding of the scenario and of the Card Set instructions were examined through frequency analysis. Frequencies of responses in the apology and no apology groups and across the total sample are presented as percentages in table 3.3.

Table 3.3

*Frequency analysis of children's understanding of scenario and Card Set instructions,*

*Study 2*

Item	Response	Apology (N = 8)	No apology (N = 4)	Total (N = 12)
Understanding scenario	Hard	0.00	0.00	0.00
	OK	12.50	0.00	8.33
	Easy	87.50	100.00	91.67
Illustrations help	No	25.00	50.00	33.33
	Yes	75.00	50.00	66.67
Realism	No way	0.00	0.00	0.00
	Maybe	37.50	75.00	50.00
	For sure	62.50	25.00	50.00
Severity	Not bad at all	0.00	0.00	0.00
	A bit bad	62.50	50.00	58.33
	Really bad	37.50	50.00	41.67
Remorse	Not sorry at all	0.00	50.00	16.67
	A bit sorry	0.00	50.00	16.67
	Really sorry	100.00	0.00	66.67
Understanding card instructions	Hard	0.00	0.00	0.00
	OK	62.5	25.00	50.00
	Easy	37.5	75.00	50.00

These results will be summarised in the discussion section. No responses were made to the question regarding additional comments.



## **Card Set Scores**

### ***Line scores***

The Card Set was scored in two different ways. One score, the ‘line score’, was determined by the strength of children’s endorsement of forgiving responses and unforgiving responses (unforgiving responses reverse scored) on the visual line. Scores were derived from the mark on the 10-centimetre line by measuring the distance that the mark was made from the left hand end of the line, where the cross was depicted. These scores were then reversed for cards depicting negative emotional or behavioural responses. Scores were then summed across all 16 cards to calculate an overall ‘line score’ for each participant, which fell between zero and 160.

### ***Sort scores***

Meanwhile, the ‘sort score’, was calculated by allocating one point for endorsing forgiving responses or not endorsing unforgiving responses, and subtracting one point for endorsing an unforgiving response or not endorsing a forgiving response. Then, the number of forgiving responses endorsed and not endorsed and the number of unforgiving responses endorsed and not endorsed was summed to create a total forgiveness score falling between -16 and 16.

Descriptive statistics for the line score and sort score are presented in table 3.4.

Table 3.4

*Descriptive statistics for line scores and sort scores in Study 2*

Condition	Apology		No apology		Total	
	(N = 8)		(N = 4)		(N = 12)	
Score	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Line	42.81	21.73	46.95	36.68	44.19	25.91
Sort	-8.0	10.64	-6.0	14.79	-7.33	11.52

Although the sample size was not large enough for tests of statistical significance to be meaningful, mean scores were observed to be similar between groups while standard deviations were observed to be large, suggesting that neither condition would have been found to be more forgiving in a larger sample.

### **Discussion**

Overall, Study 2 suggested that illustrations included in the Card Set were generally interpreted correctly by children in the nine to 11 year old age range. For those illustrations that were interpreted incorrectly, useful suggestions for improvement were generated.

Keeping in mind that the sample size was small, and results should therefore be interpreted with caution, the frequency analysis suggested that the scenario was easily understood; moreover, it was rated as having moderate to high realism and the transgression as having moderate to high severity. Results therefore suggested that the hypothetical scenario was suitable for use with children aged nine to 11 years, as almost all participants rated the scenario as easy to understand, and ratings of both realism and severity were moderate to high. Illustrations were rated as helpful by two thirds of

participants, suggesting that they should be retained in further studies using the hypothetical scenario. Remorse was perceived as high (really sorry) by all participants in the apology condition and as either low or moderate in the no apology condition. Thus, the apology manipulation appeared effective in communicating transgressor remorse.

Finally, participants rated the Card Set instructions as either 'OK' or 'easy' to understand. While it would have been preferable for all children in the sample to rate the instructions as easy to understand, the need to compare response formats (line and sort) and the consequent need to include two different tasks in the instructions may have been the reason that half of the participants rated the instructions as only 'OK'.

However, responses on the Card Set tended to be unforgiving in both conditions, regardless of the apology manipulation appearing to be effective in manipulating perceived levels of transgressor remorse. While the sample was too small to draw any concrete conclusions, possible reasons for the low levels of forgiveness and apparent lack of difference in Card Set scores between apology and no apology groups were considered in order to inform the design of further studies.

### **Features of the transgression**

One reason for the low levels of forgiveness on the Card Set and lack of difference in Card Set scores between apology conditions may be that certain features of the transgression caused it to be 'unforgiveable' for the majority of participants. For example, the public nature of the transgression in the scenario may have made it less forgivable. McCullough (2008) argues that forgiveness has the adaptive function of maintaining valuable relationships, while revenge can have the adaptive function of maintaining 'respect' or honour, in other words, guarding against similar betrayals. Because the nature of the transgression in Study 2 was quite public, it may well have been perceived as humiliating,

with damage done to the protagonist's reputation. Such damage may have been regarded as unacceptable. In this context, the fact that the transgressor was described as being the protagonist's best friend may have increased the sense of betrayal, and the friend may have no longer represented a valued relationship partner due to committing this betrayal. Adjusting the transgression to be less public or humiliating may therefore result in more forgiving responses on the Card Set.

### **Features of the Card Set**

Another reason for the generally unforgiving responses may have been that cards were always presented with a negative emotion-based card, the 'sad/upset' card, on top of the pile; therefore, in the majority of cases participants would have seen depiction of a negative response first. It is therefore possible that the negative card may have primed negative emotional responses on the Card Set. Priming of forgiveness, particularly underlying, automatic aspects of forgiveness, has some precedent in research with adults; for example, Karremans and Aarts (2007) found that subliminal presentation of the name of a participant-nominated close other led to higher inclination to forgive 15 'moderately forgivable' behaviours. Thus, priming might be the reason for the unforgiving responses in Study 2. Further study of the Card Set ought to examine the possibility that responses on the Card Set are primed by whether the first card presented is positive or negative.

Alternatively, cards may have been misinterpreted during the sorting task, regardless of the researcher stating the response that each card was intended to depict during the previous 'suggestions for improvement' task. Finally, the Card Set as a whole may not be measuring forgiveness as a latent construct, regardless of the illustrations being informed by children's descriptions of forgiveness.

## **Limitations**

One obvious limitation of this study was the small sample size ( $N = 12$ ). While this size may be considered appropriate for the qualitative phases of analysis, the small pilot nature of the study meant that quantitative results could not be meaningfully tested for significance and therefore must be interpreted with caution. Moreover, because the sample was recruited from only one school, responses of this sample may not have been representative of responses of other children in this age group.

However, responses for the qualitative phase of the study (interpretation of and suggestions to improvements to Card Set illustrations) appeared to reach saturation for each card as participants were encouraged to respond until no new interpretations were mentioned. Additionally, there was no specific reason to believe that responses from these participants would be qualitatively different to those obtained from children from other schools, as the school and geographical location was neither particularly privileged nor underprivileged.

Notwithstanding, responses may also have been limited by the nature of the focus group task. Specifically, although the focus group format provided opportunities for participants to respond spontaneously without the need for reading and writing, the public nature of the task may have led to some participants limiting their responses due to concerns that their response might have been different to others. Thus, the responses recorded may have been limited to responses from more confident individuals, while missing those of less confident individuals.

Moreover, the study did not specifically ask children how much they would 'forgive' the transgressor if they were the protagonist; thus, there was no comparison between responses on the Card Set as a latent measure of forgiveness and explicit judgments of forgiveness.

Finally, although participant's interpretations of each card were generally consistent with the intended emotion or behaviour, this study did not specifically assess whether or not illustrations were interpreted as being specifically relevant to forgiving or unforgiving emotions or behavioural motivations.

### **Directions for further research**

Further research on the Card Set needed to include a larger sample, and to compare responses on the Card Set with responses on other measures of forgiveness. Additionally, the humiliation or public nature of the transgression needed to be adjusted in order that children might give a greater range of forgiving responses.

First however, it remained to be examined whether the illustration on each card was appropriately interpreted as relating to forgiving or unforgiving responses. An examination of children's relation of the illustrations to forgiving or unforgiving responses therefore became a priority for a second pilot study.

### **Study 3: Examining validity of the Card Set through matching cards to forgiving/unforgiving states**

While Study 2 examined children's interpretations of individual cards in the Card Set, it did not examine whether participants interpreted the cards as representing forgiveness. That is, even though the emotional and behavioural responses chosen for the Card Set were based on children's descriptions and understandings of forgiveness in Study 1, and even though illustrations of these responses were on the whole interpreted satisfactorily by the participants in Study 2, participants were not asked directly whether or not the illustrations in the cards were representative of forgiveness. Children's basic

interpretation of the cards was therefore examined through a second pilot study, described next.

## Method

### Participants

Participants were 24 children (9 boys, 15 girls) from one public primary school in metropolitan Adelaide, South Australia. Ages, measured in whole years, ranged from nine to 10 years ( $M = 9.17$ ,  $SD = 0.38$ ).

### Materials

Each participant received a large envelope containing a set of 16 illustrated cards. Illustrations were adjusted according to participant responses in Study 2, such that

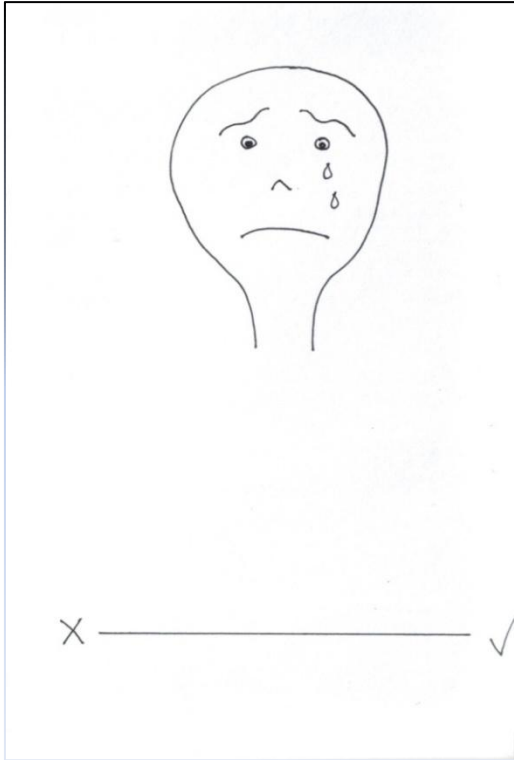
- a) On Card 5 ('angry') deeper frown lines and a 'zig-zag' mouth were added such that it looked 'angrier'
- b) On Card 8 ('not talking/listening'), the zippered mouth was replaced with a straight line and fingers were shown in ears rather than hands over ears
- c) On Card 11 ('ignoring'), the transgressor's arm was depicted lower such that they would not be interpreted as saying hello
- d) On Card 13 ('get away from me'), the victim stood up to point and the transgressor was depicted as leaving through a doorway
- e) On Card 15 ('invite to play'), the victim's arm was bent further, such that they were beckoning more, and the third party depicted with a larger smile.

The resulting final illustrations for the Children's Forgiveness Card Set are depicted below in Figure 3.2.

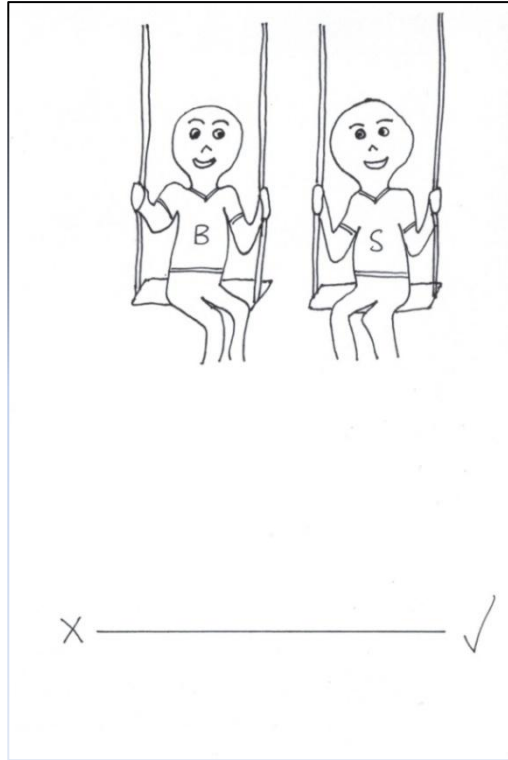
Figure 3.2

*Final illustrations for the Children's Forgiveness Card Set*

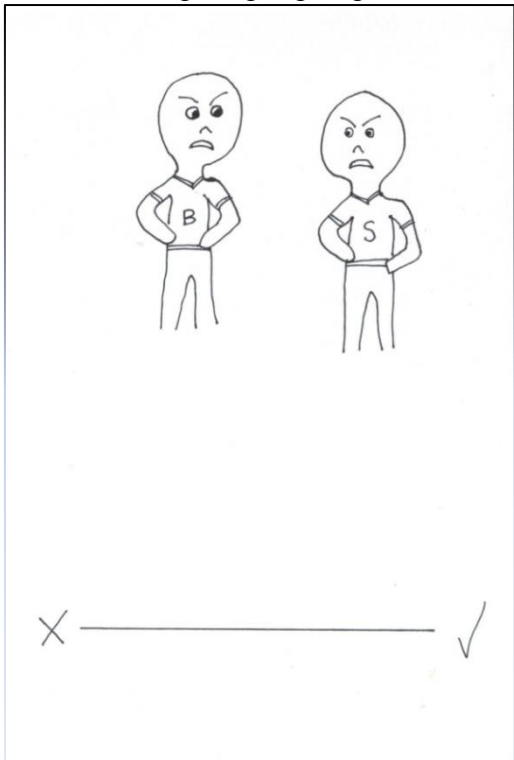
Sad/upset



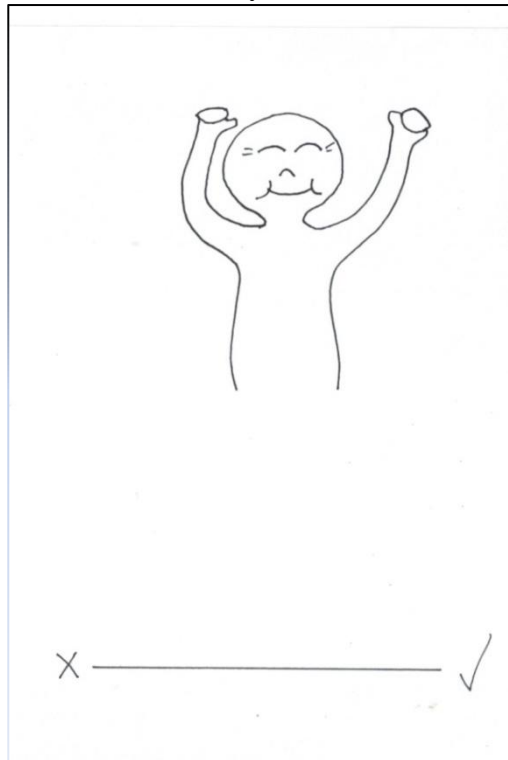
Playing/hanging out



Fighting/arguing

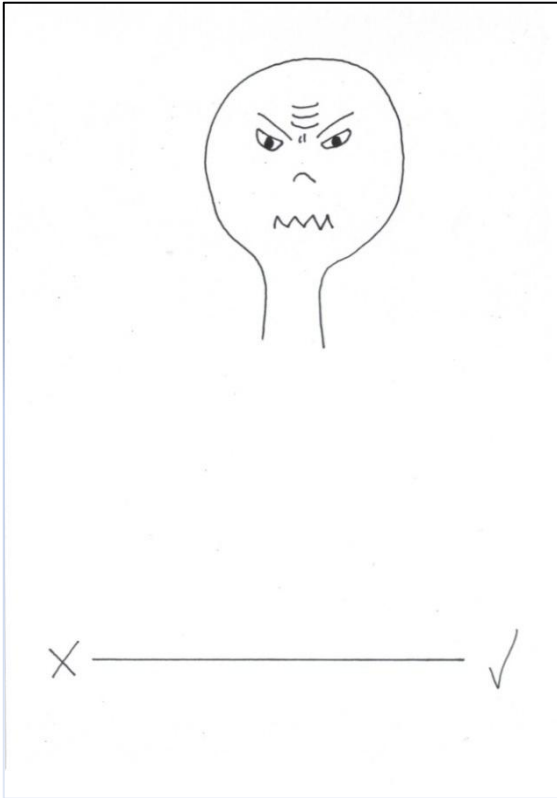


Joyful

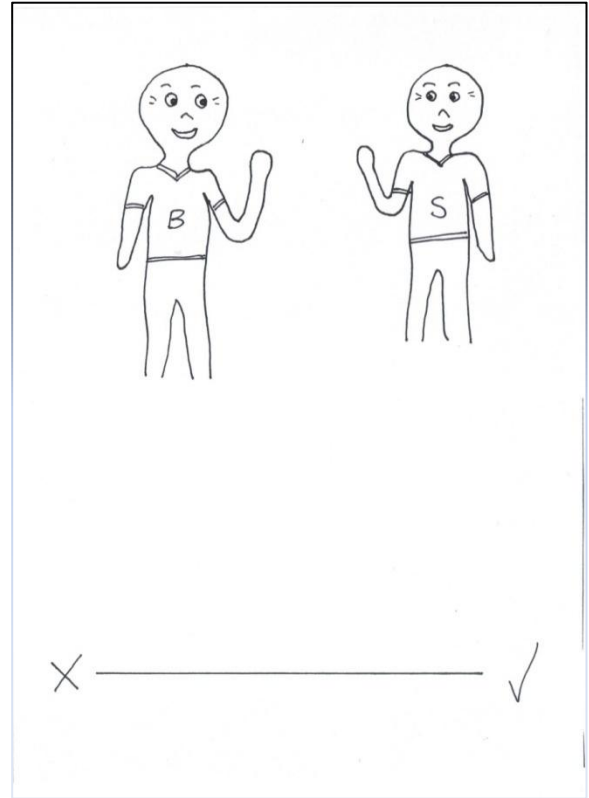




Angry



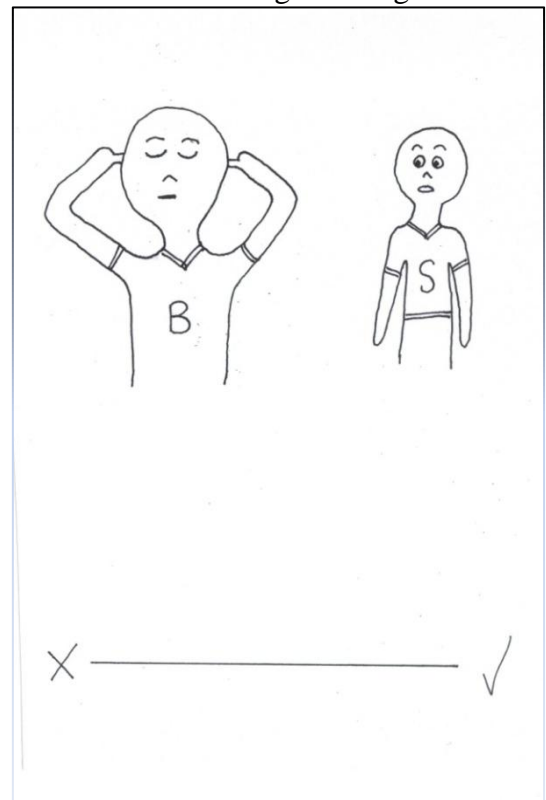
Being friendly (waving hello)



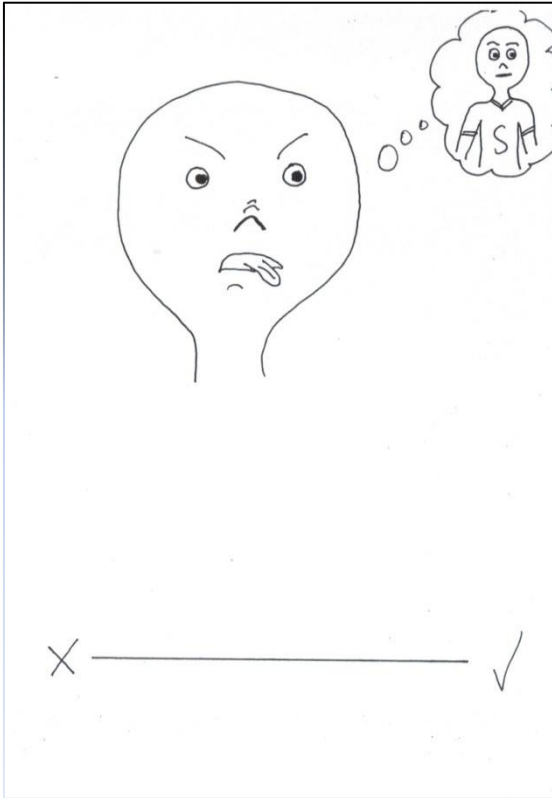
Warm



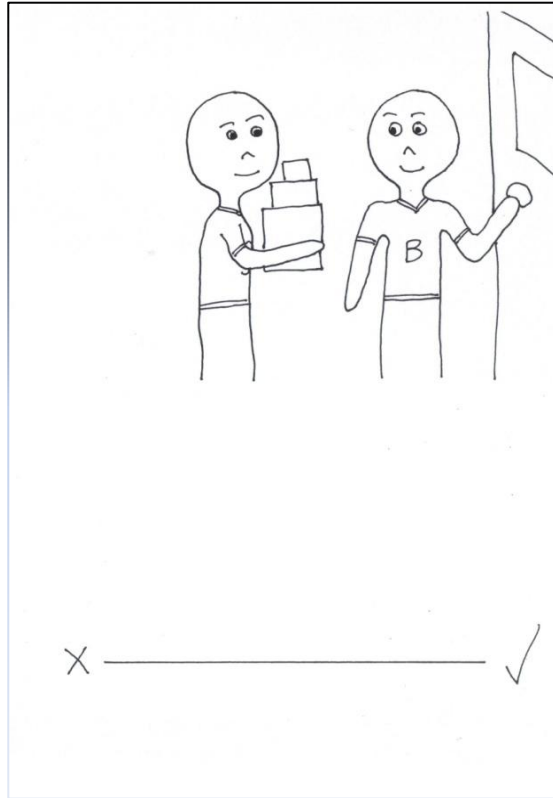
Not talking/listening



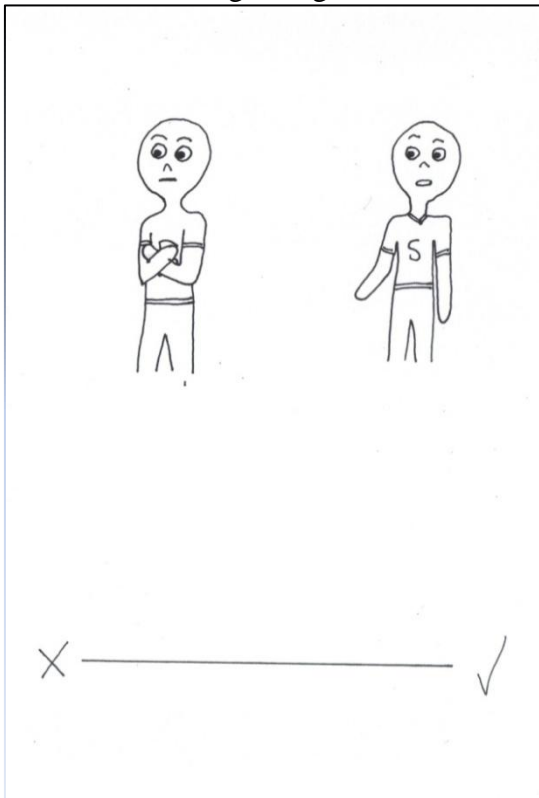
Hate



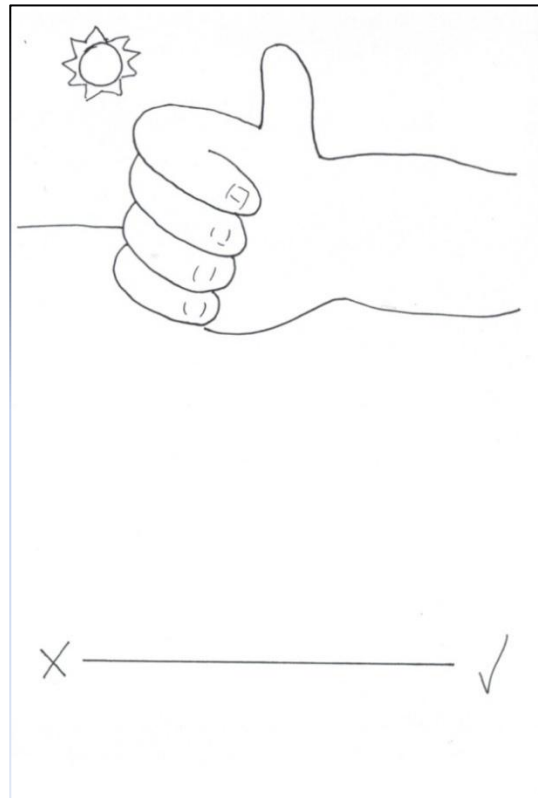
Helping



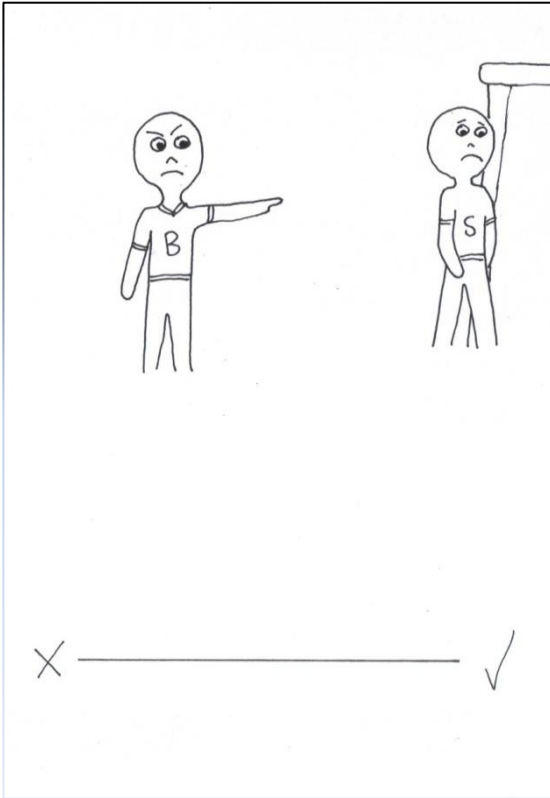
Ignoring



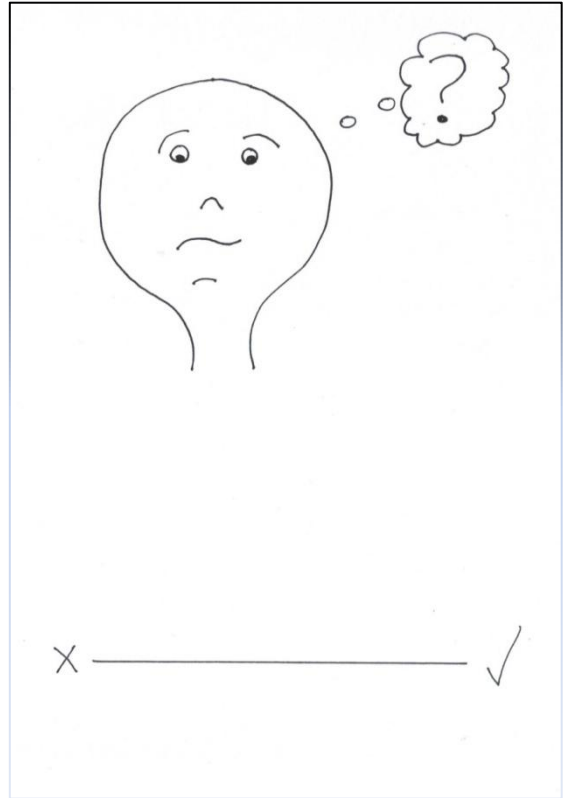
Good/OK



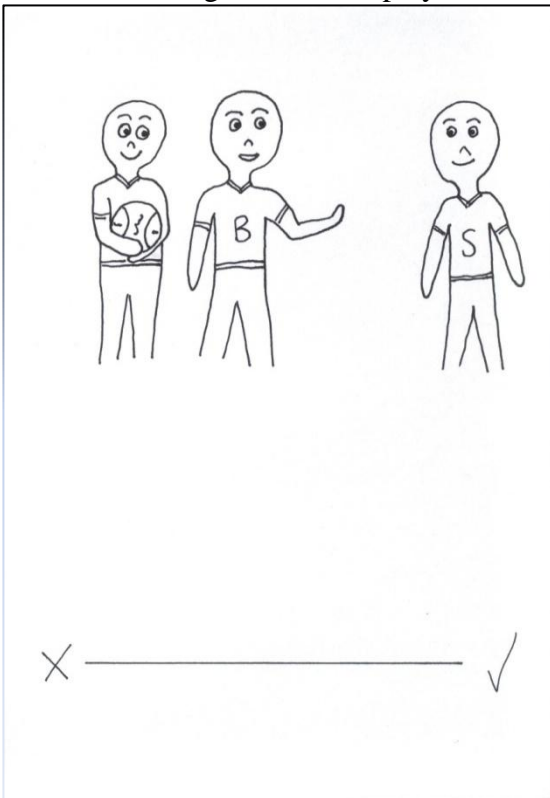
'Get away from me'



Weird/confused



Moving on/invite to play



Happy



Illustrations were presented without the 10 centimetre response line for this study.

In addition to the cards, each participant received three small envelopes; one adorned with a red star, one with a yellow star, and one with a green star.

## **Procedure**

Ethical approval for the study was obtained from the University of Adelaide School of Psychology and the Department for Education and Child Development in South Australia. Participants were recruited by first contacting the school, then sending information and consent forms home to parents via class teachers and students (Appendix 3.3). Those students who gained consent to participate were informed on the day of participation that they could withdraw from the study without penalty at any time, however, none declined to participate.

Children participated in the study in two groups. As there was no scenario for this study, boys and girls were mixed within groups. At the beginning of each group session, each child received an identification code and the anonymous, confidential and general nature of the data collection and analysis was explained. The purpose of the study was explained as helping the researcher with a set of cards that she had been working on. Children were asked to sort the cards into three piles. One was for 'ways people might feel or act when they're forgiving somebody else', which was to go in the envelope with the green star. Another pile was for 'ways that people might feel or act when they're not forgiving somebody else, when they haven't forgiven them for doing something wrong', which was to go in the envelope with the red star. The remaining pile was for 'any cards that you think aren't about forgiving but also aren't about *not* forgiving someone...if you think they're just about something completely different', which was to go in the envelope

with the yellow star. Children were told that the piles could have as many cards as they liked, and the researcher was available to clarify instructions or answer any questions. Full instructions are provided in Appendix 3.4. When children had completed the task, they sealed the small envelopes and placed all the materials into the large envelope for collection by the researcher.

## **Results**

### **Scoring the cards**

For each participant, a score was created for each card such that cards interpreted as being in the intended category – whether forgiving or unforgiving – were given a score of 1. Cards sorted into the ‘incorrect’ category – that is, sorted as being forgiving when intended to show an unforgiving response, or sorted as being unforgiving when intended to show a forgiving response – were given a score of -1. Cards that were interpreted as showing neither a forgiving nor an unforgiving response were given a score of zero. Thus for each participant an overall score was created by summing the score for all 16 cards, such that a participant interpreting all cards in the correct category would have a score of 16, while sorting all cards into the opposite category would produce a score of -16.

Actual scores ranged from 6 to 15, with a mean of 11.42 ( $SD = 2.38$ ). Thus, on average participants sorted just less than three quarters of the cards into the appropriate category; moreover some participants sorted more than half of the cards into an inappropriate category. Thus, not all cards were successful in being interpreted as representing ‘forgiving’ or ‘not forgiving’.

### **Frequency analysis of card categories**

To assess the effectiveness of each card in conveying forgiving or unforgiving responses, frequencies of each card being sorted into the intended category, into the opposite category, and as having nothing to with forgiving were examined, as presented in table 3.5.

Table 3.5

*Percentages of the sample interpreting cards as in the intended category, opposite to intended category, and as neither forgiving nor unforgiving in study 3*

Card	Intended category	Neither	Opposite category
Negative emotions			
Sad/upset	70.8	25.0	4.2
Angry	83.3	16.7	0
Hate	95.8	4.2	0
Weird/confused	12.5	75.0	12.5
Positive emotions			
Joyful	54.2	45.8	0
Loving/warm	62.5	37.5	0
All OK/thumbs up	41.7	58.3	0
Happy	58.3	41.7	0
Negative behaviours			
Fighting/arguing	95.8	4.2	0
Not talking /listening	95.8	4.2	0
Ignoring	70.8	12.5	16.7
Get away from me	100	0	0
Positive behaviours			
Saying hi	87.5	12.5	0
Helping	79.2	16.7	4.2
Playing/hanging out	87.5	12.5	0
Invite to play	87.5	8.3	4.2

To identify problematic cards, it was necessary to specify a percentage value at which cards would be considered to be sorted correctly to an acceptable level. A value of 70 percent was chosen, simply because 0.7 is considered an acceptable value in reliability analysis of psychological constructs (Field, 2009).

Several cards fell below the 70 percent criterion, namely, 'joyful', 'loving/warm', 'all OK/thumbs up', 'weird/confused' and 'happy'. 'Sad/upset' and 'ignoring' were also very close to the 70 percent criterion (70.8 percent). The 'ignoring' card and the 'weird/confused' card were the only cards to be sorted into the *opposite* category by more than one participant (other cards with less than 70% incidence of being sorted into the correct category were mainly sorted into the 'something completely different' category).

Overall then, 'joyful', 'loving/warm', 'all OK/thumbs up', 'happy', 'sad/upset', 'weird/confused' and 'ignoring' were identified as potentially problematic by the frequency analysis.

## **Discussion**

Study 3 was a pilot study aiming to assess whether or not children correctly interpreted individual cards as depicting forgiving or unforgiving emotional and behavioural responses as intended. Children sorted the cards into 'forgiving', 'not forgiving' or 'about something completely different' categories. Seven out of the 16 cards were found to have problematic levels of being sorted into an inappropriate category. These included all four of the cards depicting positive emotions, along with two depicting negative emotions and one card depicting an unforgiving behavioural response. Thus, it appeared that cards depicting positive emotions were particularly unsuccessful at being sorted into the 'forgiving' category.



On examination, it was apparent that the cards depicting positive emotions were mainly sorted into the ‘something completely different’ category, as was the ‘sad/upset’ card (these cards all had either one or no instances of being sorted into the opposite category). Meanwhile, the ‘weird/confused’ card and the ‘ignoring card’, both intended to depict unforgiving responses, were sorted into the ‘something completely different’ category and into the ‘forgiving’ category by more than one participant.

### **Possible reasons for the misinterpretation of cards**

#### ***Cards sorted as ‘something completely different’ to forgiving***

One possible reason for the misinterpretation of the problematic cards listed above is that these cards did not illustrate responses in such a way that they were easily interpretable by children. Additionally, it could be argued that the illustrations were interpretable, but that these responses were not considered to be either forgiving or unforgiving.

However, neither of these explanations made sense for the cards depicting positive emotions, nor for the sad/upset card, because participants in Study 1 consistently described a change to more positive emotions (i.e. happy, joyful, warm and good) and less negative emotions as being experienced when forgiving someone. Moreover, these cards were consistently correctly interpreted in the qualitative phase of Study 2; in fact, cards such as the ‘happy’ and ‘sad/upset’ card depicted very simple universal emotions that might be expected to be easily interpreted by anyone, including children in the late childhood age group. However, it still remained the case that these cards were not sorted into the correct category.

Notwithstanding, these cards were also rarely sorted into the opposite category, but rather as being about ‘something completely different’. Therefore, one further possible

explanation for the apparent misinterpretation of these cards may be that positive emotions such as ‘happy’ or negative emotions such as ‘sad’ are relevant to a variety of situations other than forgiving. Because Study 3 aimed to investigate the interpretation of cards as ‘forgiving’ or ‘unforgiving’ without relevance to a specific transgression, it did not include a description of a transgression or transgressor. However, rather than simplifying the interpretation of the cards, the absence of a transgression may have obscured the interpretation of cards, because in the absence of a transgressor or transgression, emotions such as ‘happy’, ‘joyful’ or ‘sad’ may be too general for children to interpret as being relevant to forgiveness, hence their frequent inclusion in the ‘something completely different’ category.

In comparison, cards depicting two parties (that is, almost all cards depicting behaviours along with the ‘hate’ card), had a much higher rate of being categorised correctly as either forgiving or unforgiving (for example, the ‘get away from me’ card was correctly interpreted by 100% of participants).

Another explanation for the misinterpretation of the majority of cards depicting emotional responses as being about ‘something completely different’ may be that, as suggested in Study 1, children tend to see forgiveness as an overt response to apology. Therefore, they may see cards depicting two parties in either hostile or conciliatory situations as relevant to forgiveness, while those cards depicting emotional responses may be seen as less relevant. This result therefore further suggests that children’s responses to the explicit question of how much they would ‘forgive’ a transgressor may not assess underlying emotional responses to the extent of a latent measure.

### ***Cards sorted into the opposite category***

In contrast to the cards depicting positive emotional reactions and the sad/upset card, the ‘ignoring’ and ‘weird/confused’ card were incorrectly sorted into the opposite (forgiving) category by more than one participant. This suggested that these two cards may be problematic in depicting unforgiving responses regardless of whether or not they were used to respond to a specific transgression.

For the ‘weird/confused’ card, this may have occurred because feeling weird or confused might occur either when forgiving or not forgiving; moreover, the expression on the figure depicted may have been misinterpreted as concern for another party, and therefore be interpreted as having more to do with forgiving than unforgiving responses.

Meanwhile, although ignoring is a negative behavioural response that might otherwise be expected to relate to unforgiving motivations, the ‘ignoring’ card was at times in Study 2 interpreted as depicting trying to be friends, trying to speak, saying hi or trying to pretend nothing had happened, assumedly from the point of view of the transgressor. Because Study 3 did not include a transgression scenario, the depicted behaviour may have been interpreted as being from either the point of view of the transgressor (who was depicted as approaching the victim) or from the point of view of the victim (who was depicted as ignoring the transgressor). Since approaching the victim may be seen as taking steps toward reconciliation, this too might be interpreted by children as being relevant to forgiveness.

### **Summary**

Overall, Study 3 was useful in identifying cards that may be problematic and ought to be examined further, particularly the ‘weird/confused’ and ‘ignoring’ cards. Results for

these cards suggested that it may be necessary to remove these cards from the Card Set, as they may obscure rather than assist the measurement of children's forgiveness.

Moreover, findings from Study 3 may provide further support to the interpretation of Study 1, that is, although children identify emotional responses as being related to the forgiveness process, their responses to the term 'forgive' tend to emphasise overt behavioural responses involving two parties.

However, Study 3 also appeared to be limited by the absence of a transgression, which may have affected participants' interpretation of the cards, particularly those depicting general emotional responses.

Therefore, with Studies 2 and 3 having pilot tested the Card Set, further examination of the Card Set by analysing the responses of a larger sample to a specified transgression became the aim of Study 4, described in the next chapter.

## Chapter 4: Study 4

### Validity of the Children's Forgiveness Card Set: Comparison with single-item explicit forgiveness judgments and prediction by apology

The Children's Forgiveness Card Set, a set of 16 illustrated cards, was developed with reference to children's descriptions of forgiveness obtained in individual interviews (Studies 1 and 1b). Illustrations were then tested for interpretability and improved where necessary according to suggestions from a separate sample of children (Study 2). After trialling the use of the Card Set to respond to the hypothetical scenario, children rated the instructions as either 'OK' or 'easy' to understand, rated the scenario as either 'OK' or 'easy' to understand, and rated realism and severity of the scenario and transgression as moderate. However, children's scores on the Card Set tended to be unforgiving.

In a further pilot study the Card Set was tested for face validity with another separate sample of children, such that children sorted cards into 'forgiving' 'not forgiving' and 'something completely different' categories (Study 3). However, several cards that were based on emotions that had been consistently identified in Study 1 and correctly interpreted in Study 2 were sorted into the 'something completely different' category. This was more often true of cards depicting emotional responses than cards depicting behavioural responses (only one card depicting a behavioural response was identified as problematic). It was therefore unclear whether these cards were not effective in depicting forgiving or unforgiving emotions, or whether results were due to either children's emphasis of overt behavioural responses when asked explicitly about 'forgiving', or whether these findings were due to children seeing depictions of general emotional reactions such as happiness, sadness, or joy as irrelevant to forgiveness when these emotions were depicted outside the context of a transgression.

This chapter describes Study 4, which sought to clarify the extent to which cards were relevant to forgiveness in response to a transgression, in order to further examine the validity of the Card Set as a measure of children's forgiving and unforgiving responses. Specifically, Study 4 sought to examine validity by (a) comparing responses on the Card Set with responses on an explicit measure of forgiveness and (b) comparing responses on the Card Set between apology and no apology conditions embedded in a hypothetical transgression context. Additionally, Study 4 presented an opportunity to examine cards identified as potentially problematic in Study 3, by means of reliability analysis.

### **Comparison with an explicit measure**

One way of establishing the concurrent validity of the Card Set would be to compare responses on the Card Set with responses on a single-item measure. Because the Card Set was based on children's descriptions of 'forgiving' in Study 1, it is reasonable to expect that children's responses to transgression on a single-item explicit forgiveness measure and their responses to the same transgression on the Card Set would share a significant amount of variability, although some differences might also be expected due to the hypothesised differences between overt responses measured by single-item explicit measures and underlying emotional responses that the Card Set aims to assess.

### **Comparison with additional measures**

In addition to relating to a single-item explicit measure of forgiveness, the Card Set might also be expected to relate to single-item measures of judgments that children are likely to make if they are in a forgiving state of mind.

One description of forgiveness that children made in Study 1 was that the relationship with the transgressor would be 'back to normal'. Such a description was not

depicted in the Card Set as it was difficult to illustrate; ‘normal’ could easily differ across relationships, depending on how the relationship was conceptualised in the first place. Instead, the overall concept of moving on was depicted in the ‘invite to play’ card.

However, the concept of a relationship being ‘back to normal’ as an indicator of forgiveness has some evidence in previous research and theory. Worthington (2005) has argued that researchers who study transgressions by strangers or people in non-continuing relationships tend to define full forgiveness as simply reducing resentment-based emotions, cognitions and motivational states (i.e. reducing unforgiveness), while researchers studying continuing relationships tend to define full forgiveness as replacing negative with positive states to reach an eventual ‘net positive’ experience.

To the extent that the ‘normal’, pre-transgression state of affairs between strangers might be expected to be a simple absence of resentment, while the ‘normal’ state of affairs between those in a continuing relationship such as a friendship might be expected to be positive, being ‘back to normal’ may therefore indicate forgiveness. A judgment of the relationship being ‘back to normal’ may therefore be a useful proxy measure of forgiveness against which to judge the validity of the Card Set.

An additional proxy measure may be based on reasonable expectations of children’s *behaviours* in a forgiving state. Denham and colleagues (2005) argue that children may be expected to express their forgiveness in behaviour, for example, reconciliatory and/or accommodating behaviour. One such behaviour that has been found to relate to children’s post-transgression emotional states is responses to Yamaguchi’s cake-sharing task (2009). As such, sharing cake may be another suitable ‘proxy’ single-item measure of children’s forgiveness.

## **Prediction by apology**

In addition to being related to children's judgments on single-item measures, a valid measure of children's forgiveness might reasonably be expected to be predicted by variables that have been found to predict forgiveness in previous studies.

One of the most salient of these variables is apology, which has been found to predict forgiveness in both child and adult samples (Darby & Schlenker, 1982; Denham et al., 2005; McCullough et al., 1998; Mullet, Riviere & Sastre, 2007; Ohbuchi & Sato, 1994).

Further, it appears that children's understandings of apology go beyond script-based understandings, to recognising some of the emotional functions of apology. For example, children aged four to nine years responding to a hypothetical scenario attributed more positive feelings to a victim who received an apology compared with a victim who did not receive an apology (Smith, Chen & Harris, 2010). Such effects also held true for children aged four to seven years responding to a laboratory-contrived mild disappointment (Smith & Harris, 2012); children who received an apology reported feeling better, viewed the transgressor as more remorseful, and rated the transgressor as nicer than did children who did not receive an apology from the contrived transgressor. Smith and Harris (2012) also found support for a mediation model such that the positive effects of apology on children's emotions were accounted for by the signalling of remorse by the wrongdoer; thus, it appears that apology is effective in eliciting more positive emotional reactions from children because they are aware of the function of apology in communicating transgressor remorse.



## **Relationships with perceived remorse**

In addition to the research cited above, further research suggests that children are sensitive not only to a perfunctory stated apology but also to remorse when forgiving or not forgiving.

For example, more elaborate apologies including statements of remorse and offers of compensation have been found to facilitate greater forgiveness compared with perfunctory apologies, at least in older children (Darby & Schlenker, 1982). Remorse has also been found to facilitate children's forgiveness in addition to apology in more recent studies (Denham et al., 2005; Goss, 2007). Additionally, sincere apology and remorse were indicated as important to forgiveness by several of the participants in Study 1. In conjunction with the research by Smith and Harris (2012), these findings suggest that one reason apology may predict forgiveness is that it may be perceived to indicate sincere remorse.

In this case, it may be children's judgments of remorse, rather than the statement of apology per se, that predicts forgiveness; particularly underlying emotional aspects of forgiveness rather than overt responses to apology. There is some further evidence for this assertion. For example, children have been found to be more forgiving in response to transgressors who apologised *or* felt really bad, when responding to hypothetical scenarios on a questionnaire measure that asked explicitly about forgiveness (Neal, Bassett, & Denham, 2004, cited in Denham et al., 2005).

Meanwhile, five year old children have been found to make more positive evaluations of transgressors who display guilt or remorse without an explicit apology, although four year old children could only draw these inferences about transgressors who apologised explicitly (Vaish, Carpenter, & Tomasello, 2011). Thus, it appears that from at least five years of age, children are sensitive to functions of apology in communicating

remorse and to the functions of remorse in appeasing the hurt feelings of victims.

Apologies may therefore be effective in predicting forgiveness to the extent that they communicate transgressor remorse.

Interviews in Study 1 for this thesis also suggested that, for at least some participants, apology was important to forgiveness only to the extent that it was sincere or communicated sincere remorse; saying sorry without ‘meaning it’ was not facilitative of forgiveness for these participants. Thus, at least some children in Study 1 showed awareness that saying sorry was not necessarily the same as ‘being’ sorry; moreover, ‘really meaning’ the apology (in other words, feeling actual remorse) was the important factor with regard to forgiveness.

Overall then, previous studies suggest that if the Card Set is a valid measure of forgiveness then responses on the Card Set ought not only to be predicted by apology, but also to correlate with perceptions of transgressor remorse, that is, with ‘how sorry’ the transgressor is perceived to be.

### **Adjusting the hypothetical scenario**

Study 2 included pilot testing of a hypothetical scenario in which a school aged child was transgressed against by their best friend, then either received an apology or did not receive an apology. Results suggested that children understood the scenario in either condition and understood the nature of the apology/no apology condition, as they understood the transgressor in the apology condition to be more remorseful than the transgressor in the no apology condition. However, participants gave generally unforgiving response to this scenario, regardless of apology. Thus, despite the small sample, it was reasoned that either the nature of the transgression or features of the Card

Set may be responsible for the lack of difference between apology and no apology conditions.

As discussed in the previous chapter, the public nature of the transgression may mean that children might consider the transgression particularly humiliating and therefore difficult to forgive. Therefore, for Study 4 the hypothetical scenario was adjusted such that the transgression was less public than that described for Study 2.

Further, although children did view the transgressor who apologised as more remorseful than transgressors who did not, the apology may not have been elaborate enough to elicit forgiving responses from children in the middle to upper primary age group. For example, in Darby & Schlenker's (1982) study in which children were found to be more forgiving in response to more elaborate apologies, the 'elaborate' level of apology included an attempt to compensate or help the victim. The apology scenario in Study 2 did not include any such offer of help. Therefore, for Study 4, the apology was adjusted such that it was more elaborate by virtue of including an offer of help by the transgressor.

### **Order of cards**

One further possible reason that participant responses in Study 2 may have been unforgiving is that participants were primed by the order of presentation of the cards. In Study 2, cards were always presented from cards 1 to 16, which meant the 'sad/upset' card was always presented on top of the pile and was likely to be viewed first as participants took their cards out of the envelopes. This may have meant that participants had negative responses in mind when responding on the Card Set. Therefore, in Study 4 the order of cards in the Card Set was counterbalanced such that half of the participants received a Card Set ordered from Cards 1 to 16, while the other half of the participants received a Card Set in the reverse order, with a positive card ('happy') first in the pile.

## **Aims and hypotheses**

Overall, Study 4 aimed to examine the validity of the Card Set as a measure of children's forgiveness, by testing the following hypotheses:

1. Children's responses on the card set will be positively correlated with children's responses on a single-item explicit measure of forgiveness
2. Children's responses on the card set will be positively correlated with children's responses on single-item 'proxy' measures of forgiveness, namely
  - a. Judgments of how 'back to normal' the hypothetical relationship would be, and
  - b. Judgements of how much cake they would be happy to share with a hypothetical transgressor
3. Children's responses on the Card Set will be positively correlated with their judgments of perceived transgressor remorse
4. Children's responses on the card set will be predicted by apology, such that those children who responded to a scenario in which the transgressor apologised would score higher on the Card Set than those children who responded to a scenario in which the transgressor did not apologise
5. Children's responses on the Card Set will be predicted by the order of presentation of the cards, such that children who received an unforgiving card (Card 1) first in their set of cards would score lower on the Card Set than children who received a forgiving card (Card 16) first in their set of cards.

## **Method**

### **Participants**

The sample for the study consisted of 34 primary school students (21 boys and 13 girls) from one public and one private primary school in metropolitan Adelaide, South Australia. Age, measured in whole years, ranged from nine to 12 ( $M = 10.24$ ,  $SD = 0.902$ ); therefore the majority of participants were in the late childhood stage of development (Soto et al., 2008).

### **Materials**

#### ***Hypothetical scenario***

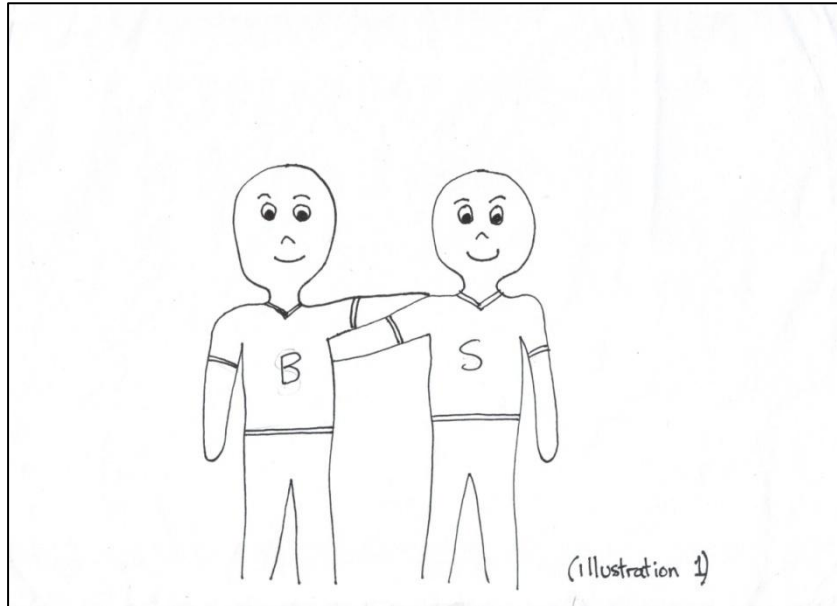
The hypothetical scenario was similar to that used in Study 2, in that it described a primary school aged child being transgressed against by their best friend, who breaks their confidence by telling an embarrassing secret they had promised not to share. As in Study 2, boys responded to the scenario featuring boy characters (Ben and Sam), and girls responded to the scenario featuring girl characters (Beth and Sophie). However, adjustments were made to the scenario such that the transgression was less public and the apology (in the apology condition) more elaborate. The resulting scenario with adjusted illustrations is depicted in figure 4.1.

Figure 4.1

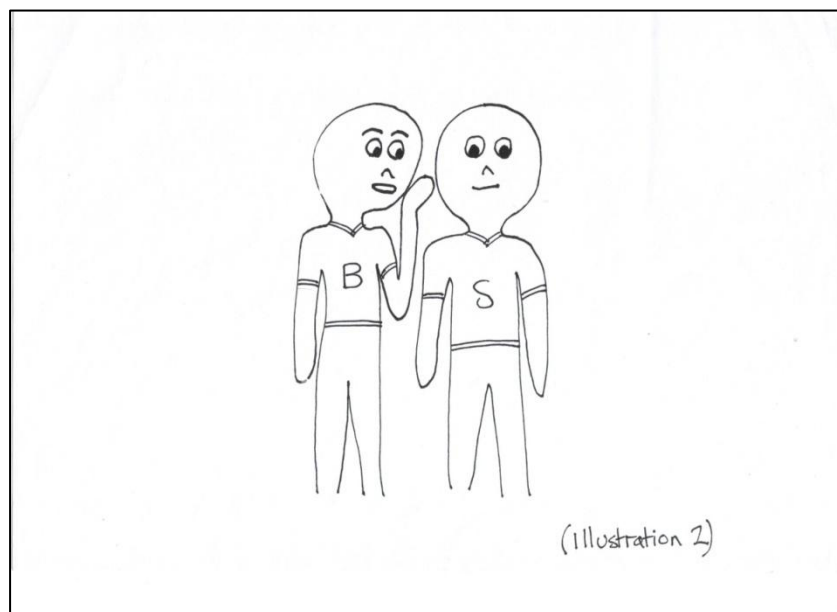
*Scenario and illustrations for Study 4*

---

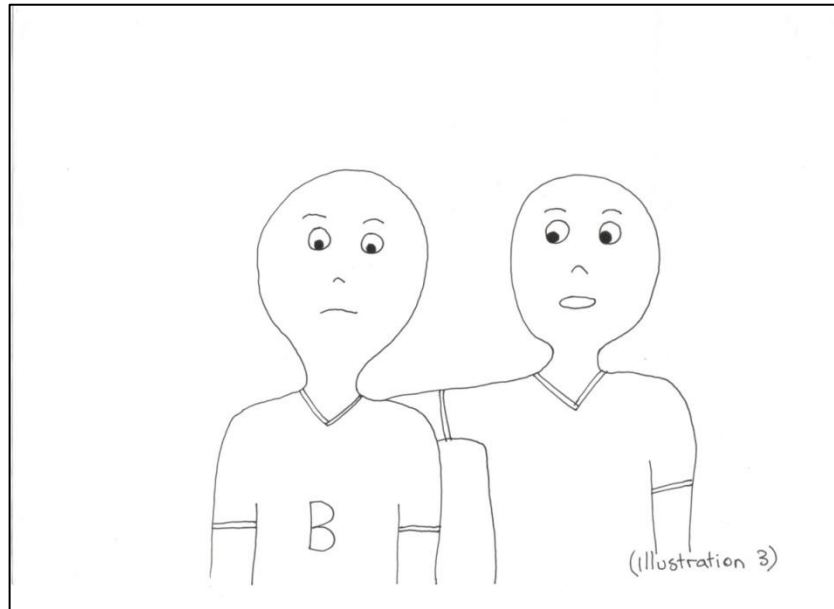
Ben (Beth) is a student in primary school, just like you. His (her) best friend at school is Sam (Sophie). Ben and Sam usually tell each other everything. (Illustration 1).



One day Ben wants to tell Sam a secret, but he doesn't want anyone else to know because it would be really embarrassing if everyone else knew. Sam promises not to tell, so Ben tells Sam the embarrassing secret (Illustration 2).

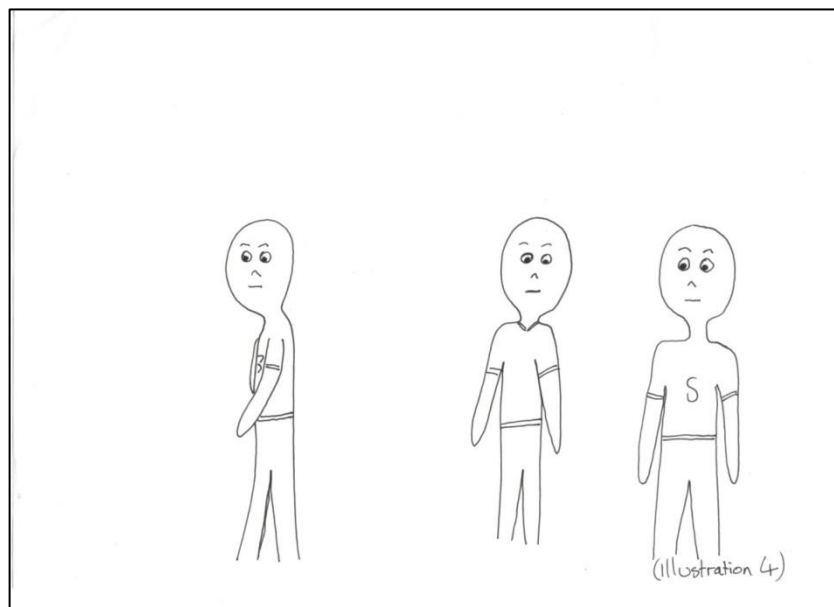


The next day, another boy (girl) in their class asks to talk to Ben alone. He tells Ben that Sam has been telling Ben's secret. The other boy says 'I know Sam is supposed to be your best friend, so I thought you should know that he told me your secret yesterday. Don't worry though, I won't ever tell anyone else (Illustration 3).



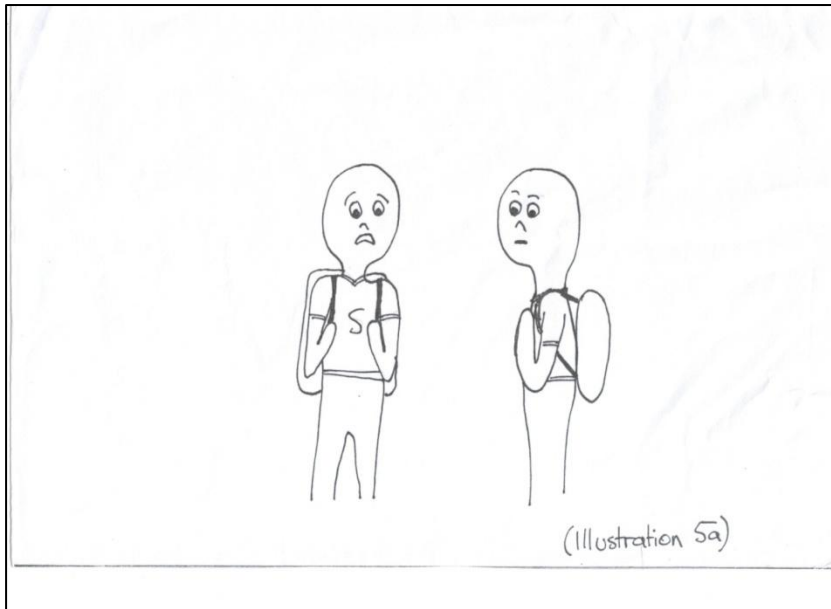
Just then, Sam walks up. Ben feels pretty bad, and says to Sam, 'I thought I asked you not to tell anyone. I thought I could trust you.' Then Ben walks away from Sam and from the other kid.

(Illustration 4).



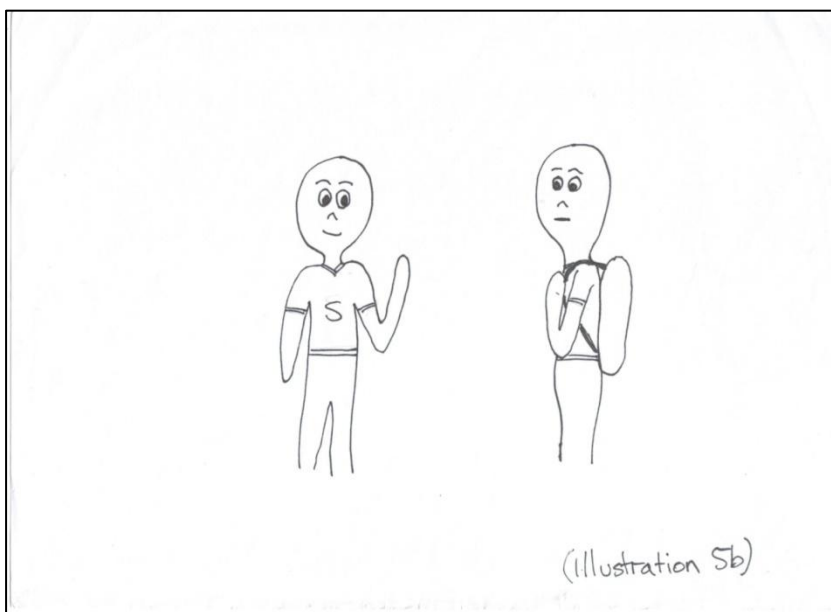
*Apology condition:*

Later, when Ben sees Sam after school, Sam says he is sorry for what happened. Sam says he feels really bad about what he did, and his face looks sad. Sam says he'll do whatever he can to make things better with Ben. (Illustration 5a).



*No apology condition:*

Later, when Ben sees Sam after school, Sam says nothing about telling the secret and acts like nothing happened. In fact, Sam doesn't seem bothered at all by what happened. (Illustration 5b).





### ***The Children's Forgiveness Card Set***

The Card Set for Study 4 consisted of sixteen illustrated cards, featuring the illustrations used in Study 3 (figure 3.2). At the bottom of each card a 10 centimetre line with a cross at one end and a tick at the other end provided a way for children to show the strength with which they would feel or feel like acting in the way depicted on the card if they were the protagonist, as for Study 2. Cards were presented in a large envelope with two smaller envelopes for sorting as for Study 2. Envelopes in which participants received the cards were marked on the bottom corner with a small positive or negative sign, which indicated to the researcher whether the Card Set was placed in the envelope with a positive or negative card first in the set. Instructions for responding to the Card Set were as for Study 2.

### ***Response sheet***




In addition to the Card Set participants received a sheet of paper with printed questions and options from which to choose their responses. One side of this sheet contained several questions to assess participants' impressions of the scenario. As in Study 2, questions and response options were read aloud by the researcher and response options were accompanied by simple illustrations in the hope that this would assist children's comprehension. Response options and illustrations are shown in figure 4.2.

Figure 4.2




Response sheet assessing children's impressions of the hypothetical scenario, Study 4

EXPERIMENTAL STUDY Number.....



1. I want to know how realistic this story is for you. Can you imagine something like this happening to you or to other people you know?

 No way       Maybe       For sure




2. How bad is what happened in the story?

 Not bad at all       A bit bad       Really bad

3. Did Sam apologise?

 No       Yes

4. How sorry do you think Sam felt about what happened?

 Not sorry at all       A bit sorry       Really sorry




The opposite side of the response sheet presented children with the proxy measures of how 'back to normal' the protagonist would feel about their friendship with the transgressor and 'how much cake' the participant would be willing to share with the transgressor if they were the protagonist, followed by the single-item explicit forgiveness measure and questions on participants' age and gender.

These questions were also accompanied by illustrated response options, which meant it was necessary to specify illustrations for both 'back to normal' and 'forgive' questions. This presented some difficulties considering that both being 'back to normal' and 'forgiving' might include a range of responses. Finally, because the transgression was in the context of a friendship, and being 'back to normal' and forgiving may therefore be construed as positive, both 'back to normal' and 'forgive' questions were illustrated with facial expressions as illustrated in figure 4.3; while this was necessarily a simplification it was at least consistent with the premise of children's emotional forgiveness being the process of replacing negative other-oriented emotions with positive other-oriented emotions (Worthington, 2006). Full instructions for the cake-sharing item were read aloud (see Appendix 4.1).

Figure 4.3





Response sheet assessing children's proxy and single-item explicit forgiveness

5. How 'back to normal' do you think Ben would feel about his friendship with Sam after what happened?




Not normal at all      A bit back to normal      Totally back to normal

6. Choose from:



None      A small slice      A bigger slice      An equal half

7. How much do you think Ben would forgive Sam for what happened?

Not at all      Forgive a bit      Totally forgive

8. Please circle if you are

      or      

A boy      a girl

9. Last of all, how old are you?

## **Procedure**

Ethical approval for the study was sought from the University of Adelaide School of Psychology and the Department for Education and Child Development in South Australia. Participants were recruited by first contacting schools, then sending information and consent forms (Appendix 4.2) to parents/caregivers via the school.

The study was run at schools with groups of two to eight children. Participants listened to the scenario and instructions for measures in groups, but completed measures individually without communicating with each other about their responses. Participants in any one group heard either the apology or no apology scenario, with boys and girls participating in separate groups such that boys listened to a scenario with boy characters and girls listened to a scenario with girl characters. Envelopes with either a positive or negative card first were distributed in alternate order, such that approximately even amounts of children in any one group had a positive or negative card first in their set of cards.

At the beginning of each session, each child received an identification code and the anonymous, confidential and general nature of the data and analysis was explained. The purpose of the study was described to participants as finding out more about how children feel, think and act when things go wrong between friends. Forgiveness was not mentioned explicitly at any stage during the session, with the exception of reading out the single-item explicit forgiveness measure toward the end of completion of the response sheet.

The researcher read out the scenario accompanied by the illustrations. Children then completed the measures in the following order; (1) the first side of the response sheet, containing questions on their impressions of the scenario (2) the Card Set and (3) the second side of the response sheet, containing single-item forgiveness measures and age and

gender items. The researcher read out questions and responses for the response sheets and instructions for the Card Set and was available to help participants with their understanding of tasks at any time. Completed measures were collected into an envelope for each individual participant, and were then collected by the researcher.

## **Results**

### **Reliability analysis**

Tests of internal consistency reliability for Card Set scores were conducted using Cronbach's alpha. Reliability for both scores was high;  $\alpha = .94$  for the line score and  $\alpha = .90$  for the sort score. Cohesion of individual cards within the Card Set was examined by reference to the item total correlation for each card, with particular attention to cards identified as potentially problematic in Study 3. Item total correlations are presented in table 4.1.

Table 4.1

*Item total correlations for individual cards in Study 4*

	Card	Item total correlation (with all other cards)
Emotion-based cards	Sad/Upset	.61
	Joyful	.72
	Angry	.85
	Warm	.79
	Hate	.78
	Good/all OK	.62
	Weird/confused	.07
	Happy	.78
Behaviour-based cards	Playing/hanging out	.75
	Fighting/arguing	.80
	Friendly/saying hi	.79
	Not talking/listening	.75
	Helping	.58
	Ignoring	.48
	Get away from me	.67
	Invite to play	.74

As can be seen, cards depicting positive emotional responses and the sad/upset card, which had been identified as potentially problematic in Study 3, had moderate to high levels of inter-item correlation in Study 4. However, inter-item correlation of the ‘weird/confused’ card was particularly low, suggesting that this card may be problematic even when children were responding to a specific transgression.

**Hypotheses 1- 3: Relationships between Card Set scores and the single-item explicit forgiveness measure, proxy forgiveness measures, and remorse**

Hypotheses 1 to 4 were examined by means of correlation analysis. Because apology and card order were manipulated, these manipulations were controlled for in

subsequent correlation analysis by employing partial correlation analysis. Partial correlation between all variables is presented in table 4.2. <sup>1</sup>

Table 4.2

*Partial correlations between forgiveness measures, remorse and severity, controlling for apology and order of cards conditions*

	1	2	3	4	5	6
1. Line score						
2. Sort score	<b>.95**</b>					
3. Explicit item	<b>.47**</b>	<b>.36*</b>				
4. Back to normal	<b>.69**</b>	<b>.64**</b>	<b>.47**</b>			
5. Cake sharing	<b>.52**</b>	<b>.45*</b>	.34	.34		
6. Remorse	.30	.28	.28	.30	.17	
7. Severity	-.17	-.10	-.24	<b>-.47**</b>	-.25	-.31

*N* = 34, *df* = 30 for all correlation analyses

\*Significant at the  $p < .05$  level

\*\*Significant at the  $p < .01$  level

***Hypothesis 1: Relation between Card Set scores and the single-item explicit measure***

The Card Set line score and sort score were both positively correlated with single-item explicit judgments of forgiveness at moderate levels. Therefore Hypothesis 1, that children’s responses on the card set would be positively correlated with children’s responses on a single-item explicit measure of forgiveness, was supported.

<sup>1</sup> Bivariate correlations between all variables in table 4.2 were also calculated; levels of correlation remained similar with the exceptions that (1) the correlation between the sort score and single items explicit measure did not reach significance although it remained at moderate levels and (2) correlation between the single-item explicit measure and remorse reached significance; see Appendix 4.3.



***Hypothesis 2: Relation between Card Set scores and single-item ‘proxy’ measures***

The line score and sort score both correlated positively, at moderate levels, with how ‘back to normal’ children judged the friendship with the transgressor would be and with children’s judgments of how much cake they would be willing to share with their transgressor. Thus Hypothesis 2, that children’s responses on the Card Set would be positively correlated with (a) their judgments of how ‘back to normal’ the hypothetical relationship with the transgressor would be and (b) judgments of how much cake they would share with the hypothetical transgressor, was supported with respect to both the line score and the sort score.

***Hypothesis 3: Relation between the Card Set and perceived transgressor remorse***

No significant correlation was found between ‘how sorry’ the transgressor was perceived to be (i.e. perceived transgressor remorse) for either the line score or the sort score. Therefore Hypothesis 3, that children’s responses on the Card Set would be positively correlated with their judgments of transgressor remorse, was not supported. However, it was also the case that none of the single-item forgiveness measures correlated significantly with remorse when controlling for apology and order of cards conditions; moreover, correlations of the Card Set scores, the single-item explicit measure and the back to normal measure with remorse approached moderate effect sizes in the expected (positive) direction, and may have been significant with a larger sample.

## **Hypotheses 4 and 5: Prediction of the Card Set by apology condition and order of cards**

### ***Manipulation checks***

Frequency analysis of the item asking whether the transgressor apologised confirmed that 100% of participants in the apology condition responded ‘yes’ and therefore understood that the transgressor had apologised, whereas 100% of participants in the no apology condition responded ‘no’ and understood that the transgressor had not apologised. Thus, the manipulation was effective with respect to children’s understandings of whether the transgressor had apologised to the victim.

Additionally a t-test was performed to examine differences in perceived transgressor remorse between the apology and no apology conditions. The transgressor was judged to be significantly more sorry by children in the apology condition ( $M = 2.82$ ,  $SD = 0.53$ ) than by children in the no apology condition ( $M = 1.71$ ,  $SD = 0.69$ ) ( $t(32) = 5.32$ ,  $p < .01$ ,  $r = .69$ ). Thus, the apology manipulation was effective not only in conveying that the transgressor had apologised, but also in conveying the transgressor’s greater remorse.

### ***Descriptive statistics***

Descriptive statistics for all measures (apart from the yes/no apology manipulation check) in each condition are presented in table 4.3.

Table 4.3

*Means (and standard deviations) of Study 4 variables by apology and order of cards conditions*

Item/measure	Apology	No apology	Sad card first	Happy card first	Total
<u>Background variables</u>					
Realism	2.35 (0.61)	2.35 (0.49)	2.35 (0.60)	2.35 (0.49)	2.35 (0.54)
Severity	2.24 (0.44)	1.88 (0.49)	2.06 (0.43)	2.06 (0.56)	2.06 (0.49)
Remorse	2.82 (0.53)	1.71 (0.69)	2.47 (0.80)	2.06 (0.83)	2.26 (0.83)
<u>Single-item measures</u>					
Explicit forgiveness	2.29 (0.59)	2.06 (0.56)	2.24 (0.56)	2.12 (0.60)	2.18 (0.58)
Back to normal	2.12 (0.49)	1.94 (0.56)	2.06 (0.56)	2.00 (0.50)	2.03 (0.52)
How much cake	1.88 (1.11)	1.35 (0.86)	1.71 (1.10)	1.53 (0.94)	1.62 (1.02)
<u>Card Set scores</u>					
Line score	83.63 (40.66)	77.15 (42.38)	74.71 (43.39)	86.07 (38.99)	80.39 (41.03)
Sort score	2.12 (9.86)	0.24 (10.53)	-0.94 (10.03)	3.29 (10.00)	1.18 (10.09)

#### ***Testing assumptions: normality and homogeneity of variance***

Prediction of the Card Set scores by apology condition and by order of presentation of cards was examined by analysis of variance. Accordingly, the assumptions of normality of distributions within groups and homogeneity of variance across groups were examined for both apology and order of cards conditions.

Inspection of histograms, inspection of z-scores of skew and kurtosis and the Kolmogorov-Smirnov test of normality were all utilised to assess normality of distributions. While histograms and the Kolmogorov-Smirnov test suggested some deviations from normal distributions, examination of skew and kurtosis z-scores for

distributions of apology and no apology groups suggested that neither skew nor kurtosis was a problem for Card Set scores or for single-item explicit or proxy measures, as all z-scores values fell below Field's (2009) criterion of 1.96. The assumption of normality was thus held to be met for distributions across the apology condition. The same was true of all Card Set and single-item scores when distributions were examined across the order of cards condition, with the exception of the 'back to normal' measure, which was found to have significant levels of kurtosis in the 'happy card first' condition. Levene's test of equality of variance suggested variance was not significantly different across either apology or order of cards conditions for any of the measures. Moreover, cell sizes were equal for both apology conditions and order of cards conditions; according to Field (2009) analysis of variance is relatively robust to violations of assumptions provided cell sizes are equal. Therefore, considering assumptions were met in the majority of cases and most importantly for Card Set scores, analysis of variance was considered appropriate.

Analysis of variance by apology condition and by order of cards condition for Card Set line scores and sort scores, and for the single-item explicit and proxy forgiveness measures, is presented in table 4.4.

Table 4.4

*Summary of analyses of variance by apology and order of cards conditions for Card Set scores and single item measures*

Source	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
<u>Line Scores</u>				
Apology	1	.413	.014	.525
Order of cards	1	.898	.029	.351
Apology x Order of cards	1	5.258	.149	.029
Error	30			
<u>Sort scores</u>				
Apology	1	.673	.022	.418
Order of Cards	1	2.031	.063	.164
Apology x Order of cards	1	4.927	.141	.034
Error	30			
<u>Explicit measure</u>				
Apology	1	1.352	.043	.254
Order of cards	1	.170	.006	.683
Apology x Order of cards	1	4.899	.140	.035
Error	30			
<u>Back to normal</u>				
Apology	1	.997	.032	.326
Order of cards	1	.028	.001	.869
Apology x Order of cards	1	5.820	.162	.022
Error	30			
<u>How much cake</u>				
Apology	1	2.019	.065	.159
Order of cards	1	.058	.002	.811
Apology x Order of cards	1	.316	.010	.578
Error	30			

***Hypothesis 4: Prediction of Card Set scores by apology***

There was no significant difference between apology and no apology groups for either the line score or the sort score. Thus, Hypothesis 4 was not supported, as children's responses on the Card Set were not predicted by apology.

However, there was also no significant difference between apology and no apology groups on the single-item explicit measure, nor on judgments of how ‘back to normal’ the protagonist would feel about their friendship or how much cake the protagonist would share with the transgressor.

***Hypothesis 5: Prediction of Card Set scores by order of cards***

There were no significant differences found between negative card first and positive card first conditions for either the line score or the sort score. Thus, Hypothesis 5 was not supported. Similarly, there was no significant difference between order of cards conditions for the single-item explicit measure, nor for judgments of how ‘back to normal’ the protagonist would feel about their friendship or how much cake the protagonist would share with the transgressor.

***Interaction between apology and order of cards conditions***

Examination of the interaction between apology and the order of cards showed a significant effect on both the line score and the sort score. Interactions between apology and order of cards are illustrated in figures 4.4 (line scores) and 4.5 (sort scores).

Figure 4.4

*Interaction between apology condition and order of cards condition in predicting Card Set total line scores*

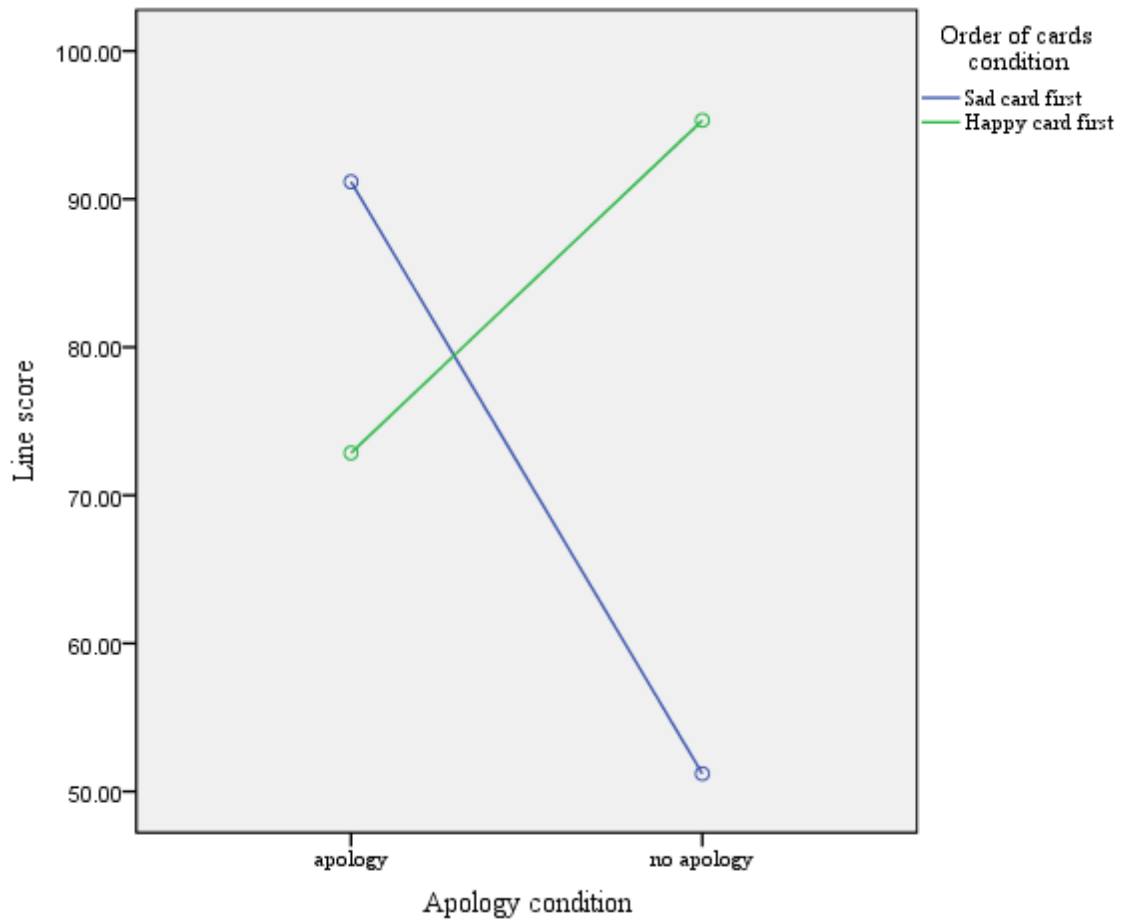
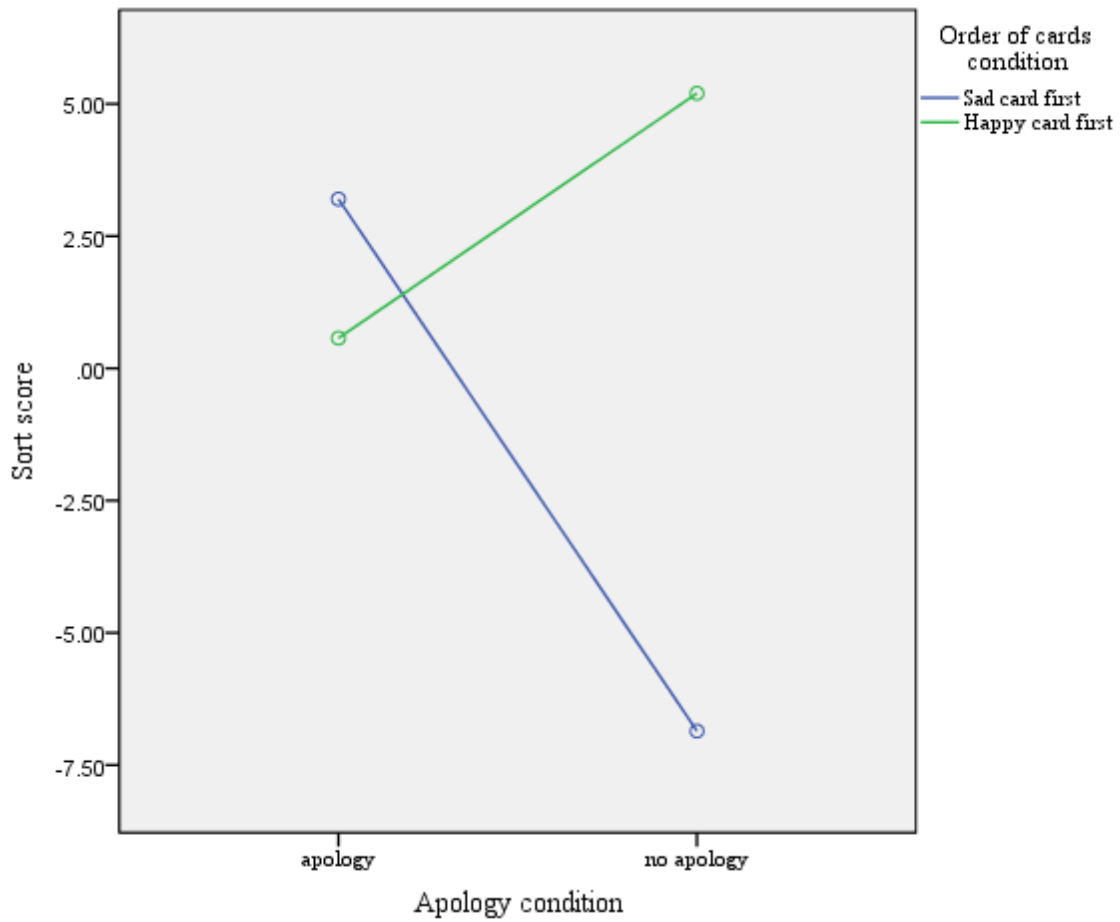


Figure 4.5

*Interaction of apology condition and order of cards condition in predicting Card Set total sort scores*



Simple effects analysis for these interactions is presented tables 4.5 (line scores) and 4.6 (sort scores).



Table 4.5

*Simple effects analysis by apology and order of cards conditions for line scores*

	Apology	No apology	Simple effects $F$ $df(1, 30)$
Sad card first	91.17 (41.50)	51.20 (36.60)	4.31*
Happy card first	72.86 (39.93)	95.32 (37.53)	1.36
Simple effects $F$ $df(1, 30)$	.905	5.251*	

\* Significant at the  $p < .05$  level

Table 4.6

*Simple effects analysis by apology and order of cards conditions for sort scores*

	Apology	No apology	Simple effects $F$ $df(1, 30)$
Sad card first	3.20 (9.81)	-6.86 (7.38)	4.62*
Happy card first	0.57 (10.50)	5.20 (9.71)	0.98
Simple effects $F$ $df(1, 30)$	0.32	6.64*	

\* Significant at the  $p < .05$  level

As shown, simple effects analysis confirmed that when the sad card was presented first, significant differences existed between apology and no apology conditions for both the line score and the sort score. Significant differences also existed between sad card first and happy card first conditions when the transgressor did not apologise. For both the line and sort score, when the sad card was presented first participants were significantly more forgiving in the apology condition than in the no apology condition. When the happy card was presented first, no significant effect was found for the apology condition. Thus, Card Set scores were predicted by apology only when a sad card was presented first.

Similarly, the interaction between apology and order of cards conditions had a significant effect on the single-item explicit measure and the back to normal proxy measure, although not on the cake proxy measure. Interaction effects for the single-item explicit and back to normal measures are represented in figures 4.6 and 4.7.

Figure 4.6

*Interaction between apology condition and order of cards condition in predicting single-item explicit forgiveness*

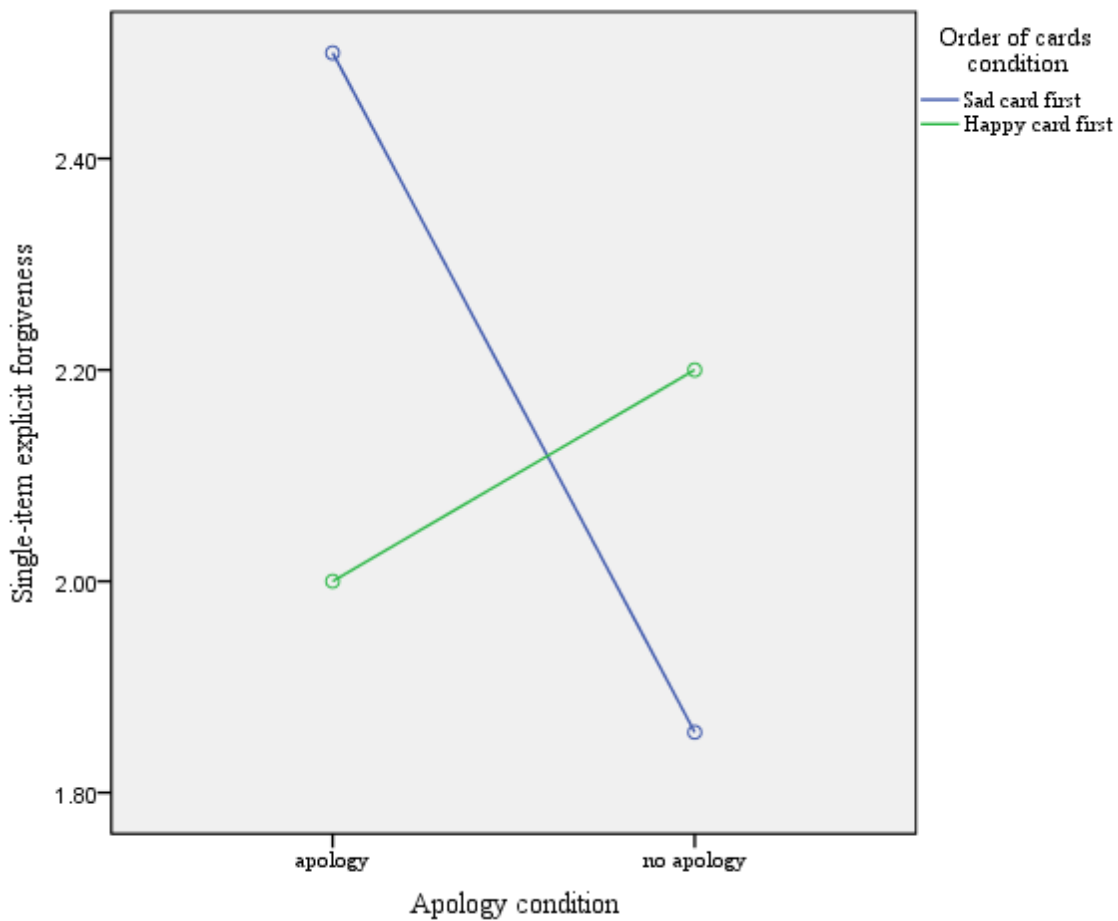
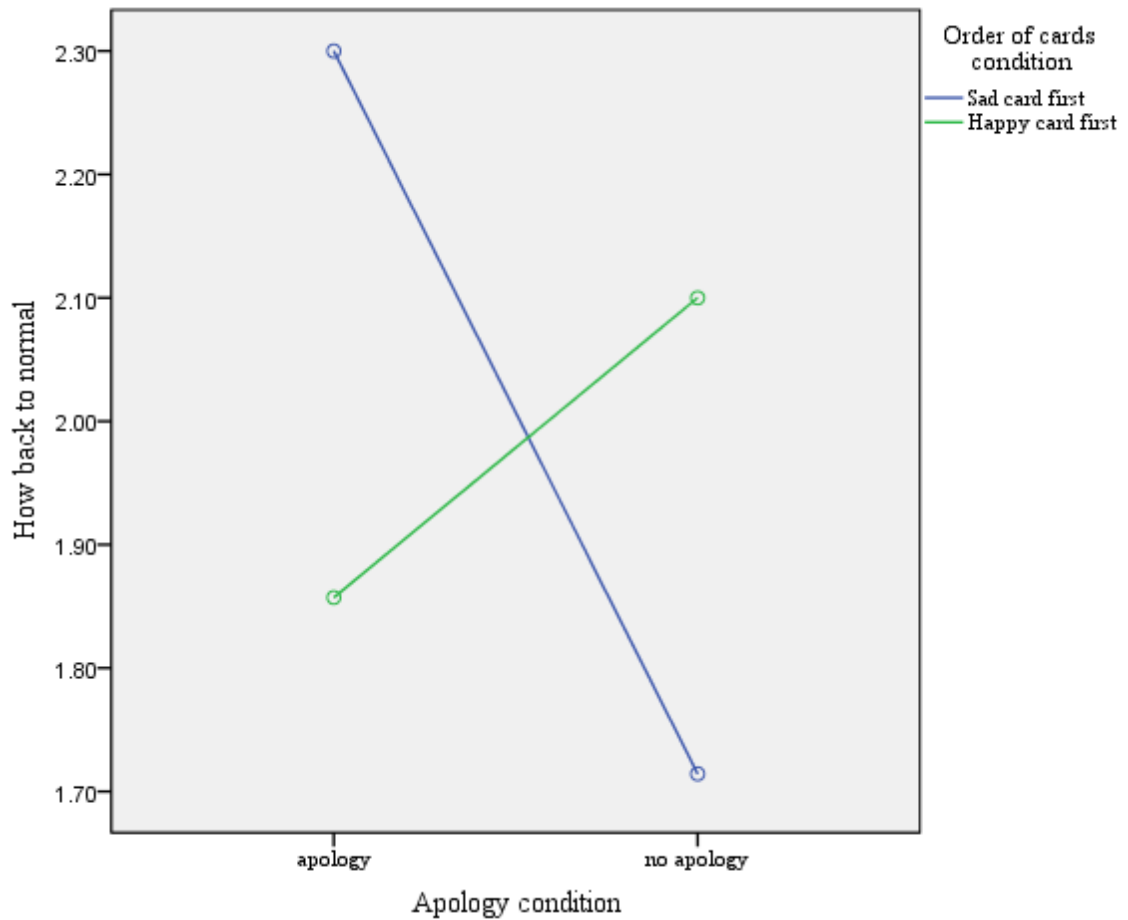


Figure 4.7

*Interaction between apology condition and order of cards condition in predicting the 'back to normal' proxy measure*



Simple effects analysis confirmed that significant differences existed between the apology and no apology condition when a sad card was presented first for both single-item explicit forgiveness and the back to normal measure, as presented in tables 4.7 and 4.8.

Table 4.7

*Simple effects analysis by apology and order of cards conditions for single-item explicit forgiveness*

	Apology <i>M (SD)</i>	No apology <i>M (SD)</i>	Simple effects <i>F</i> <i>df (1, 30)</i>
Sad card first <i>M (SD)</i>	2.50 (0.53)	1.86 (0.38)	5.70*
Happy card first <i>M (SD)</i>	2.00 (0.58)	2.20 (0.63)	0.52
Simple effects <i>F</i> <i>df (1, 30)</i>	0.07	0.21	

\* = Significant at the  $p < .05$  level

Table 4.8

*Simple effects analysis by apology and order of cards conditions for the 'back to normal' proxy measure*

	Apology <i>M (SD)</i>	No apology <i>M (SD)</i>	Simple effects <i>F</i> <i>df (1, 30)</i>
Sad card first <i>M (SD)</i>	2.30	1.71	.022*
Happy card first <i>M (SD)</i>	1.86	2.10	.325
Simple effects <i>F</i> <i>df (1, 30)</i>	.078	.123	

\* = Significant at the  $p < .05$  level

As for the Card Set scores, when the sad card was presented first, responses on the single-item explicit forgiveness measure and the 'back to normal' proxy measure were significantly higher (i.e. more forgiving) in the apology condition compared to the no

apology condition. When the happy card was presented first, no such significant difference was observed.

### ***Influence of background variables***

Further analysis was undertaken to assess the possible influence of severity on the prediction of Card Set scores and of the single-item explicit measure by apology. Although severity was not significantly correlated with Card Set scores, the direction of the association was negative. Moreover, a t-test suggested a significant difference in severity between apology conditions ( $t(32) = 2.23, p < .05, r = 0.37$ ), such that the transgression was regarded as more severe in the apology group ( $M = 2.24, SD = 0.44$ ) than in the no apology group ( $M = 1.88, SD = 0.49$ ).

However, according to Field (2009), variables that are significantly predicted by the experimental manipulation violate the assumptions of covariates in analysis of covariance, because variance predicted by the covariate is confounded with variance predicted by the experimental manipulation. Therefore, regression analysis was used to examine the possible impact of severity in interacting with apology on Card Set scores, as presented in table 4.9. However, the effect of the interaction between apology and severity was not found to be significant for either line scores or sort scores.

Table 4.9

*Regression analysis examining the interaction between apology condition and severity on Card Set line and sort scores*

Variable	B	SE B	$\beta$
Line scores			
Step 1			
Apology condition	11.36	15.37	.14
Severity (mean centred)	-13.84	15.96	-.17
Step 2			
Apology condition	11.13	15.60	.14
Severity (mean centred)	5.57	53.03	.07
Apology x severity interaction	-12.51	32.54	-.24
Sort scores			
Step 1			
Apology condition	2.50	3.81	.13
Severity (mean centred)	-1.76	3.96	-.09
Step 2			
Apology condition	2.41	3.85	.12
Severity (mean centred)	6.43	13.08	.31
Apology x severity interaction	-5.28	8.03	-.41

Note: For line scores  $R^2 = .03$  for Step 1,  $\Delta R^2 = .01$  for Step 2,  $p > .05$ .

For sort scores  $R^2 = .02$  for Step 1,  $\Delta R^2 = .01$  for Step 2,  $p > .05$ .

$p > .05$  for all coefficients.

### Discussion

Study 4 aimed to further examine the validity of the Card Set as a measure of forgiveness by examining the relationship of Card Set scores to other measures of forgiveness and judgments of remorse, and by examining prediction by apology and by the order of cards.

### **Internal consistency of the Card Set**

While the sample was too small for Principal Components Analysis, reliability analysis suggested that although reliability of both the line score and sort score was high, total item correlation of the ‘weird/confused’ card was low. Therefore, this study added to Study 3 in suggesting that the ‘weird/confused’ card may need to be eliminated from the Card Set, although further analysis with a larger sample, in particular Principal Components Analysis, would help to confirm this suggestion.

### **Correlation with other measures of forgiveness**

Validity of the Card Set as a measure of forgiveness was assessed first of all by the correlation with a single-item explicit measure of forgiveness, and with single-item proxy measures aiming to assess relationship and behavioural consequences that might be expected to follow forgiveness (judgements of how ‘back to normal’ the friendship would be and how much cake the hypothetical protagonist would be happy to share with their transgressor). Partial correlations between Card Set scores and single-item measures were all positive and significant. Thus, responses on the Card Set correlated as expected with other forgiveness measures, which suggested evidence of the Card Set’s concurrent validity. At the same time, correlations were not so high as to suggest that the Card Set was not measuring any additional variability. The Card Set therefore appeared to have incremental validity and to be a potentially useful additional measure in the multimodal measurement of children’s forgiveness. However, some qualification to this validity was suggested by the absence of relationships with remorse and prediction by apology, discussed next.

### **Prediction by apology and relationships with remorse**

Responses on the Card Set were not correlated with ratings of transgressor remorse, nor were they predicted by apology. Although correlation between Card Set scores and remorse were in expected directions and may have reached significance with a larger sample, the lack of effect of the apology condition was contrary to previous findings suggesting forgiveness is predicted by apology and/or remorse in child samples (Darby & Schlenker, 1982; Denham et al, 2005; Ohbuchi & Sato, 1994) and in adult samples (McCullough et al., 1998; Mullet, Riviere, & Sastre, 2007).

Results also contradicted findings that even young children report more positive feelings toward transgressors who apologise or feel remorse, whether they are reporting on the feelings of a hypothetical victim (Smith, Chen & Harris, 2010), their own feelings in a laboratory-contrived transgression (Smith & Harris, 2012), or their responses to a video-taped scenario (Vaish, Carpenter & Tomasello, 2011). Moreover, results were contrary to expectations based upon Study 1, in which participants emphasised the importance of apology and remorse when forgiving transgressors. Thus, the failure of the Card Set to be predicted by apology might be seen as evidence against its validity as a measure of forgiveness.

However, this pattern of findings was not unique to the Card Set. The single-item explicit forgiveness measure also was not significantly predicted by apology, nor was either of the proxy measures of forgiveness. (Similarly, partial correlations between single-item forgiveness measures and remorse were also insignificant, at similar levels to partial correlations between Card Set scores and remorse).

Thus responses on all measures contradicted expectations that children's forgiving responses would be predicted by apology. Therefore, rather than suggesting that the Card Set is not a valid measure of forgiveness, results suggested that the lack of prediction by



apology might be due to differences between this study and other studies that have examined the influence of apology on children's emotional and forgiving responses. Possible factors that may have contributed to this difference will be discussed next.

### ***Small or unrepresentative sample***

One possible explanation for the lack of prediction by apology and lack of relationship with remorse is that the sample for this study may have been too small for results to reach significance ( $N = 34$ ). As noted above, this explanation is particularly relevant to partial correlations between forgiveness measures and remorse, which approached moderate effect sizes but were still found not to be significant.

Meanwhile, sample size alone was unlikely to be the reason for the lack of significant difference between apology and no apology conditions, since effect sizes for differences between apology and no apology groups were very small. However, the small size and convenience nature of the sample (recruited from only two schools in one geographical location) may have meant that by chance it consisted of children who were not particularly responsive to apology when forgiving. Further study of responses on the Card Set in a larger sample recruited from a greater range of schools and locations may therefore be a useful first step in further examining the validity of the Card Set.

### ***Features of the Card Set***

Another possibility with regard to the lack of significant difference between apology conditions on responses on the Card Set is that it is a function of the Card Set being designed as a measure of emotional forgiveness. Other studies suggesting that primary school aged children forgive in response to apology have mainly used explicit measures asking children whether the victim would forgive or how much the transgressor

would or ought to be forgiven by the victim (e.g. Darby & Schlenker, 1982; Denham et al., 2005). Meanwhile, the Card Set was designed specifically to fill a potential gap in the variability measured by other forgiveness measures; thus, as a measure of emotional forgiveness, it may measure a different set of responses to single-item explicit measures.

It may therefore be the case that in previous studies, children have been found to be more forgiving in response to apology because single-item measures assess something other than emotional forgiveness; for example, the cognitive decision to forgive. Such an idea is supported by Study 1, in which children who were asked explicitly about ‘forgiving’ closely associated this concept with apology and tended to conceptualise ‘forgiving’ as a response to apology. It is therefore likely that children respond on explicit measures using the term ‘forgive’ according to a script or expectation that transgressors who apologise ought to be forgiven. In comparison, their latent emotional responses may not be as responsive to apology. Therefore, children’s responses on the Card Set, which measured latent emotional responses and behavioural motivations, were not predicted by apology.

Admittedly, children’s responses on the single-item measure in this study were also not predicted by apology. However, in this study children completed the Card Set measure before completing the single-item explicit measure. Therefore children would have considered their underlying emotional and behavioural responses directly before responding to the explicit measure, and may still have had these responses in mind when completing the explicit measure. Responses on the explicit measure therefore may have been affected by responses on the Card Set, such that when responses on the Card Set were not responsive to apology, responses on the single-item measure also were not responsive to apology. Further research therefore ought to counterbalance the order of presentation of explicit measures with the Card Set in order to assess this possibility. Moreover, response

options on the single-item measure were illustrated with upset, neutral and happy faces, thus may have assessed underlying emotional responses more than the single-item explicit measures used in other studies.

However, the explanation that emotional responses are not responsive to apology appears contradictory to the research suggesting that even young children understand the emotional functions of apology (Smith, Chen & Harris, 2010; Smith & Harris, 2012). According to this research, even young children (aged four years and up) understand that apology means that the offender feels bad, and that apology soothes the feelings of the victims, including their own feelings when they are the victim of a laboratory-contrived transgression (Smith & Harris, 2012). Further, children from five years of age report that victims feel better in response to a remorseful transgressor, and prefer a remorseful transgressor to an unremorseful transgressor (Vaish, Carpenter and Tomasello, 2011). Children's understandings of apology therefore can be argued to be more than script-based (e.g. Smith & Harris, 2012).

Nevertheless, there are important differences between the research cited above and the present study, with a particularly relevant difference being the age of the participants. While the research cited above was with young children from age four or five years the present sample was aged nine to 13 years. As such, the sample for this study may have had a greater ability, compared with younger children, to integrate more information in considering their emotional responses to the transgression.

The likelihood that older children's ability to integrate information may impact on their consideration of apology in predicting forgiveness is suggested by several studies. For example, compared with younger children, older children are more sensitive to the difference between an elaborate apology and a simple apology (Darby & Schlenker, 1982) and more sensitive to the difference between an apology and an excuse (Ohbuchi & Sato,

1994). Older children have also been found to acknowledge mixed feelings in response to transgressor apology, with an interaction between age and apology condition falling just short of significance (Smith, Chen and Harris, 2010). Therefore, children in the present study might be less responsive to transgressor apology than the younger children in the studies cited above because children in the present study had developed the ability to attribute mixed feelings or negative emotional responses to an apologetic transgressor, perhaps due to integrating more information than simply whether or not the transgressor either apologised or felt sorry.

### ***Features of the transgression***

If middle to upper primary children do integrate more information into their emotional and behavioural responses to transgression, then there are several contextual features of the transgression in Study 4 that may have been taken into account and therefore may have caused apology to be a less salient predictor of apology than expected.

As discussed in Chapter 2, intent and relationship closeness have been suggested to predict forgiveness in children (e.g. Darby & Schlneker, 1982; Denham et al., 2005) and adults (e.g. Boon & Sulsky, 1997; Girard & Mullet, 1997; McCullough et al., 1998). Study 1 also suggested that children considered such factors as intent and friendship closeness when deciding whether or not to forgive.

While intentionality of the transgression in Study 4 was not explicit, telling an embarrassing secret might be assumed to be intentional. Further, even though the transgressor was described as the protagonist's best friend, the transgression was a betrayal of confidence, and research suggests that trust and intimacy between friends becomes increasingly important in middle childhood (e.g. Denham et al., 2005). Thus, the transgressor being described as the protagonist's best friend may have made forgiveness

harder, rather than easier, because a best friend would be expected to keep promises and not betray confidences.

Overall then, a variety of features of the transgression may have been attended to by children in the middle to upper primary range in addition to apology; these features may have then caused apology to be less salient such that it did not predict participant's emotional forgiveness.

### **Order of cards**

A salient finding of Study 4 was that the order of presentation of cards appeared to moderate the effect of apology on the Card Set and on the single-item explicit measure. When a sad card was presented first, participants in the apology condition were significantly more forgiving than participants in the no apology condition. When a happy card was presented first, no significant difference was found between apology and no apology conditions. As such, Study 4 suggests that priming by the order of cards in the Card Set does occur, although not as suggested by Study 2 in which responses were all unforgiving when a sad card was presented first (apology was therefore expected to have more impact in the 'happy card first' condition in Study 4).

The issue of priming therefore needs further clarification, in part because priming of responses on the Card Set could be problematic for its validity, but also because priming effects may have further implications for research on children's forgiveness. It would thus be helpful to re-examine priming of Card Set responses by the order of cards with another sample, to ensure that priming effects were not specific to this sample and to clarify the nature of priming in further samples.

## **Limitations and directions for further study**

Altogether, the validity of the Card Set as a measure of children's forgiveness remains unclear, due to the lack of prediction by apology and the possibility of priming by the order of cards. Study 4 was limited in exploring these issues for several reasons.

First, the sample was small and was recruited from only two schools in one geographical location. Therefore, results may have been specific to this sample. Further, the small sample meant that potentially problematic cards identified in Study 3 could not be examined for their cohesion with the rest of the Card Set beyond reliability analysis in Study 4, as the sample was not large enough for a more comprehensive analysis such as Principal Components Analysis.

In addition, the possibility that children's responses on latent measures of emotional responding (as opposed to explicit measures) may not be predicted by apology remains conjecture, because Study 4 did not include any other latent measure of children's emotional forgiveness with which to compare responses on either the Card Set or the explicit measure. Moreover, the suggestion that Card Set responses may have influenced responses on the explicit measure could not be tested because the study did not counterbalance the presentation of the Card Set with that of the explicit measure.

Finally, Study 4 did not include any measure of the tendency to respond according to social expectation, which may have been useful for examining possible reasons for the differences between responses on the Card Set and the responses on the explicit measure.

Further study of the Card Set therefore needed to examine prediction of the Card Set by apology and the nature of priming of Card Set responses by the order of cards, with a larger sample and addressing the limitations described above. Such a study is described in Chapter 5.

## Chapter 5: Study 5

### Principal Components Analysis of the Children's Forgiveness Card Set and further comparison with existing forgiveness measures

#### **Rationale for the present study**

Previous chapters of this thesis have

- a) Established the importance of alternatives to single-item explicit measures of children's forgiveness, and the need for multimodal measurement of children's forgiveness (Study 1)
- b) Developed a set of illustrated cards based on children's own descriptions of forgiveness, with a view to creating a new measure of children's forgiveness, the Children's Forgiveness Card Set (Study 1b)
- c) Examined the interpretability of Card Set illustrations and trialled the use of the Card Set in response to a hypothetical scenario (Study 2)
- d) Re-examined the Card Set and the relevance of individual cards to 'forgiving' and 'not forgiving' from the point of view of another independent sample of children (Study 3), and
- e) Examined the validity of the Card Set with respect to relationships with a single item explicit measure of forgiveness and single-item 'proxy' measures of forgiving/accommodating behaviour, correlation with perceived transgressor remorse, and prediction by apology (Study 4).

However, the previous chapters identified several aspects of the Children's Forgiveness Card Set that remain unclear; namely, the structure of the Card Set and specifically the validity of individual cards previously identified as problematic

(weird/confused and ignoring cards), relationships with remorse and prediction by apology, priming of other measures by the presentation of the Card Set, and priming of the Card Set by the order of cards.

Therefore, this chapter describes Study 5, which was designed with the aim of examining these issues with a larger sample recruited from a greater range of schools. Specifically, Study 5 aimed to examine responses to apology, but with the addition of another latent measure with which to compare responses on the Card Set. Additionally, it sought to counterbalance presentation of other forgiveness measures with presentation of the Card Set, and to include measures of socially desirable responding. Finally, the study aimed to further examine the possibility of priming of Card Set responses and the structure of the Card Set.

### **Apology and remorse**

One important aim of Study 5 was to explain why the Card Set was not predicted by apology or correlated with remorse in Study 4, whereas other studies with both child and adult samples have found forgiveness judgments are predicted by apology and remorse, as discussed in Chapters 3 and 4. One possible explanation is that children have been socialized to learn that “forgiveness follows from apology” (e.g. Enright, Santos, & Al-Mabuk, 1989; Scobie & Scobie, 2000). Thus, a child who is told that their perpetrator is ‘sorry’ says that they forgive, as they are aware that this is the appropriate response.

However, such a script may not necessarily reflect children’s underlying *emotional* orientation toward the transgressor. As the Card Set was developed specifically to assess children’s underlying emotional and behavioural responses toward transgressors, and contains no explicit terms specifically to avoid the problem of assessing children’s overt



responses to apology, it makes sense that it would not be influenced by such a script or expectation.

### ***Differences between cognitive and emotional forgiveness***

Additionally, it may be the case that children's responsiveness to apology is characteristic of forgiving on a cognitive level, and less characteristic of forgiveness on an emotional or behavioural level. Perhaps single-item explicit measures of forgiveness assess not only the socially expected response to apology, but also the cognitive decision to forgive in response to an apology. In this case, it makes sense that children's forgiveness on a single-item explicit measure would be predicted by apology whereas their responses on the Card Set would not necessarily be predicted by apology.

### ***Introduction of a latent questionnaire measure***

If children are merely responding in a scripted way to the expectation that 'being sorry' is responded to with forgiveness, then another measure that assesses forgiveness as a latent construct and does not include the term 'forgive' ought also to show no difference between groups that are apologised to and groups that are not apologised to. Therefore, comparing responses on the Card Set to responses on a written or verbal latent questionnaire measure would examine whether the effect of apology in predicting children's forgiveness may be specific to explicit 'forgiveness' judgments and not latent measures. If both latent measures were not predicted by apology, this would suggest that the failure of the Card Set to be predicted by apology does not present a problem for its validity.

Likewise, inclusion of a latent questionnaire consisting of subscales measuring emotional, behavioural and cognitive aspects of forgiveness would help to examine the

possibility that cognitive aspects of forgiveness may be predicted by apology whereas emotional aspects of forgiveness may not be.

Inclusion of a latent questionnaire measure of forgiveness would also allow further testing of the concurrent and incremental validity of the Card Set with respect to existing measures of children's forgiveness.

### *Confounding factors of a latent questionnaire measure*

However, differences between the Card Set and a latent questionnaire measure might still cause children to be more responsive to apology on a latent questionnaire measure than on the Card Set. As discussed in Chapter 1, questionnaire formats may contribute to response biases such as socially desirable responding in child samples (Soto et al., 2008); particularly because giving accurate ratings of emotional responses may be a particularly difficult task for children (Chambers & Johnston, 2002). Children may therefore give the socially expected response to apology – that is, more forgiveness - on a verbal or written measure but not on the Card Set.

Thus, a questionnaire suitable for comparison with the Card Set would ideally consist of subscales measuring emotional, behavioural and cognitive aspects of forgiveness, and to be designed for preadolescent children in terms of both vocabulary and response format in order to minimise the effects of response biases as much as possible.

The Enright Forgiveness Inventory for Children (EFI-C, Enright, 2000) appears to be one such measure, as it is designed for ages 6-12 years, uses simple language likely to be familiar to children (e.g. happy, bad), and a simple four-point response scale. In addition the response scale is accompanied by a red circle/green circle visual aid to help children in understanding the available responses. Thus the EFI-C appears to be well designed for preadolescent children. Moreover, the EFI-C consists of three subscales

assessing cognitive, behavioural and emotional aspects of forgiveness. Thus, the EFI-C appeared an appropriate latent measure with which to compare the Card Set.

### *Testing for confounding effects of the EFI-C*

Regardless of the apparent appropriateness of the EFI-C, it is still possible that the questionnaire format will produce more socially desirable responses than the Card Set. Therefore, it will be important to test for relationships between the measures and socially desirable response bias.

However, it is possible that the EFI-C would still be more sensitive to apology when the Card Set was not, not only due to socially desirable response bias per se but perhaps also because, as argued in Chapter 1, questionnaire formats require cognitive abstraction and engagement that may be difficult for children. If it is the case that the Card Set did not require the same level of engagement, due to its pictorial format, then responses on the EFI-C might be more considered, and thus more responsive to apology, while responses on the Card Set might assess underlying emotional orientations which, as argued in Chapter 4, might not be predicted by apology.

Such a circumstance would be difficult to differentiate from the Card Set simply lacking validity in failing to be predicted by apology while the latent questionnaire might be predicted by apology. However, one way in which to indirectly assess such a possibility may be to examine interactions between apology condition and completion of either the Card Set before the EFI-C, or the EFI-C before the Card Set, as discussed in the next section.

### **Testing for order of measures effects: counterbalancing measures**

One possibility suggested by Study 4 was that prior completion of the Card Set was influencing responses on the single-item measure, such that children were responding to both measures in accordance with their underlying emotional responses and thus neither measure was predicted by apology.

Conceivably, if the EFI-C measures more considered responses while the Card Set measures underlying emotional responses, a similar effect could occur when the Card Set is presented prior to the EFI-C; that is, responses on the EFI-C might be influenced by prior completion of the Card Set. Although the EFI-C is a latent rather than explicit measure, it might still be expected to assess forgiveness on a more cognitive level than the Card Set, not only because it includes a subscale of forgiving thoughts but also because the questionnaire format requires cognitive consideration of emotional responses.

Further, the EFI-C asks children how they *do act* or *would act* while the instructions for the Card Set ask children to rate how they would feel or *feel like* acting. This wording was chosen specifically in an effort to assess children's underlying motivations rather than their socially expected responses (how children would act, particularly in a school setting, may necessarily be quite different to how they feel like acting toward a transgressor).

Thus, to some extent the EFI-C and the Card Set may measure different aspects of forgiveness, with the EFI-C measuring thoughts and overt behavioural responses in addition to emotions while the Card Set concentrates primarily on emotions and the behavioural motivations that these emotions may produce. Responding on the Card Set before the EFI-C might therefore cause the EFI-C not to be predicted by apology.

On the other hand, responding to the EFI-C or explicit item first might cause participants to become sensitised to cognitive forgiveness considerations, thus becoming

more sensitive to the effects of apology when responding on the Card Set.

Therefore, in Study 5 the presentation of the Card Set was counterbalanced with presentation of the EFI-C and explicit measure, such that any effect of the order of presentation of measures, and in particular, interaction effects with apology, could be examined.

### **Order of Cards Effects**

Additionally, Study 5 aimed to explore the effects of the order of presentation of cards in the Card Set on responses on the Card Set. Such effects were suggested by the results of Study 4, in which apology predicted responses on the Card Set when a sad card was presented first but not when a happy card was presented first. Therefore, further exploration of the Card Set's validity with respect to prediction by apology included further examination of the effect of the order of cards within the Card Set, on Card Set scores.

### **Structure of the Card Set**

One further issue that was unable to be fully explored in Study 4 was the structure of the Card Set. Study 3 suggested some concerns regarding the suitability of individual cards in measuring emotional forgiveness as a latent construct. In particular the 'weird/confused' card and the 'ignoring' card were suggested to be problematic, with some question also over the suitability of cards depicting positive emotions, which appeared not to be considered relevant to 'forgiveness' when not presented in the context of a transgression.

Although reliability analysis in Study 4 suggested high internal consistency of the Card Set overall, item total correlations for the 'weird/confused' card were low, again

suggesting that this card may be inappropriate for inclusion in a measure of children's emotional forgiveness and may need to be eliminated from the Card Set.

More generally, although the Card Set was designed to depict positive and negative emotions and behaviours, neither the existence of 'subsets' (e.g. forgiving/unforgiving or emotion/behaviour subsets) nor the overall cohesion of the Card Set in measuring one latent construct has been established, because previous studies in this thesis have been limited by small samples. Therefore, given that Study 5 sought to obtain a larger sample in order to better examine the validity of the Card Set, one further aim of Study 5 was to examine the structure of the Card Set through Principal Components Analysis, which would help to identify cards to be retained in or excluded from the measure.

### **Summary: Aims and hypotheses**

The above discussion has identified a range of aims for Study 5 with respect to establishing the structure, reliability and validity of the Card Set. Namely, study five aimed to

- A) Provide a principal components analysis of the card set, and
- B) test the following hypotheses;
  - 1) Card set scores will correlate with other measures of forgiveness, including
    - a. A single-item explicit measure of forgiveness
    - b. A multiple-item questionnaire measure of forgiveness
    - c. 'Proxy' forgiveness measures of 'how back to normal' the friendship would be and 'how much cake' would be shared'
  - 2) Card set scores will correlate with participants' ratings of transgressor remorse
  - 3) Scores on (a) the EFI-C and (b) the single-item explicit forgiveness measure will correlate with participants' judgments of transgressor remorse

- 4) Card Set scores will be predicted by apology condition, such that children in the apology condition will score higher (i.e. show more forgiving responses) on the Card Set than children in the no apology condition
- 5) Scores on the (a) single-item explicit forgiveness measure and (b) the EFI-C, including Feelings, Behaviours and Thoughts subscales, will be predicted by the apology condition, such that children in the apology condition will score higher (i.e. show more forgiving responses) on each of these measures than children in the no apology condition
- 6) Scores on (a) the single-item explicit measure and (b) the EFI-C will be more strongly correlated with a measure of socially desirable responding than scores on the Card Set
- 7) Scores on the Card Set will be predicted by an interaction between the apology condition and the order of presentation of forgiveness measures, such that participants who complete the EFI-C and single-item explicit measure before completing the Card Set will score more highly on the Card Set in the apology condition compared to their counterparts in the no apology condition (whereas there would be no such effect for participants who complete the Card Set before the other forgiveness measures).
- 8) Scores on (a) the single-item explicit measure and (b) the EFI-C will be predicted by an interaction between apology condition and the order of presentation of forgiveness measures, such that participants who complete these measures before completing the Card Set will score more highly in the apology condition compared to their counterparts in the no apology condition (whereas there would be no such effect for participants who complete the Card Set before the other forgiveness measures).

- 9) Scores on the Card Set will be predicted by an interaction between apology condition and the positive or negative valence of the first card presented in the Card Set.

## **Method**

### **Participants**

The sample consisted of 150 children (78 boys, 70 girls, 2 unspecified) and their class teachers, from eight public primary schools in metropolitan Adelaide, South Australia. Children's ages, measured in whole years, ranged from 8 to 13, with a mean age of 10.54 ( $SD = 1.345$ ) (13 children did not report age). Thus, the sample consisted mostly of children in the late childhood/preadolescent stage of development, with some young adolescents also included (Soto et al., 2008). Although demographic factors such as parental income were not assessed, schools involved in the study were from both higher and lower SES locations. Not all participants completed all items of all measures; thus  $N$  for measures ranged from 112 to 148.

### **Materials**

#### *Scenario*

The scenario for Study 5 was exactly the same as described for Study 4. Boys responded to the scenario featuring boy characters (Ben and Sam), and girls responded to the scenario featuring girl characters (Beth and Sophie). Scenarios were accompanied by illustrations as in Study 4.



### ***Response sheet A: background variables and manipulation checks***

Several items assessed children's understanding of the scenario and apology, namely (a) how realistic the scenario was (realism), (b) how bad the transgression was (severity), (c) whether or not the transgressor apologised and (d) how sorry the transgressor was (remorse). These items were accompanied by the same illustrated response scales as in Study 4 (see Appendix 5.1).

### ***Children's Forgiveness Card Set***

The Card Set for Study 5 consisted of the same 16 cards along with envelopes for responding as described in Study 4. Cards in Study 5 were ordered randomly, with either a positive or negative card placed on the top of the set. A small positive or negative sign on the bottom corner of the envelope indicated to the researcher whether the Card Set was placed in the envelope with a positive or negative card first. Participants were not informed of the meaning of the signs (most participants did not comment on them). Instructions for completing the Card Set task were the same as in Study 4, with the exception that children were instructed to imagine that it was the day after the transgression (*'imagine it is the day after what happened'*), while the length of time after what happened was not specified in previous studies.

.

### ***Enright Forgiveness Inventory for Children***

The EFI-C (Enright, 2000) is a 30 item questionnaire measure of interpersonal forgiveness designed for children aged six to twelve years. Three sub-scales of 10 items each (including five positive and five negative items) assess forgiveness in terms of feelings (e.g. 'I feel happy toward him/her'), behaviours (e.g. 'I am a friend to him/her') and thoughts (e.g. 'I think good thoughts about him/her'). Children respond to each item

on a four point scale (*1 = NO!*, *2 = a little bit no*, *3 = a little bit yes*, *4 = YES!*), with a visual aid consisting of a large red, small red, small green, and large green circle accompanying these response options. Internal consistency reliability ( $\alpha$ ) is typically reported in the mid-.90 range (Enright, 1993) and in the current sample was also high ( $\alpha = .90$ ).

#### *Pseudo-forgiveness measure*

In addition to the forgiveness scale, the EFI-C includes three items designed to measure pseudo-forgiveness; that is, the perception that the transgression was not hurtful in the first place (Enright & Fitzgibbons, 2000). An example item is ‘Were your feelings hurt?’ Pseudo-forgiveness items are responded to on the same four point scale as the EFI-C forgiveness items. Internal consistency reliability for the pseudo-forgiveness items in the current sample (Cronbach’s  $\alpha$ ) was .582.

#### *Single-item explicit measure*

Following the pseudo-forgiveness measure, the EFI-C also includes a single-item explicit measure of forgiveness, which was utilised as the single-item explicit measure for this study. Both the pseudo-forgiveness scale and the single-item explicit measure are responded to on the same scale as described for the forgiveness scale of the EFI-C.

#### *Presentation format*

Although the EFI-C is usually presented as an oral interview, proficient readers may take the inventory as a self-administered questionnaire (e.g. Flanagan et al, 2012). As the current sample was aged 8-13, the language used in the EFI-C was considered sufficiently simple for the sample to read proficiently (moreover the researcher was

available to help students if needed, see procedure). Thus, it was decided to present the EFI-C as a written measure, as this would provide practical and methodological advantages over an oral interview. Namely, children would be able to participate in groups, as required by ethical guidelines of the Department for Education and Child Development in South Australia (2012). In addition, individual interviews may contribute to socially desirable responding, as children might feel self-conscious informing the researcher of responses that they felt were ‘undesirable’, which may include unforgiving responses. Thus, the written format, which allowed greater anonymity, was chosen in order not to over-represent the amount of socially desirable responding on the EFI-C compared to the Card Set.

### ***Proxy forgiveness measures***

Children’s judgments of how ‘back to normal’ their friendship with the transgressor would be and how much cake they would be happy to share with their transgressor were presented on a separate sheet, with illustrated response options as in Study 4 (see Appendix 5.2).

### ***Measures of socially desirable responding***

Socially desirable responding was assessed using Short Form A of the Crandall Social Desirability Test for Children (CSDTC, Carifio, 1994; Crandall & Crandall, 1965). This 12-item measure is a forced choice true-false measure of a young person’s tendency to give socially desirable or acceptable responses (e.g. ‘true’ for ‘when I make a mistake, I always admit that I am wrong’). It has been found to be highly correlated with the original CSDTC ( $r = .89$ ,  $p < .05$ ), and to have acceptable internal consistency reliability ( $\alpha = .73$ )

and high test-retest reliability ( $r = .87$ ) (Carifio, 1994). In the current sample internal reliability consistency was acceptable ( $\alpha = .79$ ).

However, reports of socially desirable behaviours may not always be an accurate measure of socially desirable response bias. For example, in anxious children, perfectionistic reports may be characteristic of actual behaviour (Dadds, Perrin, & Yule, 1998). Because forgiveness is arguably a prosocial tendency and is related to agreeable personality traits (e.g. Ross et al., 2004), a similar confound might exist for forgiving; that is, more forgiving individuals might genuinely score more highly on measures listing socially desirable behaviours (e.g. being respectful to elders).

To address such a confound, Dadds and colleagues recommend asking children directly about the acceptability and social costs of the construct of interest, in this case, forgiving or not forgiving. Therefore, a further three items were generated to measure the expectation that children felt to forgive. These items asked children how important it is to forgive (*1 = not important, 2 = a bit important, 3 = really important*), whether it is OK sometimes not to forgive people (*1 = no, never OK, 2 = sometimes OK, 3 = always OK*), and what others would think of them if they decided not to forgive (*1 = they'd think I was bad, 2 = depends on the situation, 3 = they'd think it was fine*). The rating scale for each of these questions was accompanied by illustrations for each option (see Appendix 5.2). Scores for the second and third item were reversed and scores for all three items summed to produce a total score, with higher scores representing higher expectation to forgive. However, internal consistency reliability was poor ( $\alpha = .43$ ).

## **Procedure**

Ethical approval for the study was sought from the University of Adelaide School of Psychology and the Department for Education and Child Development in South

Australia. Participants were recruited for the study by approaching school principals for permission to run the study, then sending parental information and consent forms (Appendix 5.3) to parents/guardians via the school.

Children participated in groups at school in order to listen to the scenarios and instructions, but completed measures individually without communicating with each other about their responses. All participants in any one group heard either the apology or no apology scenario, and all participants in any one group either received the Card Set first or the EFI-C first. Envelopes with either a positive or negative card first were distributed in alternate order, such that approximately even amounts of children in any one group had a positive or negative card first in their set. At the beginning of each session, the researcher explained the anonymous, confidential and general nature of the study, which was described as aiming to find out about how children feel, think and act when things go wrong between friends. Forgiveness was not mentioned explicitly by the researcher at any stage during the session.

Next the researcher read out the scenario accompanied by illustrations. Children then completed the measures in the following order; (1) the sheet containing checks of the scenario and apology condition manipulation; (2) either the Card Set or EFI-C (depending on the order of measures condition for that group); (3) the remaining measure of either the Card Set or EFI-C; (4) the sheet containing proxy measures and expectations of forgiving items and (5) the CSDTC. The researcher read out the instructions for both the Card Set and the EFI-C and was available to help participants with reading questions or understanding instructions at any time. Each measure or sheet of items was distributed separately in succession; therefore children were not able to read measures ahead of time.

## Results

### Principal Components Analysis of Card Set scores

#### *Line scores*

Principal components analysis was first performed on line scores for the 16 cards in the Card Set. Oblique rotation (Direct Oblimin) was chosen as the method of rotation as it was considered likely components would be highly related given (a) the high level of correlation between items and (b) the theoretical likelihood that components of the Card Set (whether positive/negative or emotion/behaviour) would be correlated.

In a first analysis, the Kaiser-Meyer-Olkin measure indicated more than adequate sample size ( $KMO = .947$ ). The anti-image correlation matrix indicated that KMO statistics for individual cards were all above .9, and therefore well above the acceptable limit of .5 (Field, 2009), except for the 'weird/confused' card (Card 14) which had a KMO value of .473. The correlation matrix suggested moderate to high correlation among the cards, again except for Card 14. Bartlett's test of sphericity indicated that the overall level of correlation was acceptable for principle components analysis ( $\chi^2 (120) = 2112.985, p < .01$ ).

Two components in this initial analysis had eigenvalues greater than Kaiser's criterion of 1, and explained 71.94% of variance. However, factor loadings after rotation indicated that these components consisted of all cards apart from the 'weird/confused' card loading highly on the first component, and only 'weird/confused' loading highly on the other component. Thus, this analysis confirmed the exclusion of the 'weird/confused' card from the Card Set.

Principal components analysis was re-examined without Card 14, again using oblique rotation (Direct Oblimin). As expected, the Kaiser-Meyer-Olkin measure indicated more than adequate sample size ( $KMO = .952$ ), and KMO values for individual

cards were all above .90. Bartlett's test of sphericity indicated that correlations between cards were sufficiently large for principal components analysis ( $\chi^2 (105) = 2089.82, p < .01$ ).

The analysis again suggested two components with eigenvalues greater than Kaiser's criterion of 1 which together explained 75.64 % of variance. Kaiser's criterion was used to judge the number of components, because the sample size was smaller than 200 and the scree plot may therefore not be an appropriate indication of the number of components to retain (Field, 2009). Examination of non-redundant residuals showed 29 (27%) non-redundant residuals had an absolute value greater than 0.05, indicating a good model fit.

Examination of the pattern matrix (Table 5.3) indicated that all eight positively valenced cards and the 'sad' card (Card 1) loaded highly on the first component. Therefore, this component was interpreted as representing a positive orientation (all cards were scored such that a higher score represented a more positive response, therefore positive factor loadings for the sad card represent an absence of sadness). All six remaining negatively valenced cards loaded most highly on the second component. As these cards did not include the weird/confused or sad cards, but did include hatred, anger and the four cards portraying negative behaviours, this component was interpreted as representing hostility.

Only one card, the anger card, loaded above the .4 level on both components; that is, the anger card loaded on both the hostility component and the positive component. Overall, the two components were highly correlated ( $r = .757$ ), confirming the choice of an oblique rotation. The pattern and structure matrix for this analysis are presented in tables 5.1 and 5.2.

Table 5.1

*Pattern matrix for second principal components analysis of Card Set line scores*

Card number	Card description	Component 1	Component 2
16	Happy	<b>.984</b>	-.126
4	Joyful/free	<b>.979</b>	-.097
7	Loving	<b>.919</b>	-.041
12	All OK/thumbs up	<b>.873</b>	.067
1	Sad	<b>.839</b>	.007
15	Invite to play	<b>.748</b>	.105
2	Playing/hanging out	<b>.727</b>	.176
10	Helping	<b>.682</b>	.163
6	Saying hi	<b>.664</b>	.268
8	Not talking/listening	-.088	<b>.934</b>
13	'Get away from me'	.006	<b>.886</b>
9	Hate	.103	<b>.830</b>
11	Ignoring	.014	<b>.751</b>
3	Fighting/arguing	.230	<b>.695</b>
5	Anger	<b>.425</b>	<b>.497</b>



Table 5.2

*Structure matrix for second principal components analysis of Card Set line scores*

Card number	Card description	Component one	Component two
12	All OK/thumbs up	.924	.729
4	Joyful/free	.905	.644
16	Happy	.888	.619
7	Loving	.888	.655
6	Saying hi	.867	.771
2	Playing/hanging out	.860	.726
1	Sad	.844	.642
15	Invite to play	.828	.672
10	Helping	.805	.679
9	Hate	.732	.909
13	'Get away from me'	.676	.890
3	Fighting/arguing	.756	.869
8	No talking/listening	.619	.867
5	Anger	.801	.819
11	Ignoring	.582	.761

### ***Sort scores***

Principal components analysis utilising oblique rotation (Direct Oblimin) was then conducted on the sort scores, first including all 16 cards. AS for line scores, analysis indicated adequate sample size and correlation between items ( $KMO = .953$ , Bartlett's test of sphericity  $\chi^2 (120) = 1910.185, p < .01$ ) and two components were extracted; however, these consisted of one component on which all cards apart from the 'weird/confused' card (Card 14) had factor loadings above .4, and one component on which the 'weird/confused'

card alone had a factor loading above .4. Therefore, Card 14 was eliminated and principal components analysis was repeated.

In the second analysis, again using oblique rotation, the Kaiser-Meyer-Olkin measure suggested more than adequate sample size ( $KMO = .955$ ) and KMO values for all individual cards were above .9. Bartlett's test of Sphericity indicated a sufficient amount of correlation between cards for principal components analysis ( $\chi^2(105) = 1897.80, p < .01$ ). However, principal components analysis indicated only one component according to Kaiser's criterion, with the scree plot indicating similarly. This component explained 65.264% of variance in the sort scores. Examination of residuals indicated 41 (39%) of non-redundant residuals had an absolute value greater than .05, indicating an acceptable fit according to Field's (2009) criterion value of 50%. Because only one component was extracted, rotation was not performed. The component matrix is presented in table 5.3.

Table 5.3

*Component matrix for second principal components analysis of the Card Set sort score*

Card number	Card description	Component one
12	All OK/thumbs up	.885
6	Saying hi	.877
2	Playing/hanging out	.863
16	Happy	.859
5	Anger	.846
7	Loving	.827
3	Fighting/arguing	.816
4	Joyful/free	.809
13	'Get away from me'	.794
15	Invite to play	.773
1	Sad	.761
11	Ignoring	.759
9	Hate	.746
8	Not talking/listening	.741
10	Helping	.738

### **Reliability of the Card Set**

Internal consistency reliability of the total, positivity and hostility line scores and the total sort score were examined using Cronbach's alpha. Reliability was high for each score, as shown in table 5.4.

Table 5.4

*Internal consistency reliability of Card Set scores, Study 5*

Card Set Score	$\alpha$	Number of items (cards)
Total line score	.968	15
Positivity subscore	.957	9
Hostility subscore	.931	6
Total sort score	.962	15

Positivity and hostility scores were highly correlated with each other ( $r = .83, p < .01$ ) and with the total line score ( $r = .97, p < .01$ ;  $r = .94, p < .01$ ). Therefore, because positivity and hostility subscores were not evident in the principal components analysis of the sort score, analyses of positivity and hostility subscores are not reported in examining further hypotheses (these subscores were, however, found to be predicted similarly to the total Card Set scores).

**Hypotheses 1- 3 and Hypothesis 6: Relationships between Card Set scores, other forgiveness measures, remorse, and socially desirable responding**

As with Study 4, validity of the Card Set was Hypothesis 1, 2, 3 and 6 were examined by means of partial correlation analysis, controlling for apology, order of measures and order of cards conditions. Additionally, partial correlations were examined to identify potential covariates. Partial correlations between all variables are presented in table 5.5.<sup>2</sup>

<sup>2</sup> Bivariate correlations (Pearson's  $r$ ) between all variables in table 5.5 were also calculated but the pattern of correlation was similar: see Appendix 5.4.

Table 5.5

*Partial correlation between Card Set scores, other forgiveness measures, remorse, social desirability, and potential covariates, Study 5*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Line score															
2. Sort score	<b>.92**</b>														
3. EFI-C total	<b>.52**</b>	<b>.47**</b>													
4. EFI-C feelings	<b>.43**</b>	<b>.39**</b>	<b>.67**</b>												
5. EFI-C Behaviours	<b>.43**</b>	<b>.38**</b>	<b>.89**</b>	<b>.43**</b>											
6. EFI-C thoughts	<b>.41**</b>	<b>.37**</b>	<b>.83**</b>	<b>.29**</b>	<b>.67**</b>										
7. Explicit item	<b>.41**</b>	<b>.31**</b>	<b>.49**</b>	<b>.32**</b>	<b>.44**</b>	<b>.50**</b>									
8. How back to normal	<b>.33**</b>	<b>.33**</b>	<b>.36**</b>	<b>.19*</b>	<b>.33**</b>	<b>.40**</b>	<b>.28**</b>								
9. How much cake	.12	.10	<b>.29**</b>	.01	<b>.26**</b>	<b>.39**</b>	<b>.28**</b>	<b>.22**</b>							
10. Remorse	.12	.09	<b>.18*</b>	.14	<b>.19*</b>	<b>.20*</b>	<b>.27**</b>	.12	-.01						
11. Expectations of forgiveness	.16	.09	.14	-.10	<b>.25**</b>	<b>.19*</b>	<b>.22**</b>	.16	<b>.21*</b>	<b>.20*</b>					
12. Social desirability	.17	.10	.05	.12	.01	.05	.00	.15	-.11	<b>.21*</b>	.12				
13. Age	<b>-.20*</b>	-.15	-.09	-.17	-.02	.01	.05	.01	.08	<b>-.19*</b>	-.11	<b>-.23*</b>			
14. Realism	-.01	-.05	-.05	-.04	-.05	-.01	.00	-.03	.16	-.07	.15	-.03	<b>.20*</b>		
15. Severity	<b>-.30**</b>	<b>-.23**</b>	<b>-.26**</b>	<b>-.35**</b>	-.14	-.14	-.15	-.13	-.04	-.04	.11	.03	.11	.06	
16. Pseudo-forgiveness	<b>.37**</b>	<b>.30**</b>	<b>.30**</b>	<b>.37**</b>	.12	<b>.26**</b>	.14	.15	-.01	-.05	-.08	.01	-.14	-.09	<b>-.40**</b>

Bold face type indicates a significant correlation.

\*  $p < .05$ , \*\*  $p < .01$ .

As can be seen, Card Set line and sort scores correlated highly with each other. Correlation between the EFI-C total score and EFI-C subscales was also examined to determine the degree to which EFI-C subscales might be expected to be predicted differently to the total EFI-C score. Although correlations between the overall EFI-C and subscales were high, the correlation between the feelings subscale and other EFI-C scales was notably lower; in particular, the feelings and thoughts subscales correlated only weakly. Therefore, subsequent analyses comparing the Card Set with the EFI-C included analysis of EFI-C subscales.

***Hypothesis 1: Correlation between the Card Set and other forgiveness measures***

Card Set line and sort scores correlated positively with EFI-C total scores and all EFI-C subscales, the single-item forgiveness measure and participant's judgments of how 'back to normal' the friendship would be after the transgression, all at moderate levels. However, neither of the Card Set scores correlated with how much cake the protagonist was judged to be willing to share with the transgressor. Therefore Hypothesis 1, that Card set scores would correlate with other measures of forgiveness, was upheld with respect to the single-item explicit measure, the EFI-C and the proxy measure of how 'back to normal' children judged the friendship would be, but not with respect to children's judgments of how much cake would be shared.

As a comparison, correlation between EFI-C scores and other forgiveness measures was also examined. The EFI-C correlated positively with the single-item measure and 'back to normal' measure at moderate levels, similarly to the Card Set. However, the total EFI-C score and Behaviour subscale were also weakly positively correlated with the 'cake-sharing' item, as was the single-item explicit forgiveness measure and the 'back to normal' measure, and the EFI-C Thoughts subscale correlated positively with the 'cake-sharing'

item at moderate levels. The EFI-C Feelings subscale, however, did not significantly correlate with the cake-sharing item.

Thus, the pattern of correlation found for the Card Set with other forgiveness measures was similar to that found for the EFI-C, but particularly to that found for the EFI-C 'feelings' subscale.

***Hypothesis 2: Correlation between Card Set scores and remorse***

Neither Card Set score significantly correlated with ratings of transgressor remorse. Thus, Hypothesis 2, that Card Set scores would correlate with participants' judgments of transgressor remorse, was not supported.

***Hypothesis 3: Correlation between the EFI-C and remorse and the explicit measure and remorse***

Total EFI-C scores correlated positively but weakly with remorse, with the exception of the Feelings subscale which did not correlate significantly with remorse. The single-item explicit measure was also weakly positively correlated with ratings of remorse. Thus Hypothesis 3, that scores on (a) the EFI-C and (b) the single-item explicit forgiveness measure would correlate with participants' judgments of transgressor remorse, was supported for the EFI-C with the exception of the Feelings subscale, and was supported for the single-item measure.

***Hypothesis 6: Relationships between forgiveness measures and socially desirable responding***

None of the Card Set scores, EFI-C scores or single-item measure correlated with the CSDTC. However, the single-item explicit measure and EFI-C Behaviours and

Thoughts sub-scales correlated positively with the Expectations of Forgiveness measure at weak levels, whereas Card Set scores and the EFI-C Feelings subscale and EFI-C total scores did not significantly correlate with the Expectations of Forgiveness measure. Thus, Hypothesis 6, that scores on the single-item measure and the EFI-C would be more strongly correlated with socially desirable responding than Card Set scores, was not supported with respect to a general measure of socially desirable responding, the CSDTC. However it was partially supported with respect to more specific judgments of the desirability of forgiving measured by the Expectations of Forgiveness measure, as scores on the single-item explicit measure and the EFI-C Thoughts and Behaviours subscales were significantly correlated with Expectations of Forgiveness whereas the Card Set scores were not.

### **Prediction of the Card Set by apology, order of measures and order of cards condition**

#### ***Manipulation checks***

Frequency analysis of the item asking whether the transgressor apologised confirmed that 95.7% of participants in the apology condition responded 'yes' and therefore understood that the transgressor had apologised, whereas 94.9% of participants in the no apology condition responded 'no' and understood that the transgressor had not apologised. Thus, only a very small proportion of participants appeared not to understand whether or not the transgressor apologised; moreover these participants' responses may have been due simply to not understanding the word 'apologise'.

In addition, a t-test suggested that the transgressor was judged to be significantly more sorry in the apology condition than in the no apology condition ( $t(145) = 13.22, p <$



.01,  $r = 0.74$ ). Thus, the apology manipulation was effective not only in conveying that the transgressor had apologised, but also in conveying the transgressor's greater remorse.

### ***Descriptive statistics***

Means and standard deviations for all variables in each experimental condition are reported in table 5.6.

Table 5.6

*Means (and standard deviations) of Study 5 variables by apology condition, order of measures condition and order of cards condition*

<b>Variable</b>	<b>Apology</b>	<b>No apology</b>	<b>Card Set first</b>	<b>EFI-C first</b>	<b>Negative card first</b>	<b>Positive card first</b>	<b>Total</b>
Line score	69.41 (43.10)	76.96 (50.52)	79.65 (46.49)	65.06 (46.30)	66.43 (46.52)	79.95 (46.44)	73.04 (46.80)
Sort score	-2.08 (11.13)	-0.07 (12.83)	0.19 (12.24)	-2.70 (11.54)	-3.11 (11.60)	0.94 (12.08)	-1.12 (11.97)
EFI-C total	69.65 (14.04)	66.90 (15.63)	67.13 (15.81)	69.93 (13.43)	67.17 (14.87)	69.67 (14.70)	68.41 (14.78)
EFI-C feelings	19.76 (5.17)	19.07 (5.49)	19.64 (5.60)	19.23 (4.97)	19.21 (5.56)	19.68 (5.08)	19.45 (5.31)
EFI-C Behaviours	25.50 (6.32)	25.19 (6.74)	25.07 (6.70)	25.68 (6.29)	24.81 (6.37)	25.89 (6.63)	25.35 (6.50)
EFI-C thoughts	24.32 (6.43)	24.05 (6.83)	23.39 (6.89)	25.12 (6.17)	23.53 (6.19)	24.88 (6.98)	24.19 (6.60)
Explicit item	2.67 (0.98)	2.19 (1.12)	2.36 (1.06)	2.54 (1.08)	2.46 (1.06)	2.42 (1.08)	2.44 (1.07)
How back to normal	1.91 (0.54)	1.76 (0.50)	1.86 (0.48)	1.82 (0.57)	1.77 (0.51)	1.92 (0.53)	1.84 (0.52)
How much cake	1.70 (1.03)	1.44 (1.00)	1.64 (1.07)	1.51 (0.97)	1.58 (1.04)	1.58 (1.01)	1.58 (1.02)
Remorse	2.73 (0.47)	1.49 (0.66)	2.14 (0.81)	2.16 (0.87)	2.15 (0.84)	2.15 (0.84)	2.15 (0.84)
Expectations of forgiveness	6.95 (1.14)	6.93 (1.11)	7.08 (1.18)	6.78 (1.03)	7.01 (1.20)	6.86 (1.04)	6.94 (3.11)
Social desirability	4.49 (3.03)	5.91 (3.07)	4.94 (3.21)	5.46 (2.98)	5.40 (3.03)	4.93 (3.20)	5.16 (3.11)
Realism	2.58 (0.57)	2.49 (0.56)	2.45 (0.59)	2.63 (0.52)	2.50 (0.60)	2.56 (0.53)	2.53 (0.56)
Severity	2.33 (0.50)	2.39 (0.57)	2.33 (0.55)	2.40 (0.52)	2.40 (0.52)	2.32 (0.55)	2.36 (0.54)
Pseudo-forgiveness	4.39 (1.66)	5.30 (2.12)	4.83 (1.95)	4.82 (1.95)	4.64 (1.77)	5.00 (2.10)	4.82 (1.94)

### ***Examining assumptions of dependent variables***

The degree to which Card Set scores, EFI-C scores and scores on the single-item explicit forgiveness measure each met the assumptions of dependent variables for analysis of variance was investigated. Normality of distributions of these measures in each condition was checked by examination of histograms, skew and kurtosis statistics, and the Kolmogorov-Smirnov test. Levene's test was used to assess homogeneity of variance between groups for the dependent variables across each condition.

Overall, the assumption of normally distributed data was not met by Card Set scores or the single-item measure. While skew was not problematic, kurtosis caused significant deviations from normal distributions. Meanwhile, the assumption of homogeneity of variance was met across order of measures and order of cards conditions by all dependent variables, but was not met by the Card Set scores or the single-item measure across the apology condition.

These violations of assumptions raised the question of whether either data transformation or non-parametric tests should be carried out in order to examine differences between means across conditions. However, transformations as described by Field (2009) generally address the problem of skew and/or non-homogeneity of variance but not the problem of kurtosis. Transformation was therefore considered inappropriate for the data, as it would not address the main problem of kurtosis. Moreover, while non-parametric alternatives could be used to examine main effects of each condition, no such non-parametric alternative exists for examining interaction effects between conditions.

However, Field (2009) describes analysis of variance as relatively robust to violations of normality and homogeneity of variance assumptions *provided* cell sizes are equal. Cell sizes were relatively equal across apology condition (71/66), and order of card set condition (67/70), although less so for the order of measures condition (75/62);

individual cell sizes in interaction ranged from 15 to 20 participants. In light of the limitations of transformation and non-parametric tests, analysis of variance was considered the best option for analysis.

Analysis of variance by apology, order of measures and order of cards conditions for Card Set scores, the EFI-C and EFI-C subscales, and single-item explicit forgiveness is presented in table 5.7

Table 5.7

*Summary of analyses of variance for apology, order of measures and order of cards conditions on Card Set scores, EFI-C scores, and single-item explicit forgiveness*

Source	<i>df</i>	<i>F</i>	<i>Partial η<sup>2</sup></i>	<i>p</i>
Card Set line scores				
Apology	1	.963	.007	.328
Order of measures	1	3.598	.027	.060
Order of cards	1	2.859	.022	.093
Apology X Order of measures	1	.260	.002	.611
Apology X Order of Cards	1	.127	.001	.722
Order of measures X Order of Cards	1	.528	.004	.469
Apology X Order of Measures X Order of Cards	1	1.996	.015	.160
Error	129			
Card Set sort scores				
Apology	1	1.28	.009	.260
Order of measures	1	2.54	.018	.114
Order of cards	1	4.50	.032	.036
Apology X Order of measures	1	0.41	.003	.526
Apology X Order of Cards	1	0.28	.002	.598
Order of measures X Order of Cards	1	0.38	.003	.541
Apology X Order of Measures X Order of Cards	1	1.83	.013	.178
Error	137			
EFI-C total score				
Apology	1	1.45	.012	.231
Order of measures	1	0.710	.006	.401
Order of cards	1	0.721	.006	.398
Apology x Order of measures	1	5.168	.041	.025
Apology x Order of Cards	1	1.063	.009	.305
Order of measures x Order of Cards	1	0.184	.002	.669
Apology x Order of Measures x Order of Cards	1	1.291	.011	.258
Error	121			

Source	<i>df</i>	<i>F</i>	<i>Partial η<sup>2</sup></i>	<i>p</i>
EFI-C Feelings				
Apology	1	0.711	.006	.401
Order of measures	1	0.373	.003	.542
Order of cards	1	0.217	.002	.642
Apology x Order of measures	1	1.816	.014	.180
Apology x Order of Cards	1	0.423	.003	.516
Order of measures x Order of Cards	1	0.259	.002	.612
Apology x Order of Measures x Order of Cards	1	0.955	.007	.330
Error	128			
EFI-C Behaviours				
Apology	1	0.190	.001	.664
Order of measures	1	0.215	.002	.644
Order of cards	1	1.121	.008	.292
Apology x Order of measures	1	3.576	.025	.061
Apology x Order of Cards	1	1.118	.008	.292
Order of measures x Order of Cards	1	0.025	.000	.874
Apology x Order of Measures x Order of Cards	1	2.357	.017	.127
Error	137			
EFI-C Thoughts				
Apology	1	0.118	.001	.732
Order of measures	1	2.041	.015	.155
Order of cards	1	1.292	.010	.258
Apology x Order of measures	1	4.958	.036	.028
Apology x Order of Cards	1	1.196	.009	.276
Order of measures x Order of Cards	1	0.009	.000	.925
Apology x Order of Measures x Order of Cards	1	0.911	.007	.342
Error	133			

Source	<i>df</i>	<i>F</i>	<i>Partial η<sup>2</sup></i>	<i>p</i>
Single-item explicit forgiveness				
Apology	1	8.311	.056	.005
Order of measures	1	0.880	.006	.350
Order of cards	1	0.098	.001	.755
Apology x Order of measures	1	1.713	.012	.193
Apology x Order of Cards	1	0.807	.006	.370
Order of measures x Order of Cards	1	0.090	.001	.764
Apology x Order of Measures x Order of Cards	1	1.048	.007	.308
Error	139			

***Hypothesis 4: Prediction of Card Set scores by apology***

Analysis of variance on Card Set scores indicated no main effects for apology condition on Card Set line or sort scores. Thus Hypothesis 4, that scores on the Card Set would be predicted by apology, was not supported.

***Hypothesis 5: Prediction of EFI-C scores and explicit forgiveness judgments by apology***

Apology condition had no main effect on the total EFI-C score, nor on EFI-C subscales. However, apology did have an effect on the single-item forgiveness measure, such that forgiveness was higher in the apology condition than in the no apology condition. Thus Hypothesis 5, that scores on the single-item measure and the EFI-C would be predicted by apology condition, was partially supported.

***Hypothesis 7: Prediction of Card Set scores by the interaction between apology and the order of measures***

Apology was hypothesised to interact with the order of measures condition such that if the EFI-C was presented first, children would be more forgiving on the Card Set in

the apology condition than in the no apology condition. However, the order of measures had no significant main or interaction effect on any Card Set scores. Therefore, Hypothesis 7 was not supported.

***Hypothesis 8: Prediction of EFI-C scores and single-item explicit forgiveness judgments by interaction between apology and order of measures***

Hypothesis 8 proposed that scores on the single-item explicit measure and the EFI-C would be predicted by an interaction between apology condition and the order of presentation of forgiveness measures such that when these measures were presented first, participants would score more highly in the apology condition compared to their counterparts in the no apology condition. The interaction between apology condition and the order of presentation of measures was found to have a significant effect on the EFI-C total score and EFI-C Thoughts subscale, as well as a near-significant effect on the EFI-C Behaviours subscale. However, there was no such significant or near-significant interaction between apology and order of measures conditions on the EFI-C Feelings subscale, nor on the single-item explicit forgiveness measure. Interaction effects on the EFI-C total score and EFI-C thoughts subscale are illustrated in figures 5.1 and 5.2, respectively.



Figure 5.1

*Effect of the apology x order of measures interaction on the EFI-C total score*

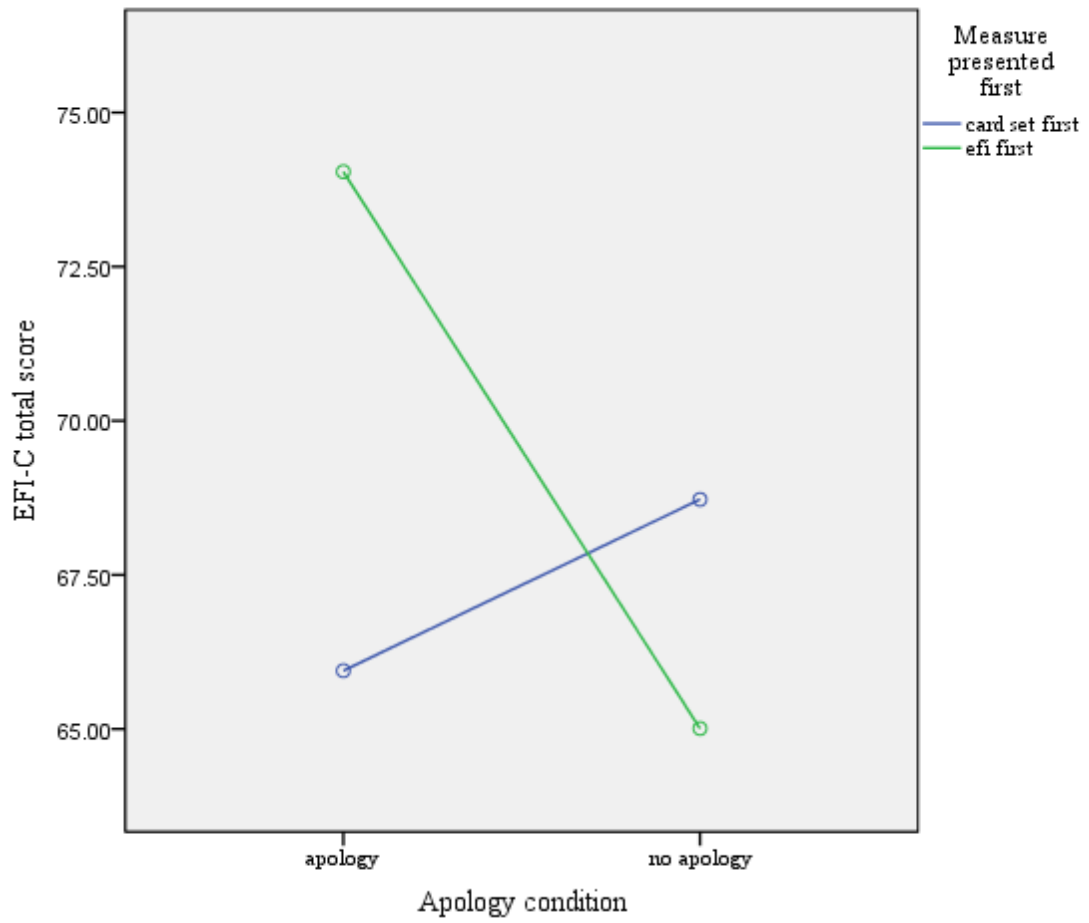
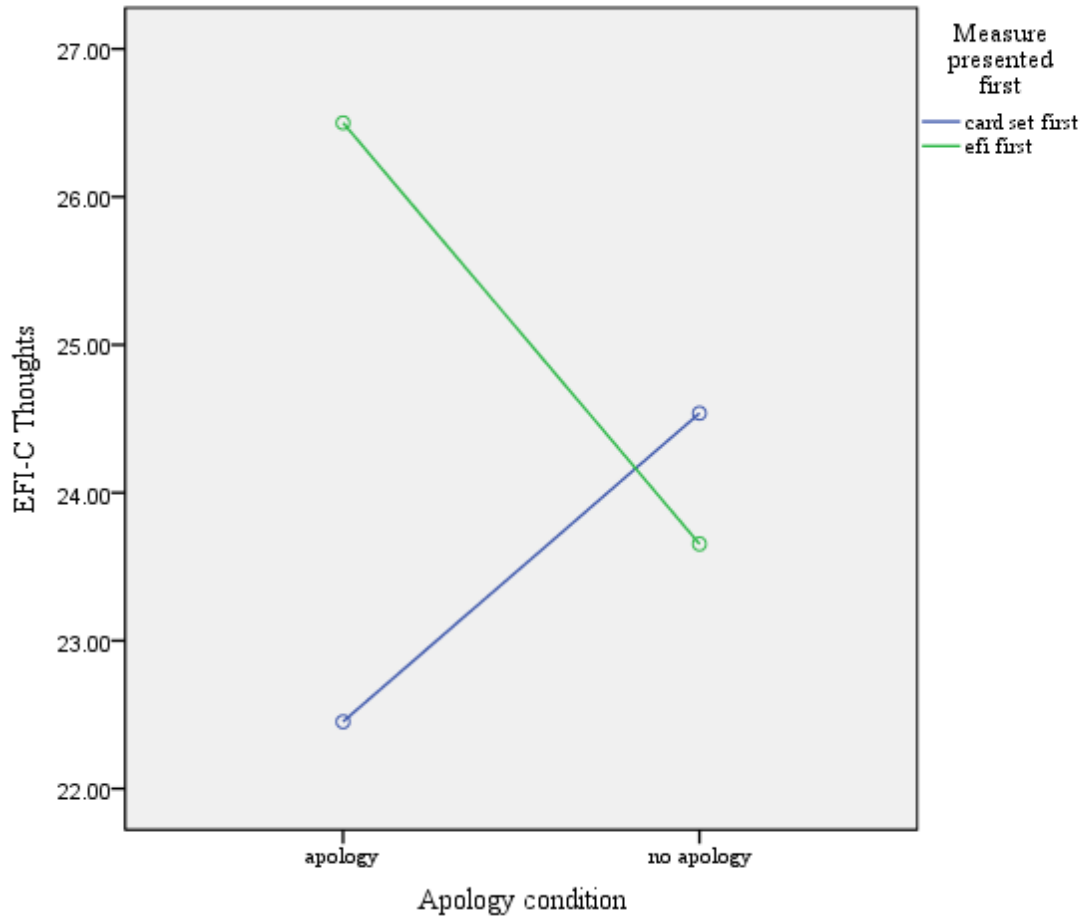


Figure 5.2

*Effect of the apology X order of measures interaction on the EFI-C Thoughts subscale*



Simple effects analysis for the interaction is presented for the EFI-C total score in table 5.8

and for the EFI-C Thoughts subscale in table 5.9.

Table 5.8

*Simple effects analysis by apology and order of measures conditions for EFI-C total score*

	Apology	No apology	Simple effects $F$
Card Set first	65.97 (14.99)	68.58 (16.93)	0.56
EFI-C first	74.13 (11.49)	64.96 (14.06)	5.83*
Simple effects $F$ $df(1, )$	5.54*	0.90	

\* Significant at the  $p < .05$  level

Table 5.9

*Simple effects analysis by apology and order of measures conditions for EFI-C Thoughts score*

	Apology	No apology	Simple effects $F$
Card Set first	22.46 (6.31)	24.49 (7.47)	1.83
EFI-C first	26.56 (5.92)	23.55 (6.13)	3.49
Simple effects $F$ $df(1, )$	7.40**	0.34	

\*\* Significant at the  $p < .01$  level

As can be seen, simple effects analysis of EFI-C total scores suggested that when the EFI-C was completed before the Card Set, scores on the EFI-C were significantly higher when the transgressor apologised than when the transgressor did not apologise; moreover, when the transgressor apologised, scores on the EFI-C were significantly higher when EFI-C was completed first compared to when the Card Set was completed first.

Meanwhile, simple effects analysis of the EFI-C Thoughts subscale suggested that the effect of apology was not significant regardless of which measure was completed first, although means were in the expected direction (i.e. more forgiving in the apology

condition) when the EFI-C was presented first. However, in the apology condition, there was a significant difference between the order of measures groups, such that scores were significantly higher when the EFI-C was presented first compared to when the Card Set was presented first.

Hypothesis 8 was therefore partially supported. While the single-item measure and EFI-C Feelings subscale were not predicted by interaction effects, the EFI-C total score and the EFI-C thoughts subscale were predicted by the interaction between the apology condition and order of measures condition, and the interaction approached significance for the Behaviours subscale. Overall, the combination of an apology and receiving the EFI-C first could be seen to lead to more forgiving responses on both the EFI-C total score and the EFI-C Thoughts subscale.

***Hypothesis 9: Prediction of Card Set scores by interaction between apology and order of cards conditions***

Hypothesis 9 proposed that scores on the Card Set would be predicted by an interaction between apology and the order of cards condition. No such interaction effects were found to be significant for either the line score or the sort score. Unexpectedly however, there was a significant main effect of the order of cards condition on the sort score, such that participants who received a positive card first scored higher than participants who received a negative card first. There was no main effect of the order of cards on the line score. Therefore, while Hypothesis 9 was not supported, there was an even more direct effect (i.e. a main effect) of the order of cards condition on the sort score than anticipated.

### *Examining covariates*

Partial correlations forgiveness measures and other variables (Table 5.5) were examined in order to identify potential covariates. Three variables were found to correlate with Card Set scores and were therefore identified as potential covariates, namely age, severity judgments and pseudo-forgiveness.

According to Field (2009), covariates must be independent from the experimental manipulation in order to avoid confounding the influence of the covariate with that of the manipulation. Therefore, the assumption of independence of covariates was tested by conducting three separate analyses of variance with apology as the independent variable and age, severity and pseudo-forgiveness as dependent variables, as presented in table 5.10

Table 5.10

#### *Examination of potential covariates across apology condition*

Source	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
<u>Severity</u>				
Apology	1	0.43	.00	.514
Error	145			
<u>Pseudoforgiveness</u>				
Apology	1	8.48	.06	.004
Error	144			
<u>Age</u>				
Apology	1	38.33	.22	.000
Error	135			

Only severity met the assumption of independence. ANOVA was therefore repeated on Card Set scores with severity as a covariate; however, results were unaltered with no significant main effects found even when severity was entered as a covariate, as can be seen in table 5.11.

Table 5.11

*Analysis of covariance by apology condition on Card Set line and sort scores, controlling for severity*

Source	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
<u>Line Scores</u>				
Severity	1	13.73	.10	.00
Apology	1	1.14	.01	.29
Order of measures	1	3.01	.02	.09
Order of cards	1	2.31	.02	.13
Apology x Order of measures	1	0.34	.00	.56
Apology x Order of cards	1	0.10	.00	.76
Order of measures x Order of cards	1	1.21	.01	.27
Apology x Order of measures x Order of cards	1	2.68	.02	.10
Error	127			
<u>Sort scores</u>				
Severity	1	8.23	.06	.005
Apology	1	1.46	.01	.229
Order of measures	1	1.96	.01	.164
Order of cards	1	3.89	.03	.051
Apology x Order of measures		0.43	.00	.513
Apology x Order of cards	1	0.31	.00	.576
Order of measures x order of cards	1	0.89	.01	.347
Apology x Order of measures x Order of cards	1	2.33	.02	.129
Error	1			

Meanwhile, pseudoforgiveness and age did not meet the assumption of independence from apology condition, since participants were older and less pseudoforgiving in the apology condition than in the no apology condition. Therefore, the interaction of age and pseudoforgiveness with apology were examined by means of linear regression analyses, displayed in tables 5.12 and 5.13.

Table 5.12

*Linear regression analysis examining the interaction between apology and pseudoforgiveness on Card Set line and sort scores*

Variable	B	SE B	$\beta$
Line scores	Step 1		
Apology condition	1.74	7.73	.02
Pseudoforgiveness (mean centred)	9.50	2.03	.39**
	Step 2		
Apology condition	1.51	7.81	.02
Pseudoforgiveness (mean centred)	9.93	2.59	.41**
Apology x presudoforgiveness interaction	-1.12	4.20	-.03
Sort scores	Step 1		
Apology condition	-0.13	1.96	-.01
Pseudoforgiveness (mean centred)	1.98	0.50	.32**
	Step 2		
Apology condition	-0.12	1.97	-.01
Pseudoforgiveness (mean centred)	1.88	0.65	.31**
Apology x pseudoforgiveness interaction	0.25	1.03	.026

Note: For line scores,  $R^2 = .15$  in Step 1,  $\Delta R^2 = .00$  in Step 2,  $p > .05$ .

For sort scores,  $R^2 = .11$  in Step 1,  $\Delta R^2 = .00$  in Step 2,  $p > .05$ .

\*\*  $p > .01$

Table 5.13

*Linear regression analysis examining the interaction between apology and age on Card*

*Set line and sort scores*

Variable	B	SE B	$\beta$
Line scores			
Step 1			
Apology condition	1.72	9.30	.02
Age (mean centred)	-6.86	3.38	-.20*
Step 2			
Apology condition	0.77	9.17	.01
Age (mean centred)	-13.29	4.44	-.40**
Apology x age interaction	14.72	6.72	.27*
Sort scores			
Step 1			
Apology condition	-0.07	2.33	-.00
Age (mean centred)	-1.37	0.86	-.16
Step 2			
Apology condition	-0.11	2.29	-.01
Age (mean centred)	-3.07	1.14	-.35**
Apology x age interaction	3.83	1.71	.27*

Note: For line scores,  $R^2 = .038$  in Step 1,  $\Delta R^2 = .036$  for Step 2 ( $p < .05$ ).

For sort scores,  $R^2 = .025$  for Step 1,  $\Delta R^2 = .037$  for Step 2 ( $p < .05$ ).

\*  $p > .05$ , \*\*  $p > .01$

As can be seen, interactions between apology condition and pseudo-forgiveness did not have a significant effect on any of the Card Set scores. However, the interaction between apology and age had a significant effect on both the line score and the sort score. The effect of interactions between apology and age are displayed below in figure 5. The effect



of interactions between apology and age on Card Set scores are displayed below in Figure 5.3 (line scores) and 5.4 (sort scores).

Figure 5.3

*Interaction between apology and age in predicting line scores*

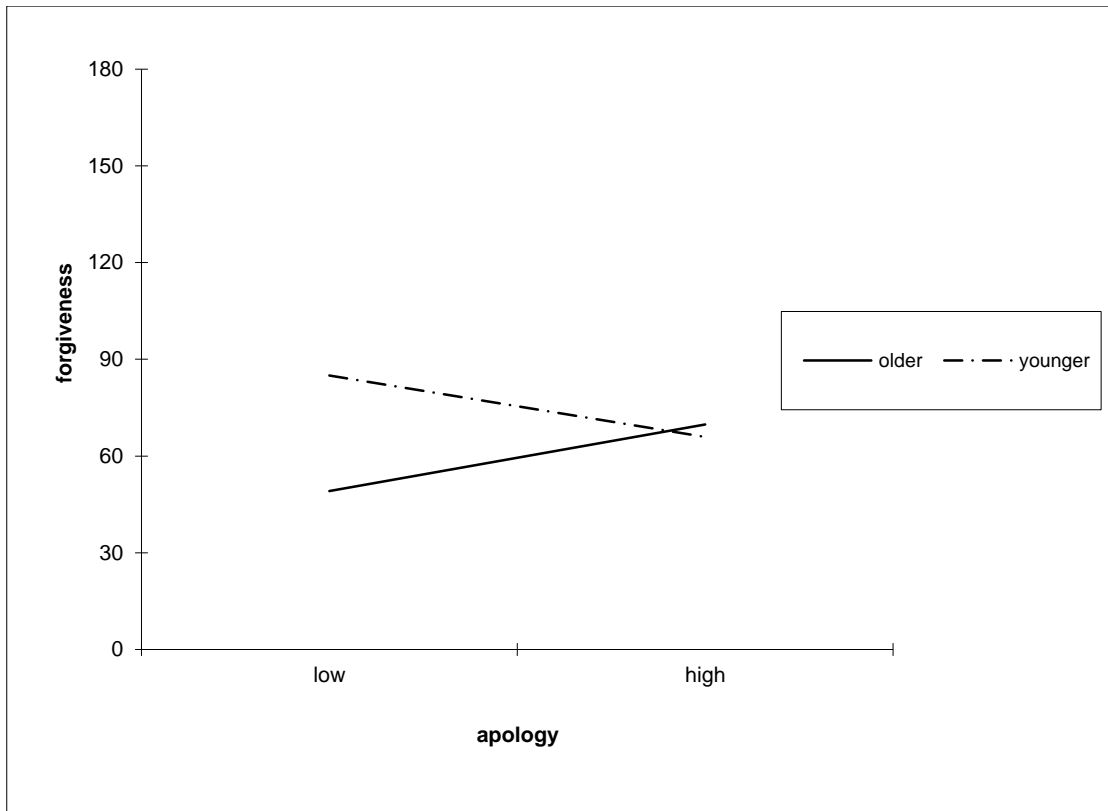
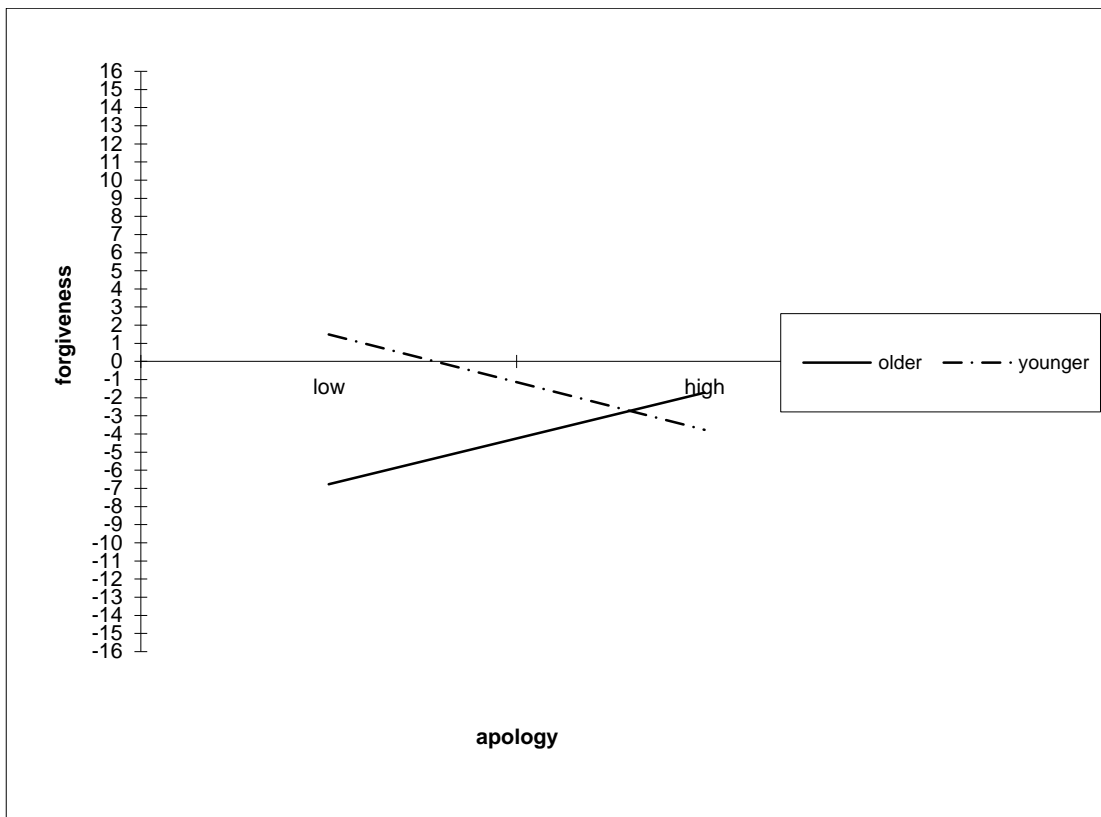


Figure 5.4

*Interaction between apology and age in predicting sort scores*



As shown, the interaction illustrated that younger children were less forgiving (i.e. had lower Card Set scores) given an apology compared with no apology, while older children were more forgiving (i.e. had higher Card Set scores) given an apology compared with no apology. However, the regression analysis examining age as a continuous variable did not investigate the age at which children in the sample became more forgiving, rather than less forgiving, in response to apology. Therefore, as a final analysis to further examine the nature of this interaction, the effect of apology was examined according to whether participants were in the preadolescent age group (aged 8 to 11 years) or the adolescent age group (i.e. aged 12 years and above), by means of analysis of variance.

Means and standard deviations for these analyses are presented in table 5.14 with analysis of variance presented in table 5.15.

Table 5.14

*Means (and standard deviations) of Card Set scores split by age group and apology conditions*

Age group	Score	Apology	No apology	Total
Preadolescent	Line score ( <i>N</i> = 91)	64.19 (44.38)	82.09 (48.35)	74.42 (47.28)
	Sort score ( <i>N</i> = 99)	-3.59 (11.47)	0.71 (12.65)	-1.20 (12.26)
Adolescent	Line score ( <i>N</i> = 35)	75.07 (39.10)	31.13 (45.47)	66.28 (43.55)
	Sort score ( <i>N</i> = 35)	-0.29 (10.01)	-9.86 (11.01)	-2.20 (10.77)

Table 5.15

*Analysis of variance by apology condition and age group on Card Set scores*

Source	<i>df</i>	<i>F</i>	$\eta$	<i>p</i>
<u>Line Scores</u>				
Apology	1	1.50	.01	.22
Age group	1	3.54	.03	.06
Apology x age group interaction	1	8.43	.07	.00
Error	122			
<u>Sort Scores</u>				
Apology	1	0.93	.01	.34
Age group	1	1.76	.01	.19
Apology x age group interaction	1	6.43	.05	.01
Error	130			

As expected, the interaction between apology and age group had a significant effect

on Card Set scores, suggesting that the impact of age in moderating the effect of apology was due to a difference between preadolescent and adolescent age groups in responding to apology. Interaction effects are illustrated in Figure 5.5 (line scores) and 5.6 (sort scores).

Figure 5.5

*Interaction between apology and age group (preadolescent/adolescent) in predicting Card Set line scores*

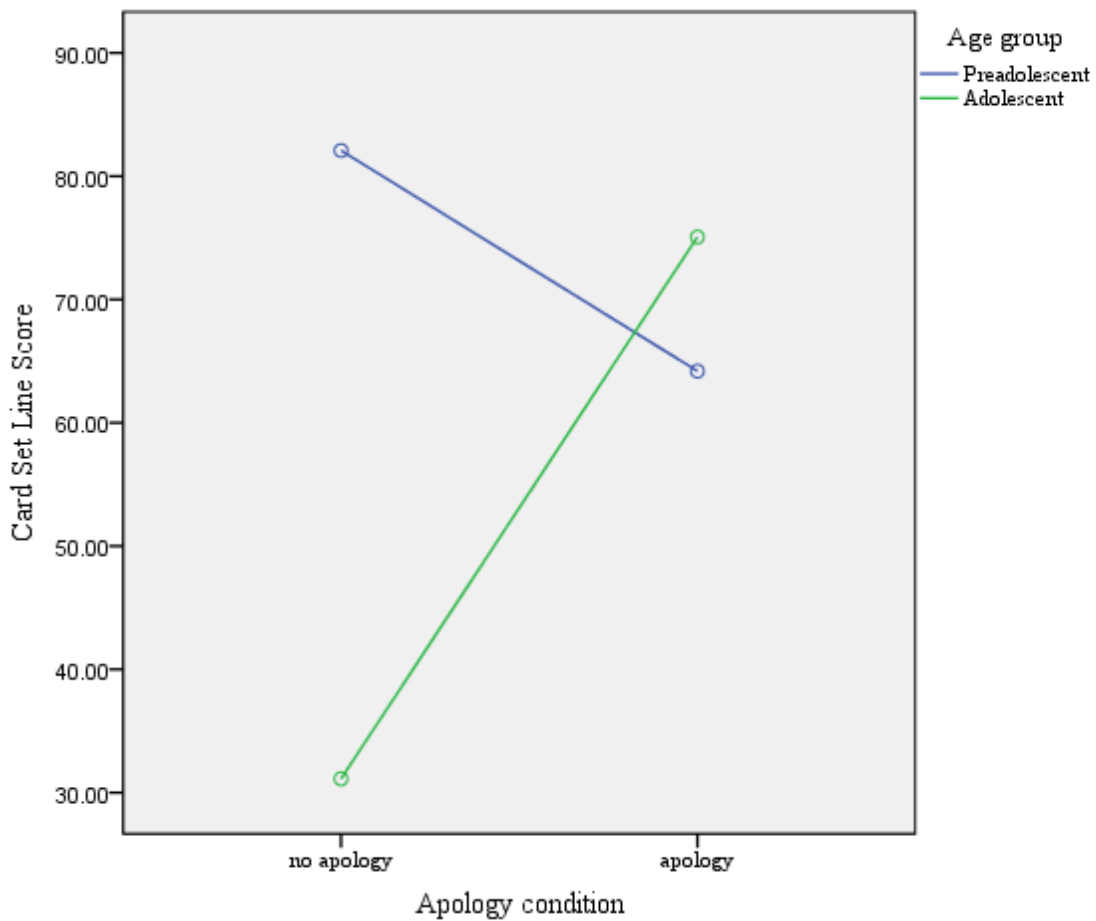
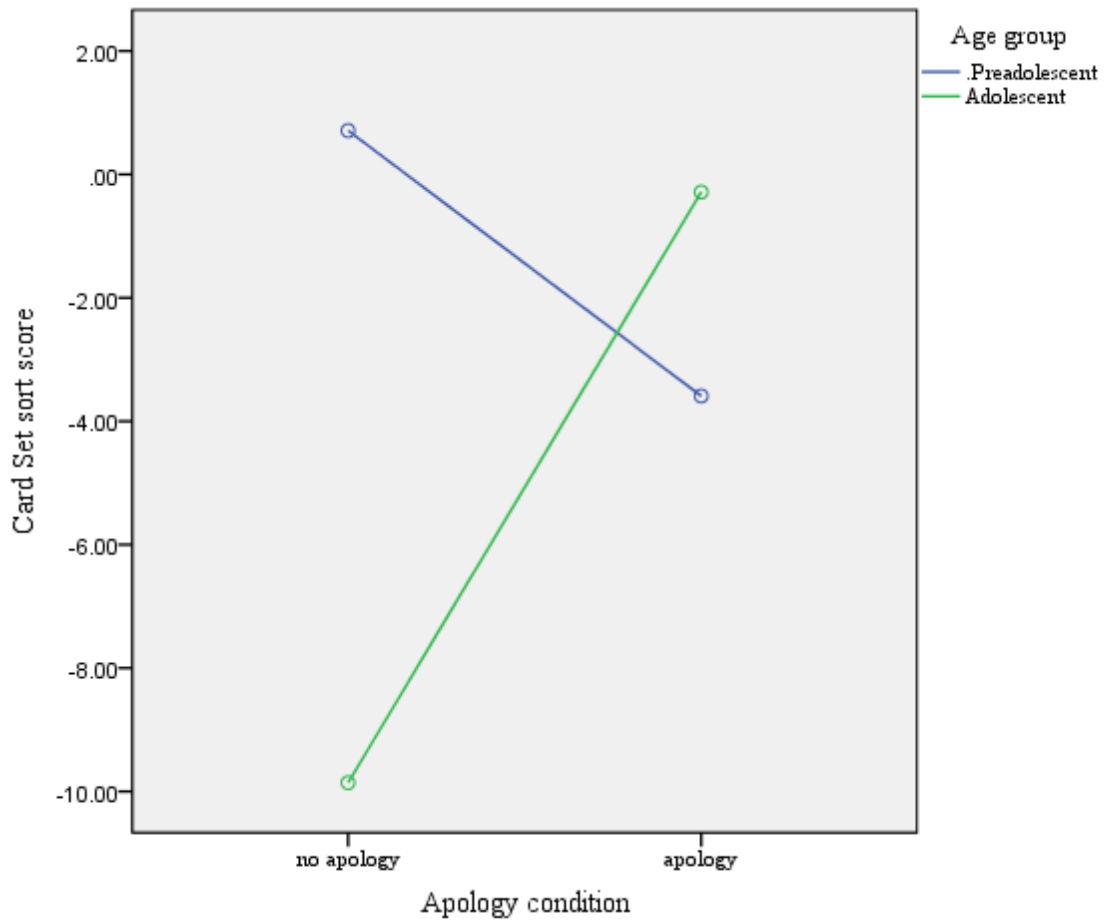


Figure 5.6

*Interaction between apology and age group (preadolescent/adolescent) in predicting Card Set sort scores*



Both figures suggest that adolescents were particularly unforgiving when the transgressor did not apologise. Simple effects analysis for the interaction between apology and age group is presented for line scores in table 5.16 and for sort scores in table 5.17.

Table 5.16

*Simple effects analysis by apology condition and age group for Card Set line scores*

	Apology	No apology	Simple effects $F$ $df(1, 122)$
Preadolescent	64.19	82.09	3.52
Adolescent	75.07	31.12	5.32*
Simple effects $F$ $df(1, 122)$	0.95	7.89**	

\*\* Significant at the  $p < .01$  level

\* Significant at the  $p < .05$  level

Table 5.17

*Simple effects analysis by apology condition and age group for Card Set sort scores*

	Apology	No apology	Simple effects $F$ $df(1, 130)$
Preadolescent	-3.59 (11.47)	0.71 (12.65)	3.32
Adolescent	-0.29 (10.01)	-9.86 (11.01)	3.76^
Simple effects $F$ $df(1, 130)$	1.37	5.09*	

\* Significant at the  $p < .05$  level

^ Approached significance ( $p = .055$ )

As can be seen, within the no apology condition there were significant differences between preadolescent and adolescent children's Card Set scores, with adolescent children being much less forgiving of transgressors who did not apologise than preadolescents were. Adolescents who did not receive an apology also scored significantly lower (i.e. were less forgiving) than adolescents who received an apology on line scores, although for sort scores this difference only approached significance. No significant differences between

age groups existed in the apology condition, and no significant difference existed between apology conditions in the preadolescent age group.

## **Discussion**

Study 5 sought both to establish the structure of the card set through Principal Components Analysis, and to examine the validity of the card set as a measure of forgiveness with respect to relationships with other forgiveness measures, relationships with remorse and prediction by apology. Prediction by apology was examined not only in terms of main effects but also in interaction with order of measures and order of cards conditions. Moreover, prediction of Card Set scores by the apology and order conditions was compared with prediction of (a) a latent measure, the EFI-C and (b) a single-item explicit measure of forgiveness, in order to establish whether the Card Set was predicted similarly to the latent measure and/or single-item measure.

### **Structure of the Card Set**

Principal components analysis confirmed the exclusion of the ‘Weird/confused’ card, which was originally identified as problematic in Study 3, from the Card Set. None of the other cards were identified as problematic. Analysis of the line scores suggested two strongly correlated components, Positivity and Hostility, with each of these being scored such that higher values represented a more forgiving orientation (i.e. more positive, or less hostile). Meanwhile, analysis of the sort score suggested one component.

The components of Positivity and Hostility make theoretical sense with respect to aspects of forgiveness identified in the literature, since forgiveness has been proposed to be a process of decreasing negative resentment-based emotions, motivations and cognitions, along with enhanced positive experience in some circumstances (Worthington et al., 2007).

Because the aspect of returning to positive experience tends to be emphasised by researchers studying continuing relationships (Worthington, 2005b), it makes sense that in the context of a hypothetical scenario involving best friends in a school context, forgiveness was found to consist of both hostility and positivity components. That is, because the relationship was likely to be continuing, both the decrease of hostility and the increase in positivity were relevant to children's considerations and were closely related. Although positivity and hostility are not perfect opposites, on the basis of a previously valued friendship and continued contact at school it is likely that that decreases in hostility would be accompanied by a return to an increase in positive experience or vice versa. This is in contrast to the absence of hostility alone, which might be expected in a less close or non-continuing relationship (Worthington, 2005).

Principal Components Analysis of the sort score suggested even closer relationships between positively and negatively oriented cards, as all cards (not including Card 14) were found to represent only one component.

PCA did not directly differentiate between emotion and behaviour based cards (although the Hostility component was made up of mostly behaviour-based cards). Along with the high correlation between components, this suggested that the emotional and behavioural aspects of children's forgiveness as measured by the Card Set were closely related. In part, this may have been due to the instructions for the Card Set, which asked to children to consider how they would 'feel, or feel like acting', in order to assess their underlying motivation rather than overt responses. Thus, the Card Set appears to successfully assess underlying emotion-based responses and behavioural motivations as opposed to overt, socially expected responses. The validity of the Card Set as a measure of forgiveness can be considered with respect to its relationships with other forgiveness measures and prediction by apology, discussed next.



### **Relationships between the Card Set and other forgiveness measures**

Card Set scores correlated significantly and in expected directions with other measures of forgiveness including the EFI-C, the single-item forgiveness measure and judgments of how 'back to normal' the friendship would be. The generally moderate level of these correlations gave good evidence of the validity of the Card Set as a measure of forgiveness.

Card Set responses did not correlate with judgments of how much cake would be shared with the transgressor, in contrast to the EFI-C and previous studies finding children's emotional responses correlated with cake-sharing judgments (Yamaguchi, 2009). However, the EFI-C Feelings subscale was also unrelated to the cake-sharing measure. This suggested that the Card Set was similar to other measures of forgiving emotions, and therefore supported the contention that the Card Set was a successful measure of underlying forgiving and unforgiving emotions and motivations (how children would *'feel, or feel like acting'*), rather than overt behavioural responses. In contrast, sharing is an overt behavioural response that children may have learnt to expect of themselves toward a friend even if their emotions toward that friend are not positive at the time. This may particularly be the case because sharing is often emphasised by parents and early learning educators; such expectations of sharing may therefore be internalised early in life. In support of this argument, both cake-sharing and the EFI-C Behaviour subscale along with the single-item explicit measure were correlated with the Expectations of Forgiveness score, whereas the Card Set and EFI-C Feelings subscale were not.

## **Relations between the Card Set and remorse**

Card Set scores were not related to ratings of transgressor remorse. This contrasted with the single-item explicit measure and the total EFI-C score, both of which were related to remorse, although the EFI-C correlated only weakly and EFI-C subscales did not correlate with remorse. This suggested that the relationship between remorse and forgiveness judgments may not be entirely due to script pattern such that children understand ‘forgiving’ on an explicit level to be the appropriate response to remorse, since the EFI-C total score was a latent measure that did not explicitly ask about forgiving. This result therefore reinforced that the Card Set did behave differently in some ways to the EFI-C. Further reasons for this were suggested by the analysis of the effects of apology.

## **Effects of apology**

Card Set scores were not predicted by main effects of apology; nor were the total EFI-C or EFI-C subscale scores. In contrast, the single-item explicit measure was predicted by apology such that children were more forgiving of transgressors who apologised. On the surface, this result suggested that children’s tendency to be more forgiving in response to apology was due to a ‘script’ in which explicit forgiveness (i.e. a statement of forgiveness) was granted in response to apology without necessarily being reflected by emotional, cognitive or behavioural aspects of forgiveness. However, further effects were found for both the Card Set and the EFI-C.

## ***Interaction between age and apology in predicting Card Set scores***

For the Card Set, the lack of effect of apology was found to be affected by an interaction between apology condition and participant age. Younger participants aged under 12 (i.e. late childhood stage) were unmoved by transgressor apology, whereas

participants aged 12 and older (i.e. adolescents) had significantly lower Card Set scores in the apology condition than in the no apology condition for the line score, with the difference also approaching significance for the sort score (further, differences may not have quite reached significance on the sort score due to the small sample size for adolescents). That is, when older (adolescent) children did not receive an apology, they were particularly unforgiving, whereas this did not occur for preadolescent children.

One explanation of the difference between younger and older children's responsiveness to apology on the Card Set may relate to the negative correlation found between age and pseudo-forgiveness. This correlation reflected that younger children tended to view the transgression less hurtful than older children did. Therefore, younger children may have been less affected by a lack of apology than older children because they did not view the transgression as being as hurtful in the first place. Such differences may be due either to age alone (i.e. younger children simply see the transgression as less hurtful), or to the hypothetical methodology (e.g. Smith & Harris, 2012). That is, younger children's less developed perspective taking ability may mean that they do not identify with the feelings of the transgressor as closely as older children do, and therefore do not imagine feeling as hurt as adolescents imagine.

Alternatively, the difference may be explained by adolescents having a more mature understanding of either the transgression or the apology. Trust and intimacy between friends has been noted to become increasingly important in adolescence (e.g. Bauminger, Finzi-Dottan, Chason, & Har-Even, 2008). Therefore, for children aged 12 and over (who were in the adolescent stage of development), a transgression involving a trust violation without an apology may have been particularly hurtful and unforgiveable.

Additionally, some researchers have emphasised that apologies function to influence forgiveness by suggesting that the offending behaviour is unlikely to occur again;

that is, by facilitating the attribution that the offense was not due to a stable behavioural characteristic of the transgressor (e.g. Gold & Davis, 2005). Smith, Chen and Harris (2010) suggest that although children appear to understand the emotional functions of apology in demonstrating transgressor remorse, they appear not to understand the functions of apology in mitigating threats to reputation and identity. Meanwhile, adolescents appear to have more understanding of the moral identity functions of apology. Therefore, it may then be the case that the lack of an apology led to less forgiveness in the adolescent subset of the sample because the transgressor effectively had not made reparation to their moral identity.

### ***Interaction between order of measures and apology in predicting the EFI-C***

Although the focus of this thesis was not the EFI-C, analyses of the EFI-C were relevant to establishing the validity of the Card Set because it was important to compare prediction (or otherwise) of the Card Set by apology with prediction of another appropriate latent measure by apology. If neither the Card Set nor the EFI-C was found to be predicted by apology, then it would be arguable that children's forgiveness judgments were predicted by apology only when assessed by single-item explicit measures.

However, the EFI-C was found to be predicted by apology in interaction with the order of measures, such that participants in the apology condition were more forgiving on the EFI-C than participants in the no apology condition, but only when they had completed the EFI-C *before* receiving the Card Set. EFI-C scores were not significantly different across apology conditions when they completed the EFI-C *after* completing the Card Set. Arguably then, the EFI-C would have been predicted by the main effect of apology had the Card Set not been included in the study.

Interaction effects were also found for the EFI-C total score and Thoughts subscale such that when the transgressor had apologised, children who listened to a scenario in which the transgressor apologised were more forgiving if they completed the EFI-C first compared with children who completed the Card Set first.

Altogether, interaction effects suggested that an apology combined with completing the latent questionnaire measure first led to a more forgiving orientation than other conditions. Particularly for the EFI-C total score, it appeared that sensitivity to the mitigating effects of apology on a transgression was reduced if the Card Set had been completed before the EFI-C. Arguably then, completing the Card Set first may have the effect of cueing children to respond according to their underlying emotional orientations, as predicted by Hypothesis 8.

While interaction effects also neared significance for the EFI-C Behaviours subscale, no such interaction effect was found for the EFI-C Feelings subscale, which was not predicted by apology regardless of the order of measures. It therefore appeared once again that the Card Set was similar to the EFI-C Feelings subscale.

This finding gave further support to the Card Set as a measure of children's underlying forgiving emotional forgiveness, as it would appear that while apology did make a difference to other aspects of forgiveness, emotional aspects were not predicted by apology (apart from in the adolescent subset of the sample discussed earlier). That is, children might give more forgiving responses to apology when considering other aspects of forgiveness or when responding to the explicit question of whether or not they had forgiven; however, their underlying emotions with respect to the transgression were not significantly predicted by apology.

Further, results suggest that when children responded to the Card Set first, their responses on the EFI-C were then more in accordance with their initial emotional

reactions. If this is the case, it appears not only that children's emotional reactions to transgression may be different to their thoughts and behavioural reactions, but also that the Card Set is relatively powerful in influencing children to respond in accordance with emotional orientation rather than overt acts and thoughts.

The same effect was not observed for the single-item measure, which was found to be predicted by apology regardless of the order of presentation of measures. This was in contrast to expectations based on Study 4, in which the absence of significant effect of apology on the single-item measure may have been due the single-item measure being consistently presented after the Card Set. However, the lack of an interaction effect on the single-item measure in Study 5 may be explained by the way that the single-item measure was consistently presented after the EFI-C Feelings, Behaviours and Thoughts subscales. Participants therefore always completed the EFI-C before completing the single-item measure, regardless of the order of measures condition. Thus, they would have always considered overt behavioural and cognitive responses on the EFI-C before responding to the single-item measure, which may have lessened the influence of the Card Set.

### **Priming Effects**

The order of the cards within the Card Set appeared to influence responses on the Card Set itself, although not in interaction with apology as hypothesised. Specifically, when a positive card was presented on the top of the pile, sort scores were significantly higher (more forgiving) than when a negative card was presented on top of the pile.

Although explaining such an effect without further study is necessarily conjecture, it seems likely that if Card Set scores are a measure of emotion-based responding, they are responsive to mood priming. Research suggests people are more likely to behave in a prosocial fashion after a positive mood has been induced (e.g. Carlson, Charlin, & Miller,

1988). It is therefore plausible that seeing a happy or friendly card induced a positive mood, which then prompted more forgiving responses. Priming has been found to influence forgiveness in previous studies. For example, Karremans and Aarts (2007) found that subliminal priming with the name of a close other led to more forgiving responses. Moreover, Karremans and colleagues have suggested that these effects are found in relatively automatic forgiveness decisions that occur in everyday relationships, rather than overtly considered forgiveness decisions (Karremans & Van Lange, 2008). Therefore, if priming does have an influence on Card Set scores, then it may be further evidence that the Card Set measures underlying emotional forgiveness.

### **Limitations**

This study had several limitations, including the hypothetical scenario and convenience sampling. However, as these limitations applied throughout studies employing hypothetical scenarios to examine the validity of the Card Set, they will be addressed in the general discussion in the next chapter.

### **Conclusions**

Overall, the Card Set appears to be a reliable measure of children's emotional responses and behavioural motivations toward a perceived transgressor. It consistently correlates at moderate levels with other measures of forgiveness, which suggests the Card Set is a valid measure of children's forgiveness.

However, evidence of its validity is arguably qualified by the way it has not been predicted by apology across studies, except in children over 12 years of age in Study 5. This contrasts with previous studies which have found children's and adults' forgiveness to be predicted by apology. It also contrasts with the single-item explicit measure and the

EFI-C (when completed before the Card Set), which were found to be predicted by apology across the entire sample in Study 5.

On the other hand, the absence of prediction by apology was also found for another latent measure of children's emotional responses to transgression, the EFI-C Feelings subscale, which was overall similar to the Card Set with respect to correlation with and prediction by other variables. This suggests that the Card Set may be a valid measure of children's emotional responses to transgression, which may sometimes differ to cognitive and behavioural responses measured by latent questionnaires and single-item explicit measures. The overall validity and use of the Card Set as a measure of children's forgiveness will therefore be discussed further in the final chapter.



## Chapter 6: General discussion

This thesis has reported the development, pilot testing and experimental testing over several studies of the Children's Forgiveness Card Set, an illustrated card-sorting measure aiming to assess children's emotional forgiveness. The measure was based on children's descriptions of forgiving responses and illustrations were developed in consultation with children in order to produce a measure that was meaningful and interpretable for children. Principal components analysis led to the confirmation of a set of 15 illustrated cards with high levels of internal consistency reliability. This chapter will discuss the evidence for the validity and usefulness of the Children's Forgiveness Card Set as a measure of children's emotional forgiveness, as well as theoretical implications and directions for future research and applications of the measure.

### **Validity of the Children's Forgiveness Card Set as a measure of children's forgiveness**

#### ***Concurrent and incremental validity***

Concurrent validity of the Card Set was examined through its relationships with existing measures of forgiveness over two studies.

In Study 4, relationships were examined between the Card Set and a single-item explicit measure of forgiveness and proxy relationship and behavioural measures of forgiveness, namely, how 'back to normal' children judged the victim's friendship with the transgressor to be, and how much cake they would share with the transgressor. Significant positive correlations at a moderate level were found between the Card Set scores and the single-item explicit measure and between the Card Set scores and both proxy measures.

In Study 5, these relationships were again examined with a larger sample, and with the addition of relationships between the Card Set and a latent questionnaire measure, the EFI-C. Significant positive correlation at a moderate level were found between Card Set scores and the single-item measure, between Card Set scores and the ‘back to normal’ proxy measure, and between Card Set scores and the EFI-C (and all EFI-C subscales). While Card Set scores were not significantly correlated with the cake-sharing item, this was also true of the EFI-C Feelings subscale, suggesting that measures of forgiving emotion were not related to the cake-sharing measure in this study.

Overall, the level of correlation between the Card Set and other measures suggested good concurrent validity of the Card Set as a measure of forgiveness; on this basis the Card Set appears to have potential as a valid and useful measure of children’s forgiveness. However, further consideration of the validity and usefulness of the measure must also take into account prediction of the measure by apology and prediction by priming, discussed below.

### ***Prediction by apology and relationships with remorse***

Responses on the Card Set were not predicted by whether or not transgressors had apologised, with the exception of the responses of children aged over 12 years in Study 5 (who were significantly less forgiving of transgressors who had not apologised). Therefore, preadolescent children’s responses on the Card Set contradicted expectations based on previous research suggesting that children are more forgiving in response to apology (e.g. Darby & Schlenker, 1982; Denham et al., 2005), experience more positive emotions in response to apology (Smith, Chen, and Harris, 2010; Smith and Harris, 2012) and make more positive judgments of transgressors who apologise or show remorse (Darby & Schlenker, 1982; Vaish, Carpenter, & Tomasello, 2011). Moreover, while in Study 4

neither responses on the Card Set nor responses on the single-item measure were predicted by apology, in Study 5 children's responses on the Card Set contradicted their responses on the single-item explicit measure, which were predicted by apology, and their responses on the EFI-C total score, which were also predicted by apology, albeit when the EFI-C was completed before, rather than after, the Card Set.

However, the Card Set was not unique in its inability to be predicted by apology. The EFI-C Feelings subscale also was not predicted by apology, regardless of whether it was completed before or after the Card Set. Therefore, while Card Set responses contradicted expectations that they would be predicted by apology, this result arguably does not present a problem for the validity of the Card Set. Rather, it can be considered evidence that Card Set responses are predicted similarly to responses on other measures of forgiving emotions. Overall, similarities with the EFI-C Feelings subscale and differences between the Card Set and the explicit item and EFI-C Thoughts subscale and total scale suggest that the Children's Forgiveness Card Set is effective in measuring underlying emotional and motivational responses to transgression, as opposed to overt behavioural or cognitive responses.

In short, the Children's Forgiveness Card Set was developed with the aim of creating a measure of children's underlying emotional responses to transgression, and it appears to have achieved that aim. Ultimately, whether or not the Card Set is a valid measure of forgiveness depends upon how forgiveness is defined. If a researcher is interested primarily in emotional reactions to transgression, then the Card Set appears to measure these reactions reasonably sensitively. However, researchers who are primarily interested in overt decisions about how one will think about and behave toward a perceived transgressor will not be well advised to use the Card Set as their primary measure of

children's forgiveness, unless they wish to compare emotion-based forgiveness with forgiveness on a decisional level.

The apparent difference between children's emotional responses and cognitive and/or decisional responses is congruent with theoretical distinctions between emotional and decisional forgiveness (Worthington, 2005). Such distinctions are important because the two processes are likely to have different consequences. For example, Worthington and colleagues (2007) postulate that while decisional forgiveness can be a permanent and sincere form of forgiving which may reduce outward hostility, it does not necessarily reduce stress responses. In contrast, emotional forgiveness has a stronger connection to overcoming negative affect and stress responses, and is therefore more likely to have a more direct influence on individual health; this is in comparison to the indirect influence that decisional forgiveness may have by, for example, facilitating reconciliation and improved relationships.

The distinction between deliberate forgiveness decisions and forgiveness on an underlying emotional level has also been recognised by Karremans and Van Lange (2008), who argue that although forgiveness is often viewed in the literature as a deliberative and intentional decision, it is often influenced by unconscious and implicit processes. Moreover, the decision to forgive does not necessarily result in the dissipation of negative feelings; one may have consciously chosen to forgive, but find it difficult to overcome negative feelings toward a transgressor, as appears to be the case with children's responses to apologising transgressors in Studies 4 and 5. Further, Karremans and Van Lange suggest that emotional forgiving may occur in an apparently spontaneous manner; that is, a person may come to realise that they no longer experience negative feelings toward a transgressor, despite not having made a conscious decision to forgive the offender.

Overall, it appears that distinctions between forgiving on an emotional level and forgiving on a deliberative or decisional level are such that a measure of children's underlying emotional responses such as the Card Set is a potentially important tool in examining precursors and consequences of children's forgiveness.

One further question with respect to the usefulness of the Card Set is whether it is a more useful measure than existing measures of children's forgiveness. In particular, because the Card Set appears to be predicted similarly to the EFI-C Feelings subscale, it might be argued that the Feelings subscale might be just as useful to assess children's forgiving emotions.

However, there are several reasons why the Card Set may be a useful addition to the measurement of children's forgiveness. First, while the Card Set was similar to the EFI-C Feelings subscale in that neither was predicted by apology in Study 5, the two measures correlated only at moderate levels, suggesting that each measure also assessed unique variance.

Second, the Card Set measures not only feelings, but also ways that children feel like acting (i.e. motivations), and therefore arguably measures responses not included in the EFI-C Feelings subscale. Further, ways that children felt like acting were suggested by Study 5 to be predicted differently to overt behaviours that children endorse (i.e. the EFI-C Behaviours subscale).

Third, the Card Set is based on feelings and behaviours that children in the late childhood age group identified as being involved in forgiveness, and is therefore arguably a child-focused measure, as opposed to being adapted downward from an adult measure.

Finally, anecdotally, children appeared to enjoy sorting the cards, compared with completing questionnaires, with several children commenting that the pictures were nice or that the task was fun. Conversely, adolescents appeared to enjoy the questionnaire more,

perhaps feeling that the pictures were too childish. The Card Set may therefore be considered to be particularly appropriate to children in the late childhood age group. It may also be an especially useful measure for children who do not engage well in reading or listening tasks.

### **Implications of differences between children's emotional and explicit forgiveness**

The suggestion that children's emotional responses to transgressors may not be predicted by apology even when overt or cognitive responses are predicted by apology has significant theoretical and applied implications.

#### ***Theoretical implications***

First, the fact that children's endorsement of forgiving acts and thoughts were predicted differently from their endorsement of forgiving emotions in these studies suggests that children differentiate between emotional forgiveness (i.e. Card Set responses) and overt and/or cognitive responses to a transgression (i.e. explicit responses and EFI-C, particularly the Thoughts subscale). Therefore, while children's forgiveness may be primarily emotional (e.g. Denham et al., 2005; Worthington, 2006), it appears that children in the late childhood age group may experience not only emotional forgiveness but also decisional forgiveness. That is, they may feel unforgiving on an emotional level but may choose to refrain from expressing unforgiving behaviours and from having unforgiving thoughts.

Moreover, it appears that the impact of situational variables (such as apology) may sometimes differ between these different types of forgiveness. The apparent distinction with respect to prediction by apology between overt (explicit) and underlying (implicit) forgiveness as reflected by the Card Set has been corroborated by recent suggestions that

implicit forgiveness may be better predicted by restitution or restitution and apology, rather than apology alone (Carlisle et al., 2012).

Such differences have implications for future research. For example, studies finding that situational variables impact on children's forgiveness need to specify which type of forgiveness was assessed (i.e. emotional/decisional, underlying responses/explicit forgiveness), and may compare the impact of situational variables across different types of forgiveness, as it will be important not to assume that situational variables will necessarily impact similarly across all types of forgiveness.

### *Applied implications*

It is also important to consider practical implications of the fact that while children's explicit forgiveness, forgiving thoughts and overt forgiving behaviours were predicted by apology, underlying emotions weren't predicted by apology for preadolescent children in these studies. That is, negative emotional reactions to the transgressor continued regardless of apology, and in spite of the presence of an apology predicting more forgiving ratings on other measures. This is important for applied contexts such as forgiveness interventions, since it suggests that children who say they have forgiven and act as though they have forgiven may still be experiencing emotional hurt related to the transgression. Considering that on the one hand children are aware that forgiveness is considered morally good, and on the other hand the sincerity of forgiveness is important to children (Study 1), it remains important for adults to have sensitivity when encouraging children to forgive, and to refrain from unrealistic expectations of children's forgiveness necessarily healing the emotional hurt that a transgression may cause. This is particularly the case when forgiveness is suggested for such uses as coping with school bullying (e.g.

Egan & Todorov, 2009), as it will be important in dealing with these issues that children do not feel persecuted or disempowered by their decision either to forgive or not forgive.

### ***Qualifications to differences between children's emotional and explicit forgiveness***

An important qualification to the points above, however, is that findings of the difference between children's emotional forgiveness and other types of forgiveness – explicit, overt, and/or cognitive – may only apply in some situations. In fact, without further study, these findings cannot be said to apply beyond children's responses to the specific transgression explored in Studies 4 and 5. For another transgression, overt and emotional responses may be similar to each other. The importance of this qualification is heightened by two important limitations of this thesis; namely, the hypothetical nature of the transgression and the fact that none of the studies in this thesis explored the role of time in forgiveness; each of which will be discussed further on in this chapter.

Meanwhile, the validity and usefulness of the Card Set as a measure of children's forgiveness and the study of children's responses to apology on the Card Set both appeared to be complicated by another factor; namely, priming. Theoretical and practical implications of priming for the Children's Forgiveness Card Set will therefore be discussed next.

### **Priming and validity of the Card Set**

Studies 4 and 5 suggested that children's responses on the Card Set might be primed, and that their responses on the Card Set might prime responses obtained on other measures.

Specifically, it appeared that whether a positive or negative card was presented first in the Card Set influenced children's overall score, such that children were more forgiving



when a positive card was presented first and less forgiving when a negative card was presented first. In Study 4 this occurred only in interaction with the apology condition; that is, when there was no apology and a negative card was presented first, children were more unforgiving. In Study 5, while no interaction effect was found, the order of cards had a main effect on the sort score, such that presenting a positive card first in the set led to significantly more forgiving responses than when a negative card was presented first.

Additionally, completing the Card Set appeared to prime responses on other measures that were completed directly after the Card Set. That is, the EFI-C total score and the Thoughts subscale were *not* predicted by apology if the Card Set had been completed prior to completing the EFI-C. Conversely, when the EFI-C was completed prior to the Card Set, the EFI-C total score and Thoughts subscale were predicted by apology. This effect also approached significance for the EFI-C Behaviours subscale. However, the EFI-C Feelings subscale was not predicted by apology regardless of whether it was completed before or after the Card Set.

The priming of forgiving responses, particularly underlying rather than overt responses, is not unique to this study. For example, Karremans and Van Lange (2008) review a number of studies investigating the effects of priming on levels of forgiveness (e.g. Karremans & Arrts, 2007), and argue that subtle environmental input may influence levels of forgiveness at any given point in time, operating at a subconscious level to influence conscious interpretations of the transgressor's behaviour and thus of forgiveness.

Thus, priming of responses on the Card Set arguably is not evidence against the Card Set as a valid measure of forgiving responses, since forgiving responses can be shaped by situational cues at the subconscious level. Considering that Karremans and Van Lange argue that such effects are characteristic of the emotions involved in forgiveness and may occur despite the conscious inclination to forgive, the priming of the Card Set is also

arguably consistent with it being a measure of underlying emotional aspects of forgiveness rather than decisional forgiveness.

However, priming may be regarded as a problem for the effective use of the Card Set to measure forgiveness at a given point in time because it appears the Card Set is influencing as well as assessing emotional responses to transgression. Thus, it is necessary to consider how the issue of priming of the Card Set might be addressed, along with how priming of responses on other measures by prior presentation of the Card Set might be avoided.

The influence of the Card Set on other measures could be easily addressed by designing studies or assessments so that other measures are completed either before the Card Set, or after a distraction task presented in between completing the Card Set and other measures.

Meanwhile, to address the problem of the order of cards influencing responses on the Card Set itself, one approach in experimental research would be to counterbalance the order of cards between participants in the sample. However, this approach would only address the problem of priming within groups of participants; it would not be helpful to control priming when assessing an individual's level of forgiveness, such as in studies of individual responses over time (e.g. in intervention studies) or in clinical assessments. In this case, it might be better for the Card Set always to be presented in a standard order, much the same as a questionnaire, so that norms for responding to the Card Set and levels of forgiveness for any given individual might be comparable between assessments.

However, interaction between the apology condition and order of cards condition in Study 4 suggests that such an approach might still not be satisfactory, because the priming by a positive or negative card presented first might interact with other situational variables to confound responses on the Card Set. Therefore, an alternative solution may be to

present the cards all at once, rather than in a pile with one illustration being prominent on top of the pile. Cards could be presented all together on a board, or alternatively on a screen, adapted to an electronic format. Adapting the Card Set to an electronic format may therefore be a useful direction for further research, as will be discussed further on in this chapter.

### **Comparing line and sort scores**

One objective of the Card Set was to produce a measure that avoided the need for children to quantify their emotional responses on response scales, by instead using a simple sorting task. However, because of the concern that the sorting task might not assess differences in the magnitude of children's forgiving responses, a line was added to each card for children to indicate the strength of their responses. This led to two alternative scores for the Card Set; the sort score and the line score.

Line and sort scores were highly correlated and in general behaved similarly to each other across studies. Slight exceptions were that the sort score was not composed of two components in Principal Components Analysis; correlations between sort scores and other forgiveness measures tended to be slightly lower than correlations between line scores and other forgiveness measures; and the sort score was predicted by the order of cards condition in Study 5 whereas this was not true of the line score (line scores were however predicted by the interaction between order of cards and apology conditions in Study 4).

Overall then, it appears that the line and sort scores are comparable. For ease of use, the sort score may be sufficient for assessing children's forgiving responses on the Card Set, and may be particularly applicable for younger children who may find it difficult

to understand the process of responding on the line. However, the line score may still remain relevant for assessments in which a more sensitive score is preferred.

## **Limitations**

### ***Hypothetical methodology***

Although the use of a hypothetical scenario is in keeping with much of the previous research on children's responses, and was useful for both ethical purposes and for methodological purposes (having a consistent transgression and control of such factors as apology), the hypothetical transgression employed in Studies 2, 4, and 5 must be acknowledged as a limitation of this thesis. It may be the case that relationships between the Card Set and other variables would be different when participants recalled a real life transgression rather than trying to imagine themselves in the place of a hypothetical victim. For example, apology may be a more salient predictor of the emotional reactions measured by the Card Set for real life transgressions.

This may be particularly the case when considering the differences between younger and older children's responses to transgressor apology as measured by the Card Set. Given that one limitation of hypothetical transgressions is that they require more perspective-taking ability than a personally experienced transgression (Smith and Harris, 2012), the finding that adolescents (children aged 12 years and over) were less forgiving on the Card Set of a non-apologetic transgressor while preadolescent children were not significantly less forgiving of a non-apologetic transgressor may indicate that younger children were simply less able to imagine themselves in the place of the victim in the hypothetical scenarios. Therefore, they may not have been able to realistically imagine the emotional responses of the victim, even though they could give the expected response in terms of explicit forgiveness and cognitive responses.

In contrast, a personally experienced transgression would not require the ability to take the perspective of a hypothetical victim. Therefore, preadolescent children may respond to a personally experienced transgression in a similar way to adolescents; that is, both preadolescent and adolescent children might have been less forgiving of transgressors who did not apologise, compared with transgressors who did apologise. Further study therefore needs to address the problem of how to assess responses to a personally experienced transgression on the Card Set while at the same time assessing the influence of apology and other situational variables on Card Set responses and addressing the ethical problem of transgression severity.

### *Time*

As mentioned above, a second limitation, particularly of the experimental studies (Studies 4 and 5), is that the impact of the passage of time on forgiveness was not explored. This limitation is important because examining the occurrence of forgiveness over time could give a different picture of emotional forgiveness in response to apology. As noted by McCullough, Fincham and Tsang (2003) and by McCullough and Root (2005), forgiveness refers to change over time; a cross sectional approach to measuring forgiveness (as is common in forgiveness research) is therefore limited because it does not show how forgiveness may develop over time.

In the studies using the Card Set for this thesis, children were responding directly after they heard about the transgression, and were asked to imagine (in Study 5) how they would respond if it was the next day. As such, children would have been responding as if immediately or soon after the transgression had occurred. (It is also questionable whether children were able to use perspective taking skills to respond as if it were the next day when they had just heard about the transgression in real time).

Therefore, it may be that even in response to this transgression, emotional responses might become more positive over time, and apology might predict the progress of this change even when it did not predict differences in initial emotional responses.

### *Sampling*

With the exception of Study 5, all studies in this thesis also had the limitation of small sample sizes. All studies also used a convenience sample. It is therefore arguable that children's responses reported in this thesis may not have been representative of responses that may be obtained from the general population and/or if sampling more broadly. However, efforts were made to sample from a representative range of schools, particularly for Study 5, for which it was attempted to recruit participants from a large number of schools from various locations in and around Adelaide, the capital city of South Australia. Schools included rural and suburban schools and were of varying socioeconomic backgrounds.

Convenience sampling was to some extent inevitable as the process of obtaining schools' interest in participating and then having consent forms signed and returned was often difficult. Contacted schools often cited factors such as the recent adoption of the Australian National Curriculum, bureaucratic responsibilities, and recent involvement in other research as reasons for not participating despite their interest in the present research; in the words of one approached principal, students, parents and teachers were 'surveyed out' (personal communication). Thus recruitment was often difficult despite efforts to reduce the burden to schools as much as possible.

However, the size and representativeness of samples in future studies of the Children's Forgiveness Card Set (and of children's forgiveness generally) may be

improved by adopting new methods aiming to make research more easily accessible to schools that would otherwise be interested in participating, as discussed in the next section.

### **Directions for future research**

One direction for future research emerging from these initial studies of the Card Set would be to further study the impact of situational variables on responses on the Card Set. Given that apology was not found to predict Card Set responses in the transgression presented in Studies 4 and 5, further study might vary the transgression so that other situational variables found to predict forgiveness in previous studies, such as relationship closeness, severity of consequences, and intent, were varied. In this way the impact of these variables and/or their interaction with apology in predicted responses on Card Set responses and, more broadly, on children's emotional forgiveness, might be examined.

However, further examination of these factors as well as future applied use of the Card Set would benefit from overcoming priming effects and other limitations noted so far in this chapter. Therefore, another direction for future research on the Card Set would be to adapt it from its current paper and pencil format to an electronic format. Given the increased use of such mediums as the internet in schools and among children and young people generally, the Card Set could be adapted to be available through a website or web app, with children simply needing to click and drag the cards to produce the sort score, or click on or touch a line to produce the line score.

Such an adaptation would help to address several limitations named so far. First, it would allow easy presentation of cards all at once on a screen, and thus hopefully minimise or eliminate priming by the order of presentation of cards in the set. Second, it would help with the practical problem of preparing and scoring the Card Set by hand, therefore reducing the likelihood of scoring errors and increasing the use of use and accessibility of

the set for research and applied purposes. Third, the increased accessibility of an electronic format may assist with more representative recruitment in future studies; for example, if entire studies could be run via a website, this may be easier and less intrusive for teachers and schools, who would be able to use their existing infrastructure for students to access the study at convenient times, provided consent and confidentiality could be managed appropriately. Finally, this greater accessibility would allow for greater flexibility in studies utilising the Card Set, such that it could be adapted for assessing forgiveness motivations over time, perhaps in response to actual transgressions that students had experienced.

Adaptation to an electronic format could also have additional advantages. For example, children may find an electronic format more fun and interactive. An electronic format might even allow for more interactive visual components such as moving illustrations, or for sound effects. Further, hypothetical scenarios and illustrations might be adapted to match a child's ethnicity or gender when this information was entered into the program, thereby increasing the child's identification with hypothetical characters. The greater accessibility and flexibility of an electronic application might assist in systematically varying the hypothetical transgression in order to assess the influence of a range of situational variables.

### **Future applications of the Card Set**

Given further research, the Card Set could be useful for a range of applications, including in clinical use or in school-based interventions. For example, the Card Set could be used clinically to screen for emotional responses to a transgressor, or as a precursor for talking about emotional responses to a transgressor. After therapy or intervention, it could be used to reassess how the child felt about their transgressor.



Further, because the Card Set is a measure of emotional responses, applications could apply beyond measuring forgiveness of a transgressor to issues such as assessing peer relations, bullying or class dynamics. For example, it could be used to assess how students are feeling about or progressing with issues they have with their peers or significant others in real time. Future applications might also include use with non-verbal children who find language and articulation difficult.

## **Conclusions**

Future use of the Children's Forgiveness Card Set in assessing children's emotional forgiveness depend upon addressing several limitations discussed above, and in particular requires that the issue of priming of responses on the Card Set be addressed. However, it appears that there is scope for future research to address these concerns. Meanwhile, initial studies of the Card Set suggest that it is an effective measure which children can use to report their emotional and motivational responses to a transgressor without the need for verbal or written reporting. As a measure of emotional-based reactions to transgression, the Card Set has potential as a valid, reliable and useful measure that may have many practical advantages in addressing children's underlying emotional reactions even in cases in which they report having 'forgiven'.

## References

- Ahmed, E., and Braithwaite, V. (2006). Forgiveness, reconciliation, and shame: Three key variables in reducing school bullying. *Journal of Social Issues, 62*, 347-370. doi: 10.1111/j.1540-4560.2006.00454.x
- Anthony, E.J, and Bene, E. (1957). A technique for the objective assessment of the child's family relationships. *British Journal of Psychiatry, 103*, 541-555. doi: <http://dx.doi.org/10.1192/bjp.103.432.541>
- Barker, J., and Weller, S. (2003). "Is it fun?" developing child centred research methods. *International Journal of Sociology and Social Policy, 23*, 33-58. doi: <http://dx.doi.org/10.1108/01443330310790435>
- Bassett, H.H. (2007). *Individual Differences in Children's Forgiveness: Intraindividual, Parental, and Family Environmental Contributors* (Unpublished doctoral dissertation). George Mason University, Fairfax, Virginia.
- Baumeister, R.F., Exline, J.J., and Sommer, K.L. (1998). The victim role, grudge theory, and two dimensions of forgiveness. In Worthington, E.L., Jr. (Ed.) *Dimensions of Forgiveness* (pp. 79-104). Philadelphia: Templeton Foundation Press.
- Bauminger, N., Finzi-Dottan, R., Chason, S., and Har-Even, D. (2008). Intimacy in adolescent friendship: The roles of attachment, coherence, and self-disclosure. *Journal of Social and Personal Relationships, 25*, 409-428. doi: <http://dx.doi.org/10.1177/0265407508090866>

- Boon, S.D., and Sulsky, L.M. (1997). Attributions of blame and forgiveness in romantic relationships: A policy-capturing study. *Journal of Social Behavior and Personality, 12*, 19-44.
- Braun, V., and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77-101. doi:  
<http://dx.doi.org/10.1191/1478088706qp063oa>
- Carifio, J. (1994). Sensitive data and students' tendencies to give socially desirable responses. *Journal of Alcohol and Drug Education, 39*, 74-84.
- Carlisle, R.D., Tsang, J., Ahmad, N.Y., Worthington, E.L., Jr., Witvliet, C.V.O., & Wade, N. (2012). Do actions speak louder than words? Differential effects of apology and restitution on behavioral and self-report measures of forgiveness. *Journal of Positive Psychology, 7*, 294-305. doi: 10.1080/17439760.2012.690444
- Carlson, M., Charlin, V., and Miller, N. (1988). Positive mood and helping behaviour: A test of six hypotheses. *Journal of Personality and Social Psychology, 55*, 211-229. doi: 10.1037/0022-3514.55.2.211.
- Chambers, C.T, and Johnston, C. (2002). Developmental differences in children's use of rating scales. *Journal of Pediatric Psychology, 27*, 27-36.
- Christensen, K.J., Padilla-Walker, L.M., Busby, D.M., Hardy, S.A., and Day, R.D. (2011). Relational and social-cognitive correlates of early adolescents' forgiveness of parents. *Journal of Adolescence, 34*, 903-913. doi:  
[10.1016/j.adolescence.2011.01.001](http://dx.doi.org/10.1016/j.adolescence.2011.01.001)

- Crandall, V., & Crandall, V.J. (1965). A children's social desirability questionnaire. *Journal of Consulting Psychology, 29*, 28-36. doi: 10.1037/h0020966
- Crivello, G., Camfield, L., and Woodhead, M. (2009). How can children tell us about their wellbeing? Exploring the potential of participatory research approaches within *Young Lives. Social Indicators Research, 90*, 51-72. doi: 10.1007/s11205-008-9312-x.
- Dadds, M.R., Perrin, S., and Yule, W. (1998). Social desirability and self-reported anxiety in children: An analysis of the RCMAS Lie Scale. *Journal of Abnormal Child Psychology, 26*, 311-317. doi: 10.1023/A:1022610702439
- Darby, B.W., & Schlenker, B.R. (1982). Children's reactions to apologies. *Journal of Personality and Social Psychology, 43*, 742-753. doi: 10.1037/0022-3514.43.4.742
- Denham, S.A., and Bouril, B. (1994). Preschooler's affect and cognition about challenging peer situations. *Child Study Journal, 24*, 1-22.
- Denham, S.A., Neal, K., Wilson, B.J., Pickering, S., & Boyatzis, C.J. (2005). Emotional development and forgiveness in children: Emerging evidence. In E.L. Worthington, Jr. (Ed.). *Handbook of Forgiveness* (pp. 127-142). New York: Brunner-Routledge.
- Department for Education and Child Development. (2012). *Guidelines and Application to Conduct Research in the Department for Education and Child Development*. Adelaide, Australia: Author.

- DeShea, L. (2008). Measuring Forgiveness. In W. Malcolm, N. DeCourville, and K. Belicki (Eds.). *Women's Reflections on the Complexities of Forgiveness* (pp. 21-38). New York: Routledge.
- Dorn, K., Hook, J.N., Davis, D.E., Van Tongeren, D.R., and Worthington, E.L., Jr. Behavioural methods of assessing forgiveness. *Journal of Positive Psychology*, 9, 75-80. doi: <http://dx.doi.org/10.1080/17439760.2013.844267>
- Egan, L.A., and Todorov, N. (2009). Forgiveness as a coping strategy to allow school students to deal with the effects of being bullied: Theoretical and empirical discussion. *Journal of Social and Clinical Psychology*, 28, 198-222. doi: <http://dx.doi.org/10.1521/jscp.2009.28.2.198>
- Eiser, C., Mohay, H., and Morse, R. (2000). The measurement of quality of life in young children. *Child: Care, Health and Development*, 26, 401-414. doi: [10.1046/j.1365-2214.2000.00154.x](http://dx.doi.org/10.1046/j.1365-2214.2000.00154.x)
- Enright, R. D. (1993). *The Enright Forgiveness Inventory for Children*. Madison WI: International Forgiveness Institute.
- Enright, R.D. (2000). *The Enright Forgiveness Inventory for Children*. Madison WI: Department of Educational Psychology, University of Wisconsin-Madison.
- Enright, R., and Fitzgibbons, R.P. (2000). *Helping Clients Forgive*. Washington, DC: American Psychological Association.
- Enright, R. D., Gassin, E. A., and Wu, C.R. (1992). Forgiveness: A developmental view. *Journal of Moral Education*, 21, 99-114. doi: <http://dx.doi.org/10.1080/0305724920210202>

- Enright, R.D., Knutson-Enright, J.A., Holter, A.C., Baskin, T., and Knutson, C. (2007). Waging peace through forgiveness in Belfast, Northern Ireland II: Educational programs for mental health improvement of children. *Journal of Research in Education, 17*, 63-78.
- Enright, R.D., Santos, M.J., and Al-Mabuk, R. (1989). The adolescent as forgiver. *Journal of Adolescence, 12*, 9-110. doi: 10.1016/0140-1971(89)90092-4
- Enright, R. D., and The Human Development Study Group. (1994). Piaget on the moral development of forgiveness: Identity or Reciprocity? *Human Development, 37*, 63-80. doi: 10.1159/000278239
- Fattore, T., Mason, J., and Watson, E. (2007). Children's conceptualisation(s) of their well-being. *Social Indicators Research, 80*, 5-29. doi: 10.1007/s11205-006-9019-9
- Fehr, R., Gelfland, M.J., and Nag, M. (2010). The road to forgiveness: A meta-analytic synthesis of its situational and dispositional correlates. *Psychological Bulletin, 136*, 894-914. doi: 10.1037/a0019993
- Field, A. (2009). *Discovering statistics using SPSS (3<sup>rd</sup> edition)*. Sage: London.
- Flanagan, K.S., Vanden Hoek, K.K., Ranter, J.M., and Reich, H.A. (2012). The potential of forgiveness as a response for coping with negative peer experiences. *Journal of Adolescence, 35*, 1215-1223. doi: 10.1016/j.adolescence.2012.04.004
- Gambaro, M.E., Enright, R.D., Baskin, T.W., and Klatt, J. (2008). Can school-based forgiveness counselling improve conduct and academic achievement in academically at-risk adolescents? *Journal of Research in Education, 18*, 16-26.

- Girard, M., and Mullet, E. (1997). Forgiveness in adolescents, young, middle-aged and older adults. *Journal of Adult Development*, 4, 209-220. doi: 10.1007/BF02511412
- Gold, G., & Davis, J. (2005). Psychological determinants of forgiveness: an evolutionary perspective. *Humboldt Journal of Social Relations*, 29, 111-134.
- Goss, S.M. (2006). *The Influence of Friendship Quality and Commitment on the Empathy-Forgiveness Relationship in Children and Adolescents* (Unpublished doctoral dissertation). University of Nebraska, Lincoln, Nebraska.
- Greenwald, A.G., and Banaji, M.R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102, 4-27. doi: 10.1037/0033-295X.102.1.4
- Guest, G., Bunce, A., and Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18, 59-82. doi: 10.1177/1525822X05279903.
- Hodgson, L.K., and Wertheim, E.H. (2007). Does good emotion management aid forgiving? Multiple dimensions of empathy, emotion management and forgiveness of self and others. *Journal of Social and Personal Relationships*, 24, 931-949. doi: 10.1177/0265407507084191
- Holter, A.C., Magnuson, C.M., Knutson, C., Knutson-Enright, J., and Enright, RD. (2008). The forgiving child: The impact of forgiveness education on excessive anger for elementary aged children in Milwaukee's central city. *Journal of Research in Education*, 18, 82-93.

- Hoyt, W.T., and McCullough, M.E. (2005). Issues in the multi-modal measurement of forgiveness. In E.L. Worthington, Jr. (Ed.) *Handbook of Forgiveness* (pp. 109-123). New York: Brunner-Routledge.
- Hui, E.K.P., and Chau, T.S. (2009). The impact of a forgiveness intervention with Hong Kong Chinese children hurt in interpersonal relationships. *British Journal of Guidance and Counselling*, 37, 141-156. doi: 10.1080/03069880902728572
- Karremans, J.C, and Aarts, H. (2007). The role of automaticity in determining the inclination to forgive close others. *Journal of Experimental Social Psychology*, 43, 902-917. doi: <http://dx.doi.org/10.1016/j.jesp.2006.10.012>
- Karremans, J.C., & Van Lange, P.A.M. (2008). Forgiveness in personal relationships: Its malleability and powerful consequences. *European Review of Social Psychology*, 19, 201-241. doi: 10.1080/10463280802402609
- Kazdin, A.E. (2005). Evidence-based assessment for children and adolescents: issues in measurement development and clinical application. *Journal of Clinical Child and Adolescent Psychology*, 34, 548-558. doi: 10.1207/s15374424jccp3403\_10
- Kearns, J.N., and Fincham, F.D. (2004). A prototype analysis of forgiveness. *Personality and Social Psychology Bulletin*, 30, 838-855. doi: 10.1177/0146167204264237
- Lawler-Row, K.A., Scott, C., Raines, R.L., Edlis-Matityahou, M., and Moore, E.W. (2007). The varieties of forgiveness experience: Working toward a comprehensive definition of forgiveness. *Journal of Religion and Health*, 46, 233-248. doi: 10.1007/s10943-006-9077-y.



- Lawler-Row, K.A., Karremans, J.C., Scott, C., Edlis-Matityahou, M., and Edwards, L. (2008). Forgiveness, physiological reactivity and health: The role of anger. *International Journal of Psychophysiology*, 68, 51-58. doi: <http://dx.doi.org/10.1016/j.ijpsycho.2008.01.001>
- Luchies, L.B., Finkel., E.J., McNulty, J.K., and Kumashiro, M. (2010). The doormat effect: When forgiving erodes self-respect and self-concept clarity. *Journal of Personality and Social Psychology*, 98, 734-749. doi: 10.1037/a0017838
- McCluskey, G., Lloyd, G., Stead, J., Kane, J., Riddell, S., and Weedon, E. (2008). 'I was dead restorative today': from restorative justice to restorative approaches in school. *Cambridge Journal of Education*, 38, 199-216. doi: 10.1080/03057640802063262
- McCullough, M.E. (2008). *Beyond Revenge: The Evolution of the Forgiveness Instinct*. San Francisco, CA: Jossey-Bass.
- McCullough, M.E., Fincham, F.D., & Tsang, J. (2003). Forgiveness, forbearance, and time: The temporal unfolding of transgression-related interpersonal motivations. *Journal of Personality and Social Psychology*, 84, 540-557. doi: <http://psycnet.apa.org/doi/10.1037/0022-3514.84.3.540>
- McCullough, M.E., Hoyt, W.T., and Rachal, K.C. (2000). What we know (and need to know) about assessing forgiveness constructs. In M.E. McCullough, K.I. Pargament, & C.E. Thoresen (Eds.). *Forgiveness: Theory, Research and Practice* (pp. 65-88). New York: Guilford Press.

- McCullough, M. E., Pargament, K. I., & Thoresen, C. E. (2000). The psychology of forgiveness: History, conceptual issues, and overview. In M.E. McCullough, K.I. Pargament, & C.E. Thoresen (Eds.). *Forgiveness: Theory, Research and Practice* (pp. 1-14). New York: Guilford Press.
- McCullough, M.E., Rachal, K. C., Sandage, S.J., Worthington, E.L., Jr., Brown, S.W., and Hight, T.L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology*, 75, 1586-1603. doi: <http://psycnet.apa.org/doi/10.1037/0022-3514.75.6.1586>
- McCullough, M.E., and Root, L.M. Forgiveness as change. In E.L. Worthington, Jr. (Ed.) *Handbook of Forgiveness* (pp. 91-107). New York: Brunner-Routledge.
- McCullough, M.E., Root, L.M., & Cohen, A.D. (2006). Writing about the benefits of an interpersonal transgression facilitates forgiveness. *Journal of Consulting and Clinical Psychology*, 74, 887-897. doi: [10.1037/0022/-006X.74.5.887](http://psycnet.apa.org/doi/10.1037/0022-006X.74.5.887)
- McNulty, J.K., and Fincham, F.D. (2012). Beyond positive psychology? Toward a contextual view of psychological processes and well-being. *American Psychologist*, 67, 101-110. doi: <http://psycnet.apa.org/doi/10.1037/a0024572>
- Macaskill, A. (2005). Defining forgiveness: Christian clergy and general population perspectives. *Journal of Personality*, 73, 1237-1266. doi: [10.1111/j.1467-6494.2005.00348.x](http://psycnet.apa.org/doi/10.1111/j.1467-6494.2005.00348.x).

- Magnuson, C.M., Enright, R.D., Fulmer, B., and Magnuson, K.A. (2009). Waging peace through forgiveness in Belfast, Northern Ireland IV: A parent and child forgiveness education program. *Journal of Research in Education, 19*, 57-66.
- Middleton, H. K. (1997). How do adolescents understand and define forgiveness? (Unpublished doctoral dissertation abstract). *Dissertation Abstracts International, Section B: The Sciences and Engineering, 57* (8-B), 5352.
- Morrison, B., Blood, P., and Thorsborne, M. (2005). Practicing restorative justice in school communities: The challenge of culture change. *Public Organization Review, 5*, 335-337. doi: 10.1007/s11115-005-5095-6
- Mullet, E., and Girard, M. (2000). Developmental and cognitive points of view on forgiveness. In M.E. McCullough, K.I. Pargament, and C.E. Thoresen (Eds.). *Forgiveness: Theory, Research and Practice*. (pp. 111-132 ) New York: Guilford Press.
- Mullet, E., Riviere, S., and Sastre, M. (2007). Cognitive processes involved in blame and blame-like judgments and in forgiveness and forgiveness-like judgments. *American Journal of Psychology, 120*, 25-46.
- Ohbuchi, K, and Sato, K. (1994). Children's reactions to mitigating accounts: Apologies, excuses, and intentionality of harm. *Journal of Social Psychology, 134*, 5-17. doi: 10.1080/00224545.1994.9710877
- Paleari, F.G., Regalia, C., and Fincham, F.D. (2003). Adolescent's willingness to forgive their parents: An empirical model. *Parenting: Science and Practice, 3*, 155-174. doi: 10.1207/S15327922PAR0302\_03

- Parker, J.G., and Asher, S.R. Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology*, 29, 611-621. doi: 10.1037/0012-1949.29.4.611
- Peets, K., Hodges, E.V., and Salmivalli, C. (2012). Forgiveness and its determinants depending on the interpersonal context of hurt. *Journal of Experimental Child Psychology*, 114, 131-145. doi: <http://dx.doi.org/10.1016/j.jecp.2012.05.009>
- Pickering, S. (2007). *Forgiveness In Children: Individual Factors and Social Outcomes* (Unpublished doctoral dissertation). Seattle Pacific University, Seattle, Washington.
- Rennik, J.E., McHarg, L.F., Dell'Api, N., Johnston, C.C., & Stevens, B. (2008). Developing the Children's Critical Illness Impact Scale: Capturing data from children, parents, and staff. *Pediatric Critical Care Medicine*, 9, 252-260. doi: 10.1097/PCC.0b013e31816c70d4
- Rizkalla, L., Wertheim, E.H., & Hodgson, L. K. (2008). The roles of emotion management and perspective taking in individuals' conflict management styles and disposition to forgive. *Journal of Research in Personality*, 42, 1594-1601. doi: <http://dx.doi.org/10.1016/j.jrp.2008.07.014>
- Roge, B., and Mullet, E. (2011). Blame and forgiveness judgments among children, adolescents and adults with autism. *Autism*, 15, 702-712. doi: 10.1177/1362361310394219.
- Ross, S.R., Kendall, A.C., Matters, K.G., Rye, M.S., Wrobel, T.A. (2004). A personological examination of self- and other-forgiveness in the five factor model.

*Journal of Personality Assessment*, 82, 207-214. doi:

10.1207/s15327752jpa8202\_8

Scobie, E.D., and Scobie, G.E.W. (1998). Damaging events: The perceived need for forgiveness. *Journal for the Theory of Social Behaviour*, 28, 373-401. doi: 10.1111/1468-5914.00081

Scobie, G.E.W., & Scobie, E.D. (2000). A comparison of forgiveness and prosocial development. *Early Child Development and Care*, 160, 33-45. doi: 10.1080/0030443001600104

Scobie and Scobie, G.E.W., and Scobie, E.D. (2003). Measuring children's understanding of the construct of forgiveness. In P.H. Roelofsma, J.M.T. Corleleyn, and J.W. van Saane (Eds). *One hundred years of Psychology and Religion*. (pp. 105-121). Amsterdam: VU University Press.

Semrud-Clikeman, M. (2007). *Social Competence in Children*. New York; London: Springer.

Smith, C.E., Chen, D., and Harris, P.L. (2010). When the happy victimizer says sorry: Children's understanding of apology and emotion. *British Journal of Developmental Psychology*, 28, 727-746. doi: 10.1348/026151009X475343

Smith, C.E., and Harris, P.L. (2012). He didn't want me to feel sad: Children's reactions to disappointment and apology. *Social Development*, 21, 215-228. doi: 10.1111/j.1467-9507.2011.00606.x

Soto, C.J., John, O.P., Gosling, S.D., and Potter, J. (2008). The developmental psychometrics of Big Five self-reports: Acquiescence, factor structure, coherence,

and differentiation from ages 10 to 20. *Journal of Personality and Social Psychology*, 94, 718-737. doi: <http://psycnet.apa.org/doi/10.1037/0022-3514.94.4.718>

Strelan, P. (2007). Who forgives others, themselves and situations? The roles of narcissism, guilt, self-esteem, and agreeableness. *Personality and Individual Differences*, 42, 259-269. doi: <http://dx.doi.org/10.1016/j.paid.2006.06.017>

Subkoviak, M.J., Enright, R.D., Wu, C.R., Gassin, E.A., Freedman, S., Olson, L.M., and Sarinopoulos, I. (1995). Measuring interpersonal forgiveness in late adolescence and middle adulthood. *Journal of Adolescence*, 18, 641-655. doi: <http://dx.doi.org/10.1006/jado.1995.1045>

Uziel, L. (2010). Rethinking social desirability scales: From impression management to interpersonally oriented self-control. *Perspectives on Psychological Science*, 5, 243-262. doi: 10.1177/1745691610369465

Vaish, A., Carpenter, M., and Tomasello, M. (2011). Young children's responses to guilt displays. *Developmental Psychology*, 47, 1248-1262. doi: 10.1037/a0024462

White, P. (2002). What should we teach children about forgiveness? *Journal of Philosophy of Education*, 36, 57-67. doi: 10.1111/1467-9752.00259

Whited, M.C., Wheat, A.L., and Larkin, K.T. (2010). The influence of forgiveness and apology on cardiovascular reactivity and recovery in response to mental stress. *Journal of Behavioral Medicine*, 33, 293-304. doi: 10.1007/s10865-010-9259-7.

Witvliet, C.V.O., Worthington, E.L., Jr, Root, L.M., Soto, A.F., Ludwig, T.E., and Exline, J.J. (2008). Retributive justice, restorative justice, and forgiveness: An

experimental psychophysiology analysis. *Journal of Experimental Social Psychology*, 44, 10-25. doi: <http://dx.doi.org/10.1016/j.jesp.2007.01.009>

Worthington, E.L., Jr. (2005). More questions about forgiveness: Research agenda for 2005-2015. In E.L. Worthington, Jr. (Ed.). *Handbook of Forgiveness* (pp. 557-574). New York: Brunner-Routledge.

Worthington, E.L., Jr. (2006). The development of forgiveness. In (E.M. Dowling and W.G. Scarlett, Eds.). *Encyclopedia of Religious and Spiritual Development* (pp.165-167). Thousand Oaks, California: Sage.

Worthington, E. L., Jr., Witvliet, C.V.O., Pietrini, P., and Miller, A. J. (2007). Forgiveness, health, and well-being: A review of evidence for emotional versus decisional forgiveness, dispositional forgivingness, and reduced unforgiveness. *Journal of Behavioral Medicine*, 30, 291-302. doi: 10.1007/s10865-007-9105-8

Yamaguchi, T. (2009). *Fairness, Forgiveness and Grudge-Holding: Experimental Studies with Primary School Children in New Zealand* (Unpublished doctoral dissertation). Massey University, Palmerston North, New Zealand.

Younger, J.W., Piferi, R.L., Jobe, R.L., and Lawler, K.A. (2004). Dimensions of forgiveness: The views of laypersons. *Journal of Social and Personal Relationships*, 21, 837-855. doi: 10.1177/0265407504047843

Zechmeister, J.S., Garcia, S., Romero, C., and Vas, S.N. (2004). Don't apologize unless you mean it: A laboratory investigation of forgiveness and retaliation. *Journal of Social and Clinical Psychology*, 23, 532-564. 10.1521/jscp.23.4.532.40309

## Appendices

### Appendix 2.1

Dear Parent/Guardian,

Your child is invited to participate in a study that aims to find out what children think about forgiveness. The study will be run by Emma Kemp, a PhD candidate from the School of Psychology at Adelaide University.

The researchers hope that through gaining a better understanding of children's ideas about forgiveness, the study will enable people who work with children in education and other areas (e.g. counselling) to better assist children with social skills and conflict resolution. Potentially, this will mean that children's formal and informal education about social skills, as well as training and intervention programs, will be able to be more tailored to children's needs and abilities.

In the study, each participating child will be individually asked about their thoughts about forgiveness, which will be (audio) tape recorded, and their age and gender will also be recorded. Interviews will last for approximately 10 minutes (maximum 15 minutes), and the researcher will be available to help in case children have any difficulty understanding the questions. Interviews will take place in a quiet area at school.

We understand that some children may feel slightly uncomfortable answering questions asked by a researcher; however, because the study is specifically about children's thoughts and opinions, there are no right or wrong answers, or good or bad answers. Any genuine children's thoughts or opinions are good for the study! The researcher will make sure that children understand there are no right or wrong answers, that the study is just looking at what children think and their responses will remain confidential. In addition, because the study is asking about forgiveness, this may prompt uncomfortable memories of conflict for some children. Therefore, children will be encouraged to contact the Kids' Help Line telephone number (which will be provided to children) or talk to a trusted adult in case the study brings up any memories that cause distress. For parent/caregiver information, the Kids' Help Line number is 1800 55 1800, and the Parent Helpline number is 1300 364 100. If any child is distressed or otherwise indicates a desire to stop participating in the interview, the interview will be ended immediately and, if distressed, the child will be taken to the class teacher so that he/she can be comforted and helped.

Children's responses will be used for research purposes only, and will remain confidential. Although the study is intended to become part of a PhD thesis and may be published in academic journals, any publications will report only general trends with examples, and no personal or identifying details will be reported or retained. That is, your privacy and your child's privacy will be respected fully. Participation in the study is voluntary and your child may withdraw from the study at any time without any penalty or prejudice.



A summary of results of the study will be provided to the Department of Education and Children's Services and to the school, and will be available to participants through the school at the beginning of the next school year. Otherwise, you can contact the principal researcher, Emma Kemp, on the details below.

Your child's class has been approached for the study because we are attempting to study a group of children who are representative of middle primary students in Adelaide. It is important for the study to represent the variety of children in Adelaide, so we hope very much that your child will be able to participate.

This study has been approved by the Human Ethics subcommittee of the Adelaide University School of Psychology and by the Department of Education and Children's Services. In the case of any ethical concerns, please contact the Convenor of the School of Psychology Ethics subcommittee, Associate Professor Paul Delfabbro, by phoning 8303 5744 or emailing [paul.delfabbro@psychology.edu.au](mailto:paul.delfabbro@psychology.edu.au). With any other matters, please contact the principal researcher for this study, Emma Kemp, on the details below. We appreciate your time spent reading this information and considering this request. If you are prepared for your child to take part, please consent to your child's participation by completing the accompanying consent form. Please keep this information sheet for your future reference.

Yours sincerely,

Ms Emma Kemp, PhD Candidate  
Email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

Dr Peter Strelan, Principle Supervisor,  
Ph. 8303 5662  
Email [peter.strelan@psychology.adelaide.edu.au](mailto:peter.strelan@psychology.adelaide.edu.au)

Dr Rachel Roberts, Co-supervisor,  
Ph. 8303 5228  
Email [rachel.roberts@adelaide.edu.au](mailto:rachel.roberts@adelaide.edu.au)

**University of Adelaide School of Psychology**

**Consent form for study**

**“Children’s understandings of forgiveness”**

(To be completed by parent or guardian)

I, \_\_\_\_\_ (please print  
parent/guardian name)

hereby consent to allow \_\_\_\_\_ (please print  
child’s name)

to take part in the research project entitled “Children’s understandings of forgiveness”

I acknowledge that I have read the attached information sheet, and have had the project, so far as it affects my child, explained to me fully. My consent is given freely.

I understand that while the information gained in the study may be published, my child will not be named and any individual information that my child provides will be kept confidential. I understand that he/she is free to withdraw from the study at any time without penalty or prejudice.

I understand that my child may not directly benefit from taking part in this research, and there will be no payment for my child taking part in this study.

I am aware that I should keep a copy of this form and of the attached information sheet for future reference.

Signed \_\_\_\_\_

Date \_\_\_\_\_

Relationship to child \_\_\_\_\_

## Appendix 3.1

PILOT STUDY

Number.....

1. How hard or easy is it to understand this story?



Hard



OK



Easy

2. Do the pictures help you to imagine the story more easily?



No



Yes

3. I want to know how realistic this story is for you. Can you imagine something like this happening to you or to other people you know?



No way



Maybe



For sure

4. How bad is what happened in the story?



Really bad



A bit bad



Not bad at all

## Appendix 3.2

### Parent information

#### **'Assessing children's responses to social transgression using picture cards' (pilot study)**

Dear Parent/Caregiver,

Hi, my name is Emma Kemp and I'm a research student at the University of Adelaide. I'm developing a new way to find out about children's responses in social situations, and your child is invited to take part in a small study to help.

The study will involve a small group of students giving their opinions and suggestions. First of all they will listen to a short story about a social situation between friends. Some stories will be pleasant, some will be unpleasant, but none will be worse than a usual schoolyard upset between friends. Students will be asked whether the story is easy to understand and realistic, and will be asked their understanding of what happens. Students will then be shown a set of picture cards, and will try using the cards to show how they think the children in the story respond to the situation described. I will be interested in students' comments on how easy or difficult the cards are to understand and use, and on ways that I could improve them. The whole study will be run in small groups at school and should not take longer than 20-30 minutes.

The study is not a test and there will not be any wrong answers. Participating in the study does not have any anticipated side effects and will hopefully be interesting and thought-provoking for children. However, any child who wants to stop taking part for any reason will be free to go with no further questions, prejudice or penalty. All individual responses will be kept confidential and any published results of the study will report general trends only, with no names or identifying information released.

This study has been approved by the DECS Research Unit and the University of Adelaide School of Psychology Human Ethics Subcommittee. Any questions about the ethics of this study can be directed to Professor Paul Delfabbro (ph. 8303 4936, email [paul.delfabbro@adelaide.edu.au](mailto:paul.delfabbro@adelaide.edu.au)), and any other questions can be directed to me ([emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)).

I know that parents are busy people, but your child's participation in this study will be very helpful in developing child-friendly ways to learn more about children's social responses. I do need children to participate in this study and hope that it will be of some interest to your child. I would greatly appreciate if you can sign and return the accompanying consent form to your child's class teacher by .....

With kind regards and many thanks,

Emma Kemp  
PhD Candidate, University of Adelaide School of Psychology  
Email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

(Principal supervisor Dr Peter Strelan, ph. 8303 5662, email [peter.strelan@adelaide.edu.au](mailto:peter.strelan@adelaide.edu.au))

(Co-supervisor Dr Rachel Roberts, email [rachel.roberts@adelaide.edu.au](mailto:rachel.roberts@adelaide.edu.au))

**PARENT/CAREGIVER CONSENT FOR STUDENT PARTICIPATION**

**'ASSESSING CHILDREN'S RESPONSES TO SOCIAL TRANSGRESSION USING PICTURE CARDS'**

**(PILOT STUDY)**

Principal researcher Emma Kemp, University of Adelaide, email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

I (parent/caregiver name).....

consent to my child (child's name).....

participating in this research project.

I have read and understood the information sheet on the above project and understand that my child will be asked to provide simple verbal and written feedback on the short story and picture cards involved in the study.

I understand that

- my child may not directly benefit by taking part in this research
- while information gained in this study may be published, my child will not be identified and all individual information will remain confidential
- my child's participation in this research project is voluntary; a decision not to participate will not result in any penalty and will not affect academic results or relationship with the school, and **my child is free to withdraw their participation at any time**
- there will be no payment for my child taking part in this study
- my child will be given the contact details of the Kids Helpline as part of this study

I am aware that I should keep a copy of the information sheet and consent form for future reference

(Photocopies of consent forms can be made by the researcher on the day of participation in the event that parents do not have access to copying equipment).

Signed.....

Date.....

Relationship to child.....



## Appendix 3.3

### Parent Information: Psychology study

#### 'Validating picture cards assessing children's responses to social transgression'

Dear Parent/Caregiver,

Hello, my name is Emma Kemp and I'm a PhD research student at the University of Adelaide. I'm running a study to develop a set of picture cards to assess children's responses in social situations, and your child is invited to take part.

The study involves a set of cards each showing an emotion or behaviour, using simple cartoon-like drawings. Participating children will help me to find out about how effective the cards are, by sorting the cards into three piles; (1) cards that they think show a forgiving feeling or behaviour, (2) cards that they think show an unforgiving feeling or behaviour, and (3) cards that they think show a feeling or behaviour that has nothing to do with either forgiving or not forgiving. Participating ought to take a maximum of 20 minutes.

The study is **not** a test of your child and there will not be any wrong answers. Participating in the study does **not** have any anticipated side effects and will hopefully be interesting for children. However, any child who wants to stop taking part for any reason will be free to go with no further questions, prejudice or penalty. All individual responses will be kept confidential and any published results of the study will report general trends only, with no names or identifying information released. For those children who are participating through schools, participating in the study will have no bearing on the child's academic or other school results.

This study has been approved by the University of Adelaide School of Psychology Human Ethics Subcommittee and the DECD Research Unit. Any questions about the ethics of this study can be directed to Professor Paul Delfabbro (ph. 8303 4936, email [paul.delfabbro@adelaide.edu.au](mailto:paul.delfabbro@adelaide.edu.au)), and any other questions can be directed to me ([emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)).

I know that parents are busy people, but your child's participation in this study will be very helpful in developing this set of cards, which will then help in later studies finding out about children's social responses. Such research will then potentially help in schools and other settings by assisting in such areas as children's conflict resolution and social and emotional wellbeing. I would greatly appreciate if you can sign the accompanying consent form and return it to your child's class teacher/group leader by .....

With kind regards and many thanks,

Emma Kemp  
PhD Candidate, University of Adelaide School of Psychology, email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

Principal supervisor Dr Peter Strelan, ph 8303 5662, email [peter.strelan@adelaide.edu.au](mailto:peter.strelan@adelaide.edu.au)

Co-supervisor Dr Rachel Roberts, email [rachel.roberts@adelaide.edu.au](mailto:rachel.roberts@adelaide.edu.au)

**PARENT/CAREGIVER CONSENT FOR STUDENT PARTICIPATION**

**‘VALIDATING PICTURE CARDS ASSESSING CHILDREN’S RESPONSES TO SOCIAL TRANSGRESSION’**

Principal researcher Emma Kemp, PhD Candidate, University of Adelaide School of Psychology

Email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

I (parent/caregiver name).....

consent to my child (child’s name).....

participating in this research.

I have read and understood the information sheet on this project. I understand that my child will be asked to sort a set of picture cards into those cards showing forgiving responses, those cards showing unforgiving responses, and cards which they feel do not show either forgiving or unforgiving responses.

I understand that

- my child may not directly benefit by taking part in this research
- while information gained in this study may be published, my child will not be identified and all individual information will remain confidential
- my child’s participation in this research project is voluntary; a decision not to participate will not result in any penalty and will not affect academic results or relationship with the school, and **my child is free to withdraw their participation at any time**
- there will be no payment for my child taking part in this study

I am aware that I should keep a copy of the information sheet and consent form for future reference

(Photocopies of consent forms can be made by the researcher and returned to parents with general feedback once study is complete).

Signed.....

Date.....

Relationship to child.....



## Appendix 3.4

### **Instructions to students for 'Validating Picture Cards Assessing Children's Responses to Social transgression'**

Today I'm going to ask for your help with a set of cards that I have been working on. This isn't a test and everyone's different, so there are no right or wrong answers.

The cards show different ways that people might feel or act toward somebody else. I'd like you to help me by sorting the cards into three piles. The first pile is for cards that you think show ways people might feel or act when they're forgiving somebody else. That pile should go on top of the envelope with the green star on it. The second pile is for cards that you think show ways that people might feel or act when they're not forgiving somebody else, when they haven't forgiven them for doing something wrong. That pile should go in the envelope with the red star on it. And the third pile is for just in case there are any cards that you think aren't about forgiving but also aren't about not forgiving someone...if you think they're just about something completely different. If you have any cards like that, they should go on top of the envelope with the gold star on it. The piles can have however many cards you like; it's up to you and what you think. When you've finished sorting the cards, put each pile into its envelope and put your hand up.

## Appendix 4.1

### Study four experimental procedure/questions

#### Intro to students:

In this study, I'm interested in learning more about how students feel when things go wrong between friends. This isn't a test and everyone's different, so there are no wrong answers. I'm going to read a story about a girl/boy called Jessica/Ben, and I want you to listen carefully and imagine the story as well as you can. I've got some illustrations to go with the story to help you imagine it.

#### (Read scenario – accompanied by illustrations)

#### Continued instructions to students (includes researcher pointing to each question and response option on example at the front):

Now, on the first page of your worksheet, circle what you think for the first question;

'How bad is what happened?'

You can choose from 'not bad at all' (smiley face), 'a bit bad' (slightly concerned face) or 'really bad' (angry/upset face). Just circle whichever one you think.

Now for the next question, circle what you remember from the story

'Did Sam/Emily apologise? Circle 'yes' (tick illustration) or 'no' (cross illustration)

Now for the next question, circle, how sorry do you think Sam/Emily was about what happened?

You can choose from not sorry at all (smiley face), a bit sorry (slightly sad face) or really sorry (pronounced sad face).

#### (Read Card Set Instructions)

Remember that Ben (Jessica) is a boy (girl) in primary school just like you. Take a minute to think about how you think Ben would feel about Sam (Sophie) after what happened.

Now, you each have one of these sets of cards that shows ways people might feel and act toward someone. I want you to sort the cards into two piles. One pile is for how you think Ben *would* feel or act toward Sam, you should put that pile on top of the envelope with the tick on it. The other pile is for how you think Ben *wouldn't* feel or act toward Sam, that pile should go on top of the envelope with the cross on it. So 'would feel' cards go on the tick pile, and 'wouldn't feel' cards go on the cross pile.

Also, each card has a line to show how *strongly* you think Ben would feel or want to act that way toward Sam. So, if you think 'no way' Ben would feel or act like that, you would put a mark right next to the cross (*show on large example*), but if you think just a bit that he probably wouldn't feel like that, you would put a mark a bit further away from the cross, toward the middle (*show*

*again*). And if you think that he probably *would* feel a bit like that, you might put a mark closer to the tick, and if you think he would *definitely* feel like that, you would put a mark right on the tick. And when you've finished making the mark, sort the card onto the 'would feel' pile with the tick, or the 'wouldn't feel' pile with the cross.

When you've finished, put your hand up in the air.

Ok, if everyone has finished sorting the cards, put the piles INTO the envelope that it's on: so 'would feel' cards go into the tick envelope, and 'wouldn't feel' cards go into the cross envelope.

**(Continued instructions)**

Ok, now for the next question over the page on the worksheet,

How 'back to normal' do you think Ben would feel about his friendship with Sam after what happened?

You can mark 'not at all' (angry face), 'a bit back to normal' (neutral face) or 'totally back to normal' (happy face).

Now, imagine Ben had to have Sam around to his house after school that afternoon, and Ben's parents have given him some of his favourite cake to share with Sam. How much he gives to Sam is up to him. I want you to circle the picture that shows how much cake you think Ben would be happy to share with Sam. So, you can choose from none at all, a small piece, a bit bigger piece, or an equal half of the cake (*pointing again*).

Ok, last of all, circle how much you think Ben would forgive Sam for what happened? You can choose from 'not at all' (angry face), 'forgive a bit' (neutral face) or 'totally forgive' (happy face).

(Ask students to put worksheet and small envelopes into larger envelope, seal, collect. Thank students for participation).

## Appendix 4.2

### Parent Information

#### **'Assessing children's responses to social transgression using picture cards' (experimental study)**

Dear Parent/Caregiver,

Hi, my name is Emma Kemp and I'm a research student at the University of Adelaide. I'm running a study on children's responses in social situations, and your child is invited to take part.

The study aims to trial a new way of finding out about children's responses to social situations using picture cards. To take part, students will listen to a story about a social interaction between friends. Some stories will be pleasant, some will be unpleasant, but none will be worse than a usual schoolyard upset between friends. Children will then be asked to use the picture cards to show how they would respond if they were the child in the story, and will answer a couple of further questions about the story, and record their age and gender. The whole study will take place in groups at school and should not take longer than 15-20 minutes to complete.

The study is not a test and there will not be any wrong answers. Participating in the study does not have any anticipated side effects and will hopefully be interesting and thought-provoking for children. However, any child who wants to stop taking part for any reason will be free to go with no further questions, prejudice or penalty. All individual responses will be kept confidential and any published results of the study will report general trends only, with no names or identifying information released.

This study has been approved by the DECS Research Unit and the University of Adelaide School of Psychology Human Ethics Subcommittee. Any questions about the ethics of this study can be directed to Professor Paul Delfabbro (ph. 8303 4936, email [paul.delfabbro@adelaide.edu.au](mailto:paul.delfabbro@adelaide.edu.au)), and any other questions can be directed to me ([emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)).

I know that parents are busy people, but your child's participation in this study will be very helpful in developing child-friendly ways to learn more about children's social responses. I do need children to participate in this study and hope that it will be of some interest to your child. I would greatly appreciate if you can sign and return the accompanying consent form to your child's class teacher by .....

With kind regards and many thanks,

Emma Kemp  
PhD Candidate, University of Adelaide School of Psychology  
Email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

(Principal supervisor Dr Peter Strelan, ph 8303 5662, email [peter.strelan@adelaide.edu.au](mailto:peter.strelan@adelaide.edu.au))

(Co-supervisor Dr Rachel Roberts, email [rachel.roberts@adelaide.edu.au](mailto:rachel.roberts@adelaide.edu.au))

**PARENT/CAREGIVER CONSENT FOR STUDENT PARTICIPATION**

**‘ASSESSING CHILDREN’S RESPONSES TO SOCIAL TRANSGRESSION USING PICTURE CARDS’  
((EXPERIMENTAL STUDY))**

Principal researcher Emma Kemp, PhD Candidate, University of Adelaide School of Psychology

Email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

I (parent/caregiver name).....

consent to my child (child’s name).....

participating in this research.

I have read and understood the information sheet on this project. I understand that my child will be asked to listen to a short story, then use a card-sorting task and answer several further questions to show how they think the child in the story would feel after the events described.

I understand that

- my child may not directly benefit by taking part in this research
- while information gained in this study may be published, my child will not be identified and all individual information will remain confidential
- my child’s participation in this research project is voluntary; a decision not to participate will not result in any penalty and will not affect academic results or relationship with the school, and **my child is free to withdraw their participation at any time**
- there will be no payment for my child taking part in this study
- my child will be given contact details of the Kids Helpline as part of this study

I am aware that I should keep a copy of the information sheet and consent form for future reference

(Photocopies of consent forms can be made by the researcher and returned to parents with general feedback once study is complete).

Signed.....

Date.....

Relationship to child.....

### Appendix 4.3

Table

*Bivariate correlation (Pearson's r) between forgiveness measures, remorse and severity in Study 4.*

	1	2	3	4	5	6
1. Line score						
2. Sort score	<b>.95**</b>					
3. Explicit item	<b>.46**</b>	.34				
4. Back to normal	<b>.68**</b>	<b>.62**</b>	<b>.49**</b>			
5. Cake sharing	<b>.50**</b>	<b>.44*</b>	<b>.38*</b>	<b>.37*</b>		
6. Remorse	.24	.23	<b>.34*</b>	.33	.30	
7. Severity	-.11	-.03	-.15	<b>-.36*</b>	-.14	.04

*N* = 34 for all correlation analyses

\*Significant at the  $p < .05$  level

\*\*Significant at the  $p < .01$  level

## Appendix 5.1

### Response Sheet A, Study 5

Number:

Age:

1. I want to know how realistic this story is for you. Can you imagine something like this happening to you or to other people you know?



No way



Maybe



For sure

2. How bad is what happened in the story?



Not bad at all



A bit bad



Really bad

3. Did Sophie apologise?



No



Yes

4. How sorry do you think Sophie felt about what happened?



Not sorry at all



A bit sorry



Really sorry

## Appendix 5.2

### Response sheet B, Study 5

1. How 'back to normal' do you think Beth would feel about her friendship with Sophie after what happened?



Not normal at all



A bit back to normal



Totally back to normal

2. Imagine Beth had to have Sophie around to her house after school that afternoon, and Beth's parents have given her some of her favourite cake to share with Sophie. How much she gives to Sophie is up to her. Circle the picture that shows how much cake you think Beth would be happy to share with Sophie. Choose from:



None



A small slice



A bigger slice



An equal half

#### Now thinking about YOU (not Beth) and how YOU FEEL...

3. How important do you think it is to forgive people who do something wrong?



Not important



A bit important



Really important

4. Is it OK sometimes not to forgive people?



No, never OK



Sometimes OK



Always OK

5. What would most other people think about you if you decided not to forgive someone?



They'd think I was bad



Depends on the situation



They'd think it was fine



## Appendix 5.3

### Parent Information: Psychology study

#### **‘Measuring children’s responses to social transgression: Comparing traditional questionnaires with picture cards’**

Dear Parent/Caregiver,

Hello, my name is Emma Kemp and I’m a PhD research student at the University of Adelaide. I’m running a study to develop a set of picture cards to assess children’s responses in social situations, and your child is invited to take part.

The study involves a set of cards each showing an emotion or behaviour, using simple cartoon-like drawings. Participating children will listen to a short story describing a disagreement between school friends. They will then use the picture cards to show how they believe the main character in the story would feel about their friend after the disagreement. They will also fill out a written questionnaire to show how they believe the child in the story would feel, and will fill out a questionnaire about their own usual responses in social situations. Participation will occur in groups and will take between 30 and 45 minutes for each group.

The study is **not** a test of your child and there will not be any wrong answers. Participating in the study does **not** have any anticipated side effects. However, any child who wants to stop taking part for any reason will be free to go with no further questions, prejudice or penalty. All individual responses will be kept confidential and any published results of the study will report general trends only, with no names or identifying information released. Participating in the study will have no bearing on the child’s academic or other school results.

This study has been approved by the University of Adelaide School of Psychology Human Ethics Subcommittee and the DECD Research Unit. Any questions about the ethics of this study can be directed to Professor Paul Delfabbro (ph. 8303 4936, email [paul.delfabbro@adelaide.edu.au](mailto:paul.delfabbro@adelaide.edu.au)), and any other questions can be directed to me ([emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)).

I know that parents are busy people, but your child’s participation in this study will be very helpful in developing this set of cards, which will then help in later studies finding out about children’s social responses. Such research will then potentially help in schools and other settings by assisting in such areas as children’s conflict resolution and social and emotional wellbeing. I would greatly appreciate if you can sign the accompanying consent form and return it to your child’s class teacher/group leader by .....

With kind regards and many thanks,

Emma Kemp

PhD Candidate, University of Adelaide School of Psychology, email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

Principal supervisor Dr Peter Strelan, ph 8303 5662, email [peter.strelan@adelaide.edu.au](mailto:peter.strelan@adelaide.edu.au)

Co-supervisor Dr Rachel Roberts, email [rachel.roberts@adelaide.edu.au](mailto:rachel.roberts@adelaide.edu.au)

**PARENT/CAREGIVER CONSENT FOR STUDENT PARTICIPATION**

**'MEASURING CHILDREN'S RESPONSES TO SOCIAL TRANSGRESSION: COMPARING TRADITIONAL QUESTIONNAIRES WITH PICTURE CARDS'**

Principal researcher Emma Kemp, PhD Candidate, University of Adelaide School of Psychology

Email [emma.kemp@adelaide.edu.au](mailto:emma.kemp@adelaide.edu.au)

I (parent/caregiver name).....

consent to my child (child's name).....

participating in this research.

I have read and understood the information sheet on this project. I understand that my child will be asked to listen to a short story about a disagreement between friends, then complete a card-sorting task and a questionnaire about how they believe the child in the story would respond to the disagreement as well as a questionnaire about their own usual responses in social situations.

I understand that

- my child may not directly benefit by taking part in this research and there will be no payment for my child taking part in this study
- while information gained in this study may be published, my child will not be identified and all individual information will remain confidential
- my child's participation in this research project is voluntary; a decision not to participate will not result in any penalty and will not affect academic results or relationship with the school, and **my child is free to withdraw their participation at any time**

I am aware that I should keep a copy of the information sheet and consent form for future reference

(Photocopies of consent forms can be made by the researcher and returned to parents with general feedback once study is complete).

Signed.....

Date.....

Relationship to child.....



## Appendix 5.4

Table

*Correlation between Card Set scores and other forgiveness measures, remorse, social desirability and potential covariates, Study 5*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Line score															
2. Sort score	<b>.92**</b>														
3. EFI-C total	<b>.48**</b>	<b>.45**</b>													
4. EFI-C feelings	<b>.43**</b>	<b>.38**</b>	<b>.67**</b>												
5. EFI-C Behaviours	<b>.42**</b>	<b>.37**</b>	<b>.89**</b>	<b>.43**</b>											
6. EFI-C thoughts	<b>.39**</b>	<b>.36**</b>	<b>.83**</b>	<b>.28**</b>	<b>.67**</b>										
7. Explicit item	<b>.35**</b>	<b>.26**</b>	<b>.49**</b>	<b>.32**</b>	<b>.43**</b>	<b>.49**</b>									
8. How back to normal	<b>.33**</b>	<b>.33**</b>	<b>.37**</b>	<b>.21*</b>	<b>.33**</b>	<b>.40**</b>	<b>.29**</b>								
9. How much cake	.11	.09	<b>.29**</b>	.02	<b>.25**</b>	<b>.37**</b>	<b>.30**</b>	<b>.23**</b>							
10. Remorse	.01	-.01	<b>.19*</b>	.14	.14	.15	<b>.35**</b>	<b>.17*</b>	.09						
11. Expectations of forgiveness	.17	.09	.12	-.09	<b>.23**</b>	.16	<b>.20**</b>	.15	<b>.22**</b>	.14					
12. Social desirability	.16	.20	.03	.09	.00	.05	-.04	.10	-.14	-.03	.11				
13. Age	<b>-.20*</b>	-.16	-.04	-.12	-.01	.02	.15	.08	.14	<b>.23**</b>	-.09	<b>-.30**</b>			
14. Realism	-.04	-.06	-.02	-.04	-.04	.02	.04	-.02	.15	.02	.12	-.04	<b>.20*</b>		
15. Severity	<b>-.31**</b>	<b>-.24**</b>	<b>-.26**</b>	<b>-.35**</b>	-.14	-.14	-.15	-.15	-.05	-.06	.11	.05	.07	.06	
16. Pseudo-forgiveness	<b>.38**</b>	<b>.32**</b>	<b>.27**</b>	<b>.34**</b>	.12	<b>.26**</b>	.07	.13	-.02	<b>-.21*</b>	-.09	.05	-.23	-.10	<b>-.38**</b>

Bold face type indicates a significant correlation.

\*  $p < .05$ .

\*\*  $p < .01$ .