Decision Making in Civil Disputes:
The Effect of Role and Frame

Victoria Gilliland

A thesis submitted in fulfilment of the requirements
for the degree of Doctor of Philosophy

School of Psychology
University of Adelaide
August 2010
Contents

Abstract ......................................................... xiv
Declaration ...................................................... xvi
Acknowledgements ............................................ xvii

1 Introduction ................................................. 1
   1.1 Litigation: The Applied Problem ..................... 2
      1.1.1 Costs .......................................... 3
      1.1.2 Crisis Bargaining ............................. 6
   1.2 Decision Making ...................................... 12
      1.2.1 Risk .......................................... 12
      1.2.2 Expected Utility Theory ..................... 14
      1.2.3 Rationality .................................. 16
      1.2.4 Heuristics and Biases ....................... 24
      1.2.5 Prospect Theory ............................. 25

2 Litigation .................................................. 36
   2.1 Economic Models of Suit and Settlement ............. 37
4.2 Study 3 ................................................. 114
  4.2.1 Method ........................................... 116
  4.2.2 Results ......................................... 123
  4.2.3 Discussion ...................................... 129
4.3 Study 4 .................................................. 130
  4.3.1 Method ........................................... 131
  4.3.2 Results ......................................... 132
  4.3.3 Plotting Negotiations ......................... 139
  4.3.4 Discussion ...................................... 144
5 Legal Fees and Framing 147
  5.1 Predicting the Effect of Costs .................. 148
  5.2 Study 5 ............................................... 152
    5.2.1 Method ........................................ 152
    5.2.2 Results ...................................... 154
    5.2.3 Discussion ................................... 158
  5.3 Study 6 ............................................... 160
    5.3.1 Method ........................................ 160
    5.3.2 Results ...................................... 161
    5.3.3 Discussion ................................... 164
  5.4 Study 7 ............................................... 166
    5.4.1 Method ........................................ 166
    5.4.2 Results ...................................... 167
5.4.3 Discussion ................................................. 170
5.4.4 Comparison of Studies 5 - 7 .......................... 170
5.5 Summary of Studies 5, 6 and 7 .......................... 174

6 Discussion ................................................. 178
6.1 General Discussion ........................................ 178
   6.1.1 Studies 1 and 2 ...................................... 179
   6.1.2 Studies 3 and 4 ...................................... 180
   6.1.3 Studies 5-7 .......................................... 183
   6.1.4 Conclusions .......................................... 183
   6.1.5 Key Findings ........................................ 186
6.2 Future Research: Questions & Directions .............. 189
   6.2.1 If not prospect theory then what? .................. 189
   6.2.2 Additional Points of Interest ....................... 191
6.3 Conclusion ............................................... 193

References .................................................... 194

Appendices ..................................................... 203
A Published Paper ............................................ 204
B Study 1 Scenarios .......................................... 221
C Study 3 Scenarios .......................................... 228
D Study 4 Framing Interventions 242

E Study 5 Scenarios 244

F Study 6 Scenarios 254
List of Figures

1. Subjective value function, as adapted from Kahneman & Tversky (1983). ................................................................. 29
2. The s-shaped weighted decision function from Tversky & Kahneman (1992). ................................................................. 31
3. Model of litigation settlement based on Kahneman and Tversky’s prospect theory (1983). The plaintiff’s decision (upper right quadrant) is represented as a choice between gains, while the defendant’s decision (lower left quadrant) is presented as a choice between losses. ................................................................. 44
4. Plaintiff’s evaluation of outcomes from two reference points, A and B. Outcomes are evaluated as gains relative to A but are evaluated as losses relative to B. ......................................................... 52
5. Defendant’s evaluation of outcomes from two reference points, A and B. Outcomes are evaluated as losses relative to A but are evaluated as gains relative to B. ......................................................... 52
Outcome structures used by Korobkin & Guthrie (1994). Positive or gain frame (top) and negative or loss frame (bottom).

The probability of settlement for each role/frame condition for each scenario based on the yes/no data from experiment 1 of Gilliland & Dunn (2008).

Proportion of settlement acceptances as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) averaged across scenarios.

Proportion of settlement acceptances as a function of legal role and frame for each scenario.

Average subjective probability of a plaintiff win as a function of role/frame condition for each scenario.

Proportion of settlement acceptances as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) averaged across scenarios for Study 2.

Average reservation price as a function of role and frame for each scenario.

Proportion of settlement acceptances as a function of Study (1 vs. 2), legal role and frame, averaged over scenarios.

Proportion of settlement acceptances as a function of Study (1 vs. 2), legal role and frame, for each scenario.
15 Average subjective probability of losing at trial as a function of Study, legal role and frame for each scenario.

16 Hypothetical distributions of the subjective probability of losing at trial in relation to settlement criteria for positively framed (dashed line) and negatively framed (solid line) judgments. The probability of settling in each distribution is given by the area to the right of the corresponding criterion, \((1 - r_+\)\) for positively framed judgments and \(r_-\) for negatively framed judgments.

17 The probability of accepting the settlement offer as function of role, frame, and the subjective probability of losing for each scenario and Study. The dashed line shows the best fitting constant variance function for positively framed conditions. The solid line shows the best fitting constant variance function for negatively framed conditions.

18 Average subjective probability of a plaintiff win as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) averaged across scenarios.

19 Average reservation price for each condition across all scenarios for Study 3.
Average subjective probability of a plaintiff win as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) averaged across all three scenarios.

Average subjective probability of a plaintiff win as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) for each scenario.

Average reservation price for each condition across all scenarios for Study 4.

Plaintiff offers plotted against defendant offers (both in $1000s).
As shown in (a), the reservation point defines the settlement window and settlement occurs if the negotiation reaches the settlement line \((P = D)\). The effect of a positive frame is demonstrated in (b) and a negative frame is shown in (c).

Plaintiff offers plotted against defendant offers (both in $1000s) for the P−D− condition. Figure (a) shows trajectories and reservation points for pairs that reached a settlement \((n = 12)\), while (b) shows the pairs that were unable to settle \((n = 11)\). Settlement occurs if the negotiation reaches the settlement line \((P = D)\). The dashed lines in (b) highlight unco-operative behaviour that was ‘punished’ by the other party (the associated reservation points are marked by *).
Plaintiff offers plotted against defendant offers (both in $1000s) for the P+D+ condition. Figure (a) shows trajectories and reservation points for pairs that reached a settlement, while (b) shows the pairs that were unable to settle. Settlement occurs if the negotiation reaches the settlement line ($P = D$). The dashed lines highlight negotiations which included non-monetary offers.

Two possible value functions showing the differential effect of a costs regime on litigant behaviour. Figure (a) illustrates how costs could lead positively framed litigants to show a clear preference for settlement. Figure (b) presents an alternate function which lessens the difference in value between trial and settlement and shows how positively framed litigants could prefer trial over settlement.

Proportion of settlement acceptances as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) averaged across scenarios.

Proportion of settlement acceptances as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) for each scenario.

Average subjective probability of a plaintiff win as a function of role/frame condition averaged across all scenarios.
30  Proportion of settlement acceptances as a function of legal
    role (plaintiff vs. defendant) and frame (positive vs. negative)
    averaged across scenarios. ........................................ 162
31  Proportion of settlement acceptances as a function of legal role
    (plaintiff vs. defendant) and frame (positive vs. negative) for
    each scenario. ....................................................... 162
32  Average subjective probability of a plaintiff win as a function
    of role/frame condition averaged across all scenarios. ...... 163
33  Proportion of settlement acceptances as a function of legal
    role (plaintiff vs. defendant) and frame (positive vs. negative)
    averaged across all scenarios. ................................. 168
34  Proportion of settlement acceptances as a function of legal role
    (plaintiff vs. defendant) and frame (positive vs. negative) for
    each scenario. ....................................................... 168
35  Average subjective probability of a plaintiff win as a function
    of role/frame condition averaged across all scenarios. ...... 169
36  Proportion of settlement acceptances as a function of legal role
    (plaintiff vs. defendant) and frame (positive vs. negative)
    averaged across scenarios for Studies 5, 6 and 7. .......... 171
Proportion of settlement acceptances as a function of legal role (plaintiff vs. defendant) and frame (positive vs. negative) for the defamation dispute for each of the scenario evaluation studies. This scenario was presented to participants first in Studies 1 and 2 and last in Studies 5-7.

Distribution of subjective probability estimates (chance of defendant winning) collapsed across scenario for Studies 5, 6 and 7.
List of Tables

1 Overview of experimental manipulations across all 7 studies presented in this thesis. 62

2 Latin Square arrangement of condition for each version of the questionnaire. 68

3 The average subjective probability of the plaintiff winning, reservation price and the number and average size of settlements for each scenario. 124

4 The number of negotiations and settlements for each role/frame pair combination of negotiators, as well as the average size of the settlements and the mean number of rounds completed. 124

5 Number of negotiations for each scenario and paired combination. 134

6 The number and size of settlements for each role/frame pair combination of negotiators, as well as the mean number of rounds completed. 134
Abstract

This thesis presents seven experiments that investigate the application of Kahneman and Tversky’s prospect theory (1979) to litigation, paying particular attention to the role of framing. Litigation is treated as a form of crisis bargaining which varies significantly from negotiation undertaken in more normative circumstances (for example, managerial conflict and two-party price negotiations). The first two experiments made use of the scenario evaluation paradigm, used in previous studies by Rachlinski (1996), van Koppen (1990) and Korobkin and Guthrie (1994, 1998), in which they argued that framing is dependent on litigant role with plaintiffs adopting a positive or gain frame and defendants adopting a negative or loss frame. The aim of these experiments was to manipulate the reference points of both plaintiffs and defendants in order to determine whether it is possible to alter the frame adopted by each. The results revealed that it is possible for defendants and plaintiffs to be induced to adopt a positive frame and negative frame respectively. Furthermore, regardless of role, positively framed litigants were significantly more likely to settle than their negatively framed counterparts (an average increase of approximately 20 percent). This is a new finding in litigation research.

Studies 3 and 4 sought to determine whether the dissociation of role and frame is still evident in a more realistic experiment using simulated negotiations. This methodology has previously been used by Margaret Neale, Max
Bazerman and others in the field of organisational conflict, and by Linda Babcock and colleagues (1997) in considering bias in litigation. However, the studies presented here are the first to use simulated negotiations to investigate the effects of framing during litigation. In contrast to the scenario-based studies, Study 3 found no effect of either role or frame. Study 4 was conducted in order to determine if this was due to the requirement, to maintain comparability with the scenario-based experiments, that the parties ignore court costs and legal fees. However, despite including a schedule of fees, Study 4 also found no evidence of framing effects.

The aims of studies 5, 6 and 7 were to determine whether the failure to observe framing effects in studies 3 and 4 could be attributed to the implementation of costs and other changes or whether the direct manipulation of reference points simply does not transfer to more dynamic negotiation environments. While the results of these experiments did not reach a clear outcome on this question, it was possible to conclude that prospect theory’s prediction of framing effects is not a major determinant of litigant behaviour.
Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution to Victoria Gilliland 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.

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 catalogue, the Australasian Digital Theses Program (ADTP) and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Victoria Gilliland
August, 2010
Acknowledgements

This PhD has been one hell of a journey and as it is coming to an end, there is an army of people to thank.

To my three amazing supervisors, even I am struggling for words. To John, for taking me on at the beginning of Honours, and sticking with me to the end. Your willingness to explore new topics and chase every idea to its end never ceases to amaze (and frustrate!) me. Perhaps more impressive is the patience with which you have nurtured me and never shown frustration when I have struggled. At the beginning, I wasn’t sure this journey was for me and it is mostly due to you that I have embraced it.

To Dan, for your unique ability to explain the most complicated ideas (and equations!) in the simplest of terms. You are quick to spot the difference between a problem and an Eeyore, and to help me see it too.

To Carolyn, for getting where I’m coming from. Your sense of humour has kept me sane and your grant money has kept me warm and fed. It’s been nice to have someone practical around to help me keep the other two in line!

There are so many groups of people who have helped to fill this journey with fun, mischief, procrastination, wine and even occasionally, research. To the inhabitants of Room 114 who have made the office home: Dragana, Nick and especially Angela, who was there at the beginning and will be there at the end. And to the rest of John’s lab group, particularly Rachel and Anastasia, I love our weekly meetings, sometimes for the practical support,
sometimes for a much needed laugh with friends, but usually for both.

To my Council for Crisis Management, Peter, Kate, Diane and Annemarie, your support has been immeasurable. To the good friends I did not expect to make but am so glad I did - Jo, Jess, Anthony and Yasmin. And a special thank you to Adam, it seems so long ago that we met in undergrad - I can’t believe we’re still hanging out in the basement together.

I must also thank the professional staff within the School of Psychology, particularly Jess (again!), Wanda, Carola and Lynda, who have always taken care of me even when I didn’t know I needed it.

And then there are the amazing friends who had the good sense not to do PhDs. To Dave, Anna and Emily, who have learnt when it’s ok to ask how it is going, when it isn’t, and when it’s not but they should anyway. And of course a special thank you to Chris, who not only did all of those things, but even read my thesis too.

Finally, to those that always seem to get left until the end, despite being the most important in my life – my family. In particular, to my parents, who always seem to love me, even though I kill their plants, forget to put acid in the pool, neglect the dogs and sometimes say things I don’t mean and never say the things I do. And to Luke, there’s not much else you can say to someone who can do maths AND cook, other than ‘I love you’.