

THE DYNAMICS OF BARGAINING GAMES



J. KEITH MURNIGHAN

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**For Mom and Dad
and Jack and Erik**

Preface

Bargaining is everywhere. That's the simplest way to put it. More accurately, bargaining is a useful framework to interpret any number of different interpersonal interactions.

Bargaining Games are *the* way to learn about bargaining. More accurately, bargaining games are how I think about negotiations and how I think people can learn about bargaining.

Some people may possibly be born negotiators—but I've never met any. Instead, people who bargain well have had many experiences negotiating. They have learned from their mistakes and put their experience to good use in their subsequent negotiations.

This book provides you with the opportunity to experience many different negotiations. At the same time, a course on bargaining provides you with the opportunity and impetus to spend the time that's necessary to think carefully about different bargaining strategies.

Strategic thinking is one of the keys to good negotiation. Implementation is the other. Both are essential for a successful negotiation—unless you are very lucky. If (1) you formulate strategies that carefully and accurately include considerations of who you are and what you want and (2) you implement those strategies

well, you will achieve a series of successful bargaining outcomes—and you may enjoy the process of negotiation as well.

This sounds simple enough. As you will see, however, a multitude of strategies is possible; the effectiveness of any one of them may turn on split-second timing or a subtle phrase or gesture. Bargaining is easy. Effective bargaining takes considerable personal investments of thought and practice.

The Dynamics of Bargaining Games is the result of many years of teaching and research on negotiations. All of the games have been tested in my classes. My students' reactions provide the basis for the "Typical Reactions" section that you will see for some of the games. Sometimes knowing the reactions that other people have had to the games can be very illuminating.

My experience leads me to emphasize *two important rules* that will help make these Bargaining Games more meaningful:

1. Don't read ahead. Play the games as you encounter them. Many of the chapters include some discussion of the dynamics of the games. Reading ahead may make your strategy formulations meaningless. Interference will limit how much you can learn from preparing for and playing the games. To get the most out of the games, then, don't read ahead.
2. Play each game seriously. Try to do as well as you can given the situation you face. These games are unlike the negotiations you will see in ordinary, everyday interactions. Thus, you might be tempted to treat them playfully, as many people treat games. However, if you think of these as *strategic games*, as an opportunity for serious learning, you can approach them with a motivation to do well and you will learn more from them after you've finished.

One of the easiest and most frustrating cop-outs players can claim after they have finished playing one of these games (especially if they have done poorly) is to say that they were only *playing*, that they didn't take the game seriously. By doing so, they demean the people they have been bargaining with and they undercut the other players' opportunities to learn from the game—as well as undercutting their own learning opportunities. It is far better to acknowledge your mistakes and to learn from them. After all, these games are new to most people. You shouldn't expect to do well on each of them, even given your best efforts. They were designed to be challenging. By sloughing off or by reading ahead, you avoid the challenge. You do yourself and your classmates a real disservice.

Although a single author gets all the blame for a bad book, he or she should not get credit if the book happens to be good. That is certainly the case here. Many people have contributed many good things to this book. If I have failed in presenting their contributions competently, the fault is clearly mine.

The idea for the book began after I had attended the Third International Conference on Social Dilemmas in Groningen, The Netherlands, in the summer of 1988. At the end of the conference, I traveled to Heidelberg to see some old

friends. My first evening there I was helping Sonja Bohm-Bonin prepare dinner for some friends and was telling her about some of the games people at the conference had been studying. I was enthusiastic, and she actually seemed interested. She asked whether there was something she might read about them. When I said there wasn't, I realized that I could write something—and that I would enjoy doing it. Thus, this project began in her kitchen, thanks to her curiosity about the games. She was the perfect catalyst; I am very thankful. In addition, I must also thank the participants at the Groningen conference for providing me with interesting games and stories—and the enthusiasm to help sustain me through the writing process.

Many people have told me stories that I have been intrigued by and have stolen for this book. They include, but are probably not limited to, Andreas Diekmann, Lela Hersh, Sue Jones, Jim March, Tom Moore, Kevin Peterson, Rolf Schwing, and Dick Thaler. Others, including Shannon and Tzvi Naintstein, Dafna Eylon and Ian Spira, Lynn Gale and Bud and Mary Hills, and the staff of the Center for Advanced Study in the Behavioral Sciences, have provided me with wonderful, quiet places to write.

Several people have read the entire book and have provided outstanding feedback. Max Bazerman was tremendously thorough and particularly constructive. Don Conlon, Rob Folger, Pat Seybolt, and Chris Shalley removed many of my blinders and did yeoman service cleaning up my prose. Other reviewers have commented on portions of the manuscript. They include James L. Hall, Barrie Gibbs, Roger Volkman, Benson Rosen, Angelo DeNisi, and Gerald L. Ferris. Craig LaTorre was a particularly helpful assistant. My editor, Alison Reeves, was outstanding throughout the entire process.

I have also been blessed with smart, energetic students of bargaining at Illinois, Duke, and ESSEC. They have been a tremendous sounding board for my ideas and games. They have informed both my teaching and my research. I am most grateful. I am also grateful to the organizations that have supported my research, including the Russell Sage Foundation, the Bureau of Economics and Business Research and the Research Board of the Graduate College at the University of Illinois, and the National Science Foundation.

My greatest thanks go to my colleagues and collaborators. Many have inspired me with their own work. Some I have had the tremendous privilege and pleasure to work with closely. They include Jean Bartunek, Max Bazerman, Ken Bettenhausen, Dave Boje, Dan Brass, Peter Carnevale, Carl Castore, Don Conlon, Morton Deutsch, Andreas Diekmann, Larry Kahn, Tom King, Debbie Kolb, Sam Komorita, Ed Lawler, Huseyin Leblebici, Roy Lewicki, Wim Liebrand, Robert McKersie, Dave Messick, Rick Metzger, Marian Moore, Herb Moskowitz, Greg Oldham, Charlie Plott, Lou Pondy, Joe Porac, Dean Pruitt, Amnon Rapoport, Anatol Rapoport, Elaine Romanelli, Christel Rutte, Jerry Salancik, Thomas Schelling, Francoise Schoumaker, Pat Seybolt, Blair Sheppard, Gene Szwajkowski, Richard Walton, and, most of all, Al Roth. They have steered me and my work away from a variety of wrong turns and dead ends; they have helped me

see some light and avoid my natural habit of getting lost. This last acknowledgment, of course, applies even more to the people I've chosen for the book's dedication.

Keith Murnighan
Stanford, California
April 21, 1990

Contents

Preface xi

1 Introduction 1

Cars and Bargains	2
Almost Free Consulting	3
The Old City	5
The Urge to Compete	7
Bargaining in Reverse	9
A Few More Tips	10
Rules of Thumb	11

2 The Gas Station Game 13

Background and Purpose	15
------------------------	----

Typical Reactions	18
Strategies	20
Communicating and Intentions	21
The Deadline	22
Conclusions	24

3 The Noncontact Silent Bargaining Game 28

Background and Purpose	28
Strategies	29
Prominence	30
Automobile Strategies	32
Collective Bargaining	33
Conclusions	34

4 The Everyone Has a Number Market 36

Nonverbal Behavior	37
Conclusions	42

5 The Battle of the Sexes 44

Background and Purpose	46
The Value of a Mediator	48
Arbitration	50
Intravention	53
Strategies	54
Strength of Preference	55
Conclusions	61

6 The Volunteer Dilemma 62

Strategies	63
Altruism	64

Certainty and Uncertainty	65
Conclusions	65
7 The Dollar Auction	67
Too Much Invested to Quit	68
Escalating Commitment	69
Conclusions	71
8 The Information Game	73
Information and a Used Car	75
Toy Drums	78
Conclusions	80
9 The Highest Number Game	82
Auctions	84
The Winner's Curse	87
Strategies	89
Conclusions	90
10 The Diamond Bidding Game	92
Realistic Diamond Bidding: Phase One	94
Phase Two	96
Phase Three	99
Strategies	100
Comparisons with the Gas Station Game	101
Conclusions	102
11 The Ultimatum Game	105
Labor-Management Analogs	106

The Deadline	109
A Final Note	110
Conclusions	113

12 The Game of Chicken 116

Credible Threats	117
Blackmail	119
The Paradox of the Blackmailer	121
Reputations	121
Strategies	122
Coercive Capabilities	125
Conclusions	127

13 The Game of 4–3–2 129

Stability and Defection	130
The Common Market	132
Larger Groups	134
String Quartets: Another Example	135
Conclusions	137

14 The Game of Envelopes and Money 140

Social Dilemmas	142
Some Solutions	143
Structure and Psychology	144
Conclusions	148

15 The Interdisciplinary Research Game 150

Other Veto Games	151
Other Pressures	154
Face to Face	156
Interpersonal Norms	157

Cooperative vs. Competitive Norms	162
Strategies	163
Conclusions	165

16 The Multiple Items Game 167

Strategies	168
Frames	169
Risk Aversion and Bargaining	172
Within and Between Group Negotiations	175
Conclusions	178

17 Ethics and Bargaining 180

Reasons for Unethical Behavior	181
What is Fair to Whom	182
Other Forces on Fairness	184
Varieties of Unethical Behavior	186
Justifications	187
Situational Contingencies	189
The Consequences of Ethical and Unethical Conduct	191
A Serious Case of Unethical Classroom Negotiating	192
Other Potentially Unethical Behaviors	193
The Release of Unethical Behavior	200
Conclusions	201

18 Games' End 203

References	212
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Index	221
--------------	-----

Introduction

This book is about bargaining and, therefore, about life. Bargain well and your life becomes better; at the same time, others' lives may also be better. We bargain all the time—we might as well be good at it.

Do you know the story about Chinese heaven and Chinese hell? I hadn't heard this story until just recently, when I was visiting friends in Cardiff. One of their friends discovered that I was on my way to a conference on cooperation. Her name was Sue Jones, and she related the story this way: If you should find yourself in Chinese hell, you will find that everyone has chopsticks that are 30 feet long, and no one can feed themselves. If, on the other hand, you are fortunate to find yourself in Chinese heaven, you will find that everyone has 30-foot chopsticks as well. But, in Chinese heaven, everyone feeds each other.

The moral of this story is clear. So, I hope, is this book. *The Dynamics of Bargaining Games* is about cooperation and competition and everything in between. Sometimes on earth we find ourselves cooperating, as if we were in Chinese heaven. Everyone is happy and well fed. At other times, we find ourselves locked in competition or independent action, as if we were in Chinese hell. Most of the time we find ourselves in situations that combine both competition and cooperation, and these are exactly the situations we refer to as Bargaining Games.

The Dynamics of Bargaining Games will prepare you for many different negotiations. The exercises in this book are straightforward and (I hope) clearly

presented. The more you experience and the more you think about them, the more your intuitions will improve. Even if you don't do well when you play these games, the discussions that follow, which always include ideas concerning the formulation of appropriate and sometimes optimal strategies, should put you well on your way to improving your skills as a negotiator. After some experience with these games, you should know more about how to approach a negotiation and should not have to experience as much painstaking anxiety as you've experienced before, wondering whether you're doing it right. *Bargaining Games* works on your intuitions. When you have finished this book, I predict that you won't be the same bargainer you were before. You won't be a drastically different person, but you will have a chance to be a better bargainer. You will know yourself better and, with luck, you'll be able to use that self-knowledge automatically. You'll be in a much better position to negotiate—almost anything, almost anytime.

CARS AND BARGAINS

This book will present a series of stories about negotiations. Some will be “war stories” of experiences I've had or I've heard. All the stories, however, will have a point—often they'll have several points. My old friend and colleague, Dave Boje, uses stories almost exclusively in some of his courses, and he finds that they work extremely well—if they make a point. So be ready for some stories in this book—maybe they will connect with some of your own negotiation stories.

Here's our first story, with a bit of a prologue: Have you ever talked to anyone who has just bought a new or used car and said they *didn't* get a good deal? *Everyone* thinks they got a good deal when they have just purchased a car. If something goes wrong with it soon afterwards, they may change their mind. But *immediately* after the purchase, everyone feels that they got a good deal. This, of course, is the definition of a market exchange: someone buys and someone sells, and both parties feel that the deal has made them better off. This doesn't, however, get at the question of whether they couldn't have done *better*.

I remember hearing my ex-wife's uncle once report how he had gotten a great deal on the new car he had just bought. For a long time he and his wife had not owned a car. They lived in the city and used public transportation. But their circumstances changed and it became clear that they needed a car. So he went to a dealer and, that very first day, he bought a new car! He didn't check things out with other dealers. He didn't consider other models. He didn't check the used car market. He didn't read any consumer magazines. But he came home triumphantly and announced that he had gotten a great deal. Of course, we never found out how much he actually had paid for the car; we never knew how much the price was discounted. But I would bet a lot of money that he could have paid less—quite a bit less—for the exact same car.

Bargaining Games. They are simply strategic interactions. They may be playful, as parlor games often are. Or they may be very serious, as they are when the major military powers play war games in preparation for (or during) global conflict. Bargaining games are strategic situations where bargaining is expected, where the people involved act strategically, where competition and/or cooperation can reign. This is the focus of this book: Bargaining Games, especially those that take place in small groups of two people, or fifty, or a hundred.

Those of us who do research on negotiations see bargaining everywhere. Many examples are obvious: interviewing for a job, buying something at an antique show, searching out the best price for a diamond ring, the give and take of international diplomacy, a teenager wanting to use the family car on Saturday night, and labor-management relations are all easy examples of negotiations. A wide variety of other situations, however, can also benefit by being viewed from a negotiations perspective: two people meeting for the first time and, during their conversation, subtly negotiating whether their future interactions might be romantic, businesslike, or nonexistent; the runners in a 1500 meter race, negotiating lanes and surges with their elbows or their feet, to try to be in the best position at the finish; executives who need a gargantuan task completed immediately but who present it to their secretaries with a smile, saying, "Could you possibly handle this?"; wives and husbands; parents and children; employers and employees; and sets of acquaintances and friends. Although not all of these people may be bargaining explicitly, we can learn quite a lot about these interactions by thinking of them as negotiations.

ALMOST FREE CONSULTING

Recently I was teaching my MBA course on Bargaining. The course was horrendously overenrolled—there were over 80 people in the class. As a result, students had little opportunity to ask questions about their everyday bargaining experiences. To try to alleviate this problem, I instituted "Almost Free Negotiation Consulting." Each Monday afternoon at 5 o'clock I would go to a local bar and buy myself a beer. If students wanted to come and ask questions they were welcome to join me. To keep me there, all they had to do was make sure that I had a fresh beer. (That's why the consulting was "almost" free.) As long as people had questions we would discuss them and try to come up with an answer or two.

One afternoon one of my best students, let's call him Rick, was among the group. After telling us how he had negotiated badly and probably paid too much for a beat-up old convertible that he truly loved, he presented his question. Rick was about to finish the MBA program and had just finished a round of final interviews with several companies. The company that he wanted to work for had made him an offer, and he was going to take it. The salary they offered was good, but he had a nagging feeling that it could be higher. He wanted to ask them for more money before he accepted the job, but he didn't want to alienate them in

any way because he fully intended to accept the job, even if they couldn't or didn't offer him any additional money.

It was clear that Rick's first priority was being accepted and doing well with this company. The starting salary was really a minor issue—one that he wanted to address without letting it get in the way of anything else. He wondered if he could raise the issue and increase his chances for a better salary without turning off any of his future colleagues.

This situation called for a strategy that was different from the obvious. Normally, the negotiation of your salary is one example of what we call distributive bargaining: The company either keeps a little more of its money or it *distributes* it to you. Distributive bargaining is usually quite difficult. When labor and management bargain over wages, for instance, they usually go at it nose to nose, hoping that the other side will flinch so they won't have to.

But Rick's circumstances were different. Although his starting salary was still a distributive issue, other aspects of the situation were more important. As a result, instead of calling and asking for more money before he accepted the job, we suggested that he turn things completely around. First, Rick should call and accept the job, saying how happy he was to be coming to the firm. (All of this was true, of course.) Then we decided that he should say that there was one thing troubling him—the starting salary. He would say that he couldn't help feeling that it was a little low (also true) and was there anything they could do about it?

This strategy restructured the entire situation. Rather than taking an aggressive, distributive bargaining stand, Rick shook hands first, accepted the job, and then asked them, almost as a matter of good faith, to help on the salary issue. He didn't beg or plead or bargain hard—just the reverse. He agreed with them on the big issue and left the smaller issue up to them. He was already part of the team—it was now their turn. On the one hand, then, the company may have felt obligated to reciprocate. (After all, Rick accepted, now it's our turn to do something). On the other hand, it took the burden off Rick's shoulders and placed it squarely on the firm's: If they didn't come through, they would be the ones who looked bad. Rick had no reason for bad feelings at all—he had accepted their offer of a job, expressed pleasure at the prospect of working with them, and been completely open and upfront about his feelings, asking whether they could do him a favor and boost his salary. He made no demands and didn't even say what kind of raise would make him happy.

Class met on Tuesday afternoons, the day after “Almost Free Consulting.” Prior to the next class, Rick came to the front of the room and shook my hand. He said that even though he had given me a hard time about the cost of the beer he had bought me (I sometimes order expensive beers), that beer had been the best investment he had ever made. He had talked to the company, accepted the job, and proceeded just as we planned. They called him back later and said that they were able to increase his salary by \$5,000. Needless to say, Rick was very pleased.

This story is not unique. *The Dynamics of Bargaining Games* works under the