Raiffa, "The Art and Science of Negotiation."

Raiffa develops an 'experimental' approach to competitive decision-making. He is concerned with "situations in which two or more parties recognize that differences of interest and values exist among them and in which they want (or in which one or more are compelled) to seek a compromise agreement through negotiation. He argues that the skill of the negotiator is one variable that may significantly affect the outcome of negotiated disputes.

In Chapter 1, Raiffa proposes a set of organizing questions that are all potential variables affecting outcomes:

1.   Are there more than two parties?
2.   Are the parties monolithic?
3.   Is the game repetitive?
4.   Are there linkage effects?
5.   Is there more than one issue?
6.   Is an agreement required?
7.   Is ratification required?
8.   Are threats possible?
9.   Are there time constraints or time-related costs?
10.   Are the contracts binding?
11.   Are the negotiations private or public?
12.   Is third-party intervention possible?

Rather than constituting a systematic analytical framework, these questions represent a "partial checklist" of areas of inquiry and tend to reveal the "complexity, pervasiveness and importance" of competitive decision-making.

In Chapter 4, Raiffa explores analytical models of strategic bargaining. He assumes monolithic bargaining agents (no ratification requirement) and a minimal influence (or absence) of linkages, as well as "honorable" bargainers and enforceable (inviolable) contracts. Moreover, each party knows its own reservation price (i.e. has tried to develop its BATNA, or issue-specific preferences).

Having run the classical, distributive "negotiation dance" in laboratory settings, Raiffa reports the following results: Final contracts covered the entire zone of agreement, with a "surprising spread of outcomes" around the average price. The strategy of offering a reasonable opening price and then remaining firm tends to antagonize the other party. Once the parties' offers are on the table, the midpoint is the best predictor of the outcome. When the buyer's opening bid is held constant, adding $ 100 to the opening bid of the seller results in a net increase of about $ 28 in the terms of the final contract, whereas, in the converse scenario (subtracting $ 100 from the buyer's opening bid), there is a net decrease of ~ $ 15.

Other variations in outcome were observable as bargaining strategy (as a function of party preferences) changed: When expressly told what the best achievable outcome was, sellers performed better than if they were told that anything above a certain value was acceptable. Disclosure of

preferences to the other party tended to be systematically related to outcomes in specific contexts: "Some sellers told the buyers that they thought $ 500 was the fair price and that they did not want to get a higher value; but the buyers they were bargaining with tended not to believe them, and these sellers on the average hurt themselves."

In instances where each party knows the other's reservation price, the mid-point tends to become the focal point of the negotiation. However, a number of asymmetries might occur that may prevent the parties from apportioning the surplus between themselves: Differences in endowment or wealth (resources); time-related costs; perceived determination or aggressiveness; marginal valuations (eg. tax brackets); needs; number of parties on each side, and others.

Knowledge of the adversary's reservation price may remain elusive due to "inconvenience, transaction costs and risk aversion," even after the negotiation has ended. If a party's reservation price is subsequently revealed (and is favorably different from the terms of the contract), that party's reputation will be adversely affected. In this context, misrepresentation of the true reservation price by the 'winning' party may enhance its reputation. Conversely, a buyer may want to 'buy' reputation for additional rounds of bargaining by representing a disproportionately low reservation price as higher than it actually is, and thus taking a loss on an individual transaction.

If each party has probabilistic information about the other party's reservation price in the form of an equally likely set of preferences, then smaller zones of agreement will be more difficult to locate but, once located, the parties almost always come to agreements.

Contrary to expectations, a simultaneous revelation of (stated, vs. actual) preferences does not work well. This scenario raises a methodological tension between ethical and empirical considerations: Divisions exist about the appropriateness of 'exaggeration' (is it ok to lie in a laboratory setting?) while, in the real world, parties may not actually have firm reservation prices and the lab setting (plus exaggeration) may thus, in fact, produce fairly accurate outcomes. According to Raiffa, results reveal that this approach is fairly inefficient: Over one-third of trials failed to reach an agreement (due to exaggeration) while a zone of agreement did in fact exist. A "truncated" truth-telling strategy (eg. announced RP = 100 for all true RP < \$100, and announced RP = true RP for all true RP > \$100) was successful in this context.

Raiffa concludes the chapter by proposing a theoretical technique to induce truthfulness: A third party (rules manipulator) would oversee the payment of an "adjusted amount" by the seller by the buyer. This amount varies, across iterations, with the seller's stated reservation price so as to encourage the buyer to state the true reservation price. Similarly, once the seller states the actual reservation price, the buyer would be persuaded to state her true reservation price by the same mechanism. The antecedent conditions are (i) agreement by the buyer and seller to the scheme, and (ii) knowledge by the rules manipulator of the probability distributions of the respective reservation prices. Raiffa challenges us to come up with a way to implement this model in practice.