Kenneth Oye, "Explaining Cooperation Under Anarchy: Hypotheses and Strategies," in Oye (ed.) *Cooperation Under Anarchy* (Princeton, NJ: Princeton University Press, 1986), pp. 1-24.

I. Introduction
   A. This book address two critical questions: 1) what circumstances favor the emergence of cooperation under anarchy? and 2) what strategies can states adopt to foster the emergence of cooperation by altering the circumstances they confront?
   B. This introductory chapter assesses these two questions by examining variations among situations along three dimensions: the payoff structure states confront in a given situation, the inclination of states to discount the future, and the number of states involved.

II. Payoff Structure: Mutual and Conflicting Preferences
   A. Payoff Structure and Cooperation
      1. Some international situations have payoff structures that make cooperation unnecessary -- if all the actors prefer unrequited cooperation to unilateral defection on their part, no incentive to cheat exists and cooperation is not necessary (if all states prefer free trade no matter what other states do, for example). This is called harmony.
      2. In other cases, no cooperation is possible -- if at least one actor prefers mutual defection to mutual cooperation, you have deadlock and cooperation is impossible.
      3. Thus, it only makes sense to speak of cooperation when two things are the case: actors prefer mutual cooperation to mutual defection (i.e., cooperation is possible), and actors must prefer unilateral defection to unrequited cooperation (i.e., cooperation is necessary).
      4. Not all situations requiring cooperation are alike, however. Three different games illustrate different possibilities:
         a) Prisoner's Dilemma (PD) -- each actor prefers unilateral defection to mutual cooperation, so cooperation is generally difficult.
         b) Stag Hunt -- all actors prefer mutual cooperation to unilateral defection, so it's an assurance game. Cooperation is easier than in PD.
         c) Chicken -- similar to Prisoner's Dilemma in that unilateral defection (i.e., you swerve and I don't) is preferred to mutual cooperation (we both swerve). So cooperation is harder here than in Stag Hunt. But mutual defection (nobody swerves and we crash) is the least desirable outcome, so cooperation should be easier here than in PD.
   B. Strategies to Alter Payoff Structure
      1. Unilateral strategies -- states can invest in assets that decrease their ability to defect from a cooperative arrangement and that decrease the payoff to the other party of defecting (eg., a state invests in defensive military systems, making an offensive move on its part less likely and an offensive move on its adversary's part less profitable).
      2. Bilateral strategies -- states can use issue linkage to alter payoff structures (combining dissimilar games), or they can use bilateral instructional strategies to change the other side's understanding of cause and effect and thus their perceived interests (eg., the US discussing the logic of MAD with the USSR to facilitate cooperation in the SALT I talks).

3. Multilateral strategies -- norms generated by regimes may be internalized by states, altering their behavior; or information generated by regimes may alter state's perception of self-interest.

III. The Shadow of the Future: Single Play and Iterated Games
   A. The Shadow of the Future and Cooperation -- iteration makes reputation start to count; in Stag Hunt and PD, this increases the likelihood of cooperation (each actor wants to be seen as a reliable cooperator in the future), but in chicken it can decrease the likelihood of cooperation (each actor wants to be seen as unlikely to swerve).
   B. Reciprocity (the ability in iterated games to reward cooperation with cooperation and to punish defection with defection) increases the likelihood of cooperation, but the definition of cooperation and defection must be unambiguous and there must be transparency so that cooperation and defection are apparent.
   C. Strategies to Improve Mutual Recognition of Iterated Play and Lengthen the Shadow of the Future
      1. International regimes can foster cooperation by making reciprocity easier (by codifying understandings of cooperation and defection so that they are easily recognized and mutually understood, and by promoting transparency -- see above).
      2. Issue linkage can change a single-play game into an iterated situation.
      3. Cooperation can be spread out over time to make defection less likely (eg., arms reductions can be achieved incrementally rather than in one big step).

IV. Number of Players: Two-Person and N-Person Games
   A. Increasing the number of players decreases prospects for cooperation for three reasons:
      1. With more players, transaction and information costs rise. Increasing complexity makes the identification of shared interests in cooperation more difficult.
      2. With more players, increasing heterogeneity makes defection more likely -- more players means it is more likely to have an actor that discounts the future heavily, that is too weak to engage in reciprocity, or whatever.
      3. With more players, it becomes less feasible to punish defectors by defecting yourself, particularly if defection affects all players (i.e., if you punish polluters by polluting yourself, everyone is adversely affected).
   B. Strategies of Institutionalization and Decomposition
      1. To improve prospects for cooperation with a large number of players, states can create regimes to provide rules of thumb that reduce transaction and information costs as well as mechanisms of collective enforcement that are feasible.
      2. States can also reduce the number of players in a game to improve prospects for cooperation, though this usually comes with a reduction in the gains that can be achieved through mutual cooperation (regional trade liberalization is not as beneficial as global trade liberalization). It can also affect third parties adversely, which can prompt them to take retaliatory action.

V. Conclusion -- the goal of this book is to challenge the traditional division between studies of political economy and security. The study of cooperation, the three dimensions used to assess prospects for cooperation, and the analysis of strategies for altering the environment to make cooperation more likely all transcend distinctions between economic and military affairs.