

Index

- Actual stability, 50, 51, 54, 219
 α -core, 122, 123, 145
Analysis of options, 37, 127–146, 201
Ancestor, 83
Anticipated outcome, 61, 74, 109, 114–116, 126, 155, 219
Argument of a function, 208
Arrow, K. J., 70
Asymmetric metarational outcome, 106
Asymmetric stability, 168
Aumann, R. J., 51
Axiom of choice, 68, 92, 96–100
- Bargaining, 101, 114, 121–122, 124, 127, 233–234
Basic characterization, 88
Basic game, 56, 85, 88, 94
Basic outcome, 26, 56, 88
Basic strategy, 26, 56, 88
Bentham, J., 6
Best attainable outcome, 85, 102, 104, 106, 114–116, 177
 β -core, 123–124
 β operator, 56, 84
Bipartition of outcomes, 71, 72
Blank, 35, 132, 134, 135, 137, 142
Blank space, 26, 89, 90, 90n
Bluff, 184
Boolean of a set, 69
Borel, E., 11
Breakdown of rationality first, 10, 11, 23, 30, 37, 42–44, 154 second, 23, 44–48, 68–69, 154 third, 30, 69, 179–186
- Campus conflict, 34–37
Caretaker, The, 140–145
Cartesian product, 19, 211–212
C-cooperative anticipation, 114–117, 155
Certainty, game with, 85, 179, 221–222, 225, 226
Chammah, A. M., 52n
Chance, 15, 18, 20–21
Characterization of metaequilibria, 125
Characterization of metarational outcomes, 86, 88–90
Chicken, 182, 185, 186, 223
(*C*, *H*)-metarational. *See* Coalition metarational
- C*-metarational. *See* Coalition metarational
Coalition, 73, 109–119, 122–124, 139, 154–155. *See also* Preferences of coalitions
Coalition metarational, 112–118
Communication, 106, 116, 221
Complementary set, 206
Complete metagame, 60, 84, 101, 113, 185, 197
Conflict point, 170, 185, 198, 199–200
Consistent preferences, 10, 40, 111
Contamination of preferences, 77
Continuous game, 31, 86, 149
Convergence, 101
Cooperative game, 51–54
Credibility of sanctions, 138–139
Cuban missile crisis, 181–184, 191, 223
Cycle, 72
- d-. *See* Inducement
Decision node, 14, 24
Descendant, 83, 100, 105
Determinate game, 160–165, 166, 168, 185, 188
Disjoint, 167, 206
Domination, 110, 153–154
Dostoevski, F., 3–4, 46
Dummy variable, 204, 208, 208n
- Element, 203
Empty set, 205
Equality, 204
Equilibrium, 28, 29, 41, 51, 54n, 61, 79–81, 82n, 107–108, 120–127, 160, 163–168, 175, 180, 189, 191–192
Equivalence, 213
Existentialist axiom, 64–65
Experimental error, 220–221
Experiments, 51, 65, 67, 73–77, 82, 85, 97–98, 120, 147–148, 179, 219–234
Extensive form, 11–22, 24, 75
- Family of sets, 211
Feasible outcome, 35
Festinger, L., 199–200
Finite game, 11, 19, 38, 41, 82–83, 123, 171
Follow, 89
Follow last, 89, 103, 105–106, 121

- Free will, 66, 106, 121, 159
Fully deteriorated game, 200–201
Function, 207–210
- Game against nature (one-person game), 7–8, 164
Game matrix, 11
Game of coordination, 29–31, 44, 47, 60, 194
Game theory, 1, 8, 11, 11n, 18n, 47, 50, 60, 62, 75, 79, 122, 145, 146, 202
Game tree, 13–21
General equilibrium, 120, 162, 166–168
General metarational outcome, 84–85, 103–105, 118–119, 120, 122, 139, 142
- Harsanyi, J. C., 51, 82n
Heller, J., 46
Howard, N., 64, 127, 140
Hume, D., 4, 48
- (i, H)-metarational, 112, 114, 177
Image of a function, 208
 i -metarational. *See* (i, H)-metarational
Imperfect game, 196
Indexed set, 209
Induced outcome, 179
Inducement, 169–171, 179, 189, 198, 201
Inducement equilibrium, 175–178, 180
Inducement metaequilibrium, 175–178
Inducement metarational, 175–178
Inducement rational, 175
Inducement value, 173–175, 186
Inescapable improvement, 142–145
Inessential coalition, 117–118
Infeasible outcome, 35, 36, 130, 131, 133, 137, 143
Infinity, 8, 17, 19, 19n, 78, 83, 92, 172, 190, 203
Information set, 15–16, 18, 24
Intersection of sets, 205–206, 210
- Level of a metagame, 83
Lexicographic payoff function, 149–151, 173, 175
List of issues, 128–129
Logical implication, 212
Luce, R., 42, 53
- Management Science Center, 182n, 201, 232
Merchant ship-warship game, 9–10, 19, 25, 29, 41, 42, 43
Metaequilibrium, 56–57, 60, 124–127, 167, 167n
Metagame, 11, 23, 27, 54, 67–68
Metagame equilibrium, 120–122, 124, 127
Metagame strategy, 25, 59, 61, 68, 84
Metagame tree, 55, 100, 101, 113–114
Metaoptimal outcome, 189–190
Metaoptimum, 190–192
Metarational outcome, 57, 59, 62, 79, 84–89, 100–105, 107, 112, 120
Metastrategy. *See* Metagame strategy
Mixed strategy, 37–38, 41–44, 78, 165
Model, 1, 42, 72, 75–78
Morgenstern, O., 11, 23, 38, 51, 109
Move, 169–170
Mutually ordinal game, 147–151, 171, 172
- Nash, J. F., 41, 42, 51
Necessary condition, 218
Negation, 213
Noncooperative game, 51–53
Nonquantitative approach, 1–2, 18n, 91, 155
Normal form, 11–25, 69
Normative study, 53
Nuclear test ban, 32–34, 117
Numerical utility, 11n, 18n, 38–41, 155
- Objective rationality, 10, 27, 45, 54
Offer, 180
 Ω -set, 132, 133, 135
One-shot game, 73–74, 219
Optimal outcome, 189–190
Optimum, 188, 190–192
Option, 34, 129
Ordinal game. *See* Ordinal preferences
Ordinal preferences, 10, 69, 72, 73–74, 82–83, 147–148, 154, 158
Outcome, 11, 11n, 12–13, 19, 22–23, 33

- Parlor games, 17, 152, 165
Particular outcome, 131
Particular player, 131
Partly ordinal preferences, 71–72,
 82, 147, 153
Pascal, B., 7
Perfect game, 185, 188, 195–198
Perfect information, 16
Perfectly optimal outcome,
 192–193
Perfect optimum, 192–196
Perfect recall, 16
Pinter, H., 140
Player, 11, 129
Play of a game, 21
Policy, 59, 85, 88, 97, 99, 106
Policy dilemma, 125, 140
Positive theory, 49–50, 69
Precede, 89
Preference deterioration, 148,
 199–201
Preference function, 28, 58, 69
Preferences, 9, 10, 26, 28, 47–48,
 70, 130. *See also* Ordinal
 preferences; Consistent
 preferences
Preferences of coalitions, 73,
 110–111, 139
Prime metagame, 83, 88
Prime representative, 88
Prisoner’s dilemma, 23, 44–48, 51,
 53, 55–60, 75, 102, 116–117,
 170–171, 176–177, 186,
 189, 192
Probability, 7–8, 14–15, 18, 20, 22,
 38, 41, 215–217
Proofs in mathematics, 217–218
Quantifier, 91, 93, 213–215
Quasi equilibrium, 120

Raiffa, H., 42, 53
Rapoport, A., 52n
Rational game, 186–188, 197
Rationality, 3–10, 30, 48–50, 60,
 61, 63, 69, 153, 164–165, 184.
 See also Objective rationality;
 Subjective rationality
Rational outcome, 28, 29, 57,
 79–83, 107, 131, 168
Reaction game, 73, 74, 232–234
Real world, 62, 69, 77, 97–98,
 127, 146, 149, 152, 153,
 201–202
Reflexivity of preferences, 70, 110
Rejection level, 234
Residual, 135–137
Russell, B., 4, 6, 42
Saddle point, 160–162, 165
Safe strategy, 163
Sanction, 124, 133–139
Set, 203–204
Side payments, 111
Singleton set, 205
Social sciences, 1–2, 202
Split the dollar, 123, 145
Stability, 10, 27, 50–51, 63, 74,
 108, 126, 131, 168
Strategy, 11–14, 18–19, 21, 22,
 34, 129–130
Strategy set, 19
Strictly determined game. *See*
 Determinate game
Subjective game, 62, 65, 130
Subjective metagame, 106, 121–122
Subjective rationality, 10
Subset, 206
Sufficient condition, 218
Sure-thing strategy, 27–28, 29,
 44, 102–103, 179–184
Symmetric equilibrium, 67, 122,
 127, 166
Symmetric metarational outcome,
 105–107, 119, 122, 133

Time paths, 15
Transitivity of preferences, 72
Traveling salesman problem, 8
Trust (a coalition), 114–116, 118,
 145
Two-person zero-sum game,
 151–153, 163–168, 188, 189,
 193
Undominated outcome, 112
Unilateral improvement, 131
Union of sets, 205, 210
U.S. Arms Control and
 Disarmament Agency, 128
Utility. *See* Numerical utility

Value of a function, 19, 208–209
Value of a game, 164, 167
Value of an outcome, 155–160,
 163–164, 172–173
Value-outcome, 172
Venn diagram, 206
Vietnam, 22, 125, 128–140,
 200–201

von Neumann, J., 11, 23, 38, 51,
109, 165

Well-behaved game, 156, 156n,
157, 158, 166–167

Zero-sum mentality, 152–153