

TABLE OF CONTENTS

PREFACE	21
PART I. Designers: their Designees and Nominees	25
1. Introduction	27
1.1 The analytical benchmark	27
1.2 Demand-supply vs. legal norm and business rule	28
1.2.1 IF-THEN representation	28
1.2.2 Domain and range	29
1.2.3 Conditions and tasks	30
1.3 Natural vs. artificial language	31
1.3.1 IT-parlance	31
1.3.2 Example 1: A person in different roles	31
1.3.3 Example 2: An order as a carrier of will	32
1.3.4 The evil of professional jargons	32
1.4 Associated notes	32
1.4.1 Profit function	32
1.4.2 Integrability problem	33
2. Major theses	34
2.1 Thesis A: Designer vs. Designee	34
2.1.1 Example	34
2.1.2 The thesis	34
2.1.3 Operational unit	35
2.1.4 Designer's choice	35
2.1.5 Associated notes	36
2.2 Thesis B: Task vs. behavior	36
2.2.1 Task vs. operational unit	36
2.2.2 Development	37
2.2.3 Content	37
2.2.4 Express vs. implied formulas	38
2.2.5 Task vs. condition	39
2.3 Thesis C: Designee vs. Nominee	39
2.3.1 SP-representation of an operational unit	39
2.3.2 A Beneficiary	40
2.3.3 A Defendant	41
2.3.4 A Manager	41

3.	Appendix to PART I	43
3.1	A Designer: the choice vs. behavior/action	43
3.1.1	Designer's "psychological portrait"	43
3.1.2	Axioms of rationality	44
3.1.3	Production cycle; re-design of a strategy	44
3.1.4	Designer's behavior/action	46
3.1.5	A Designee: the behavior/action	46
3.2	Infinite recursion of designs and nominations	47
3.2.1	Example 1: Manager of a Manager	47
3.2.2	Example 2: Designee turned Designer	48
3.2.3	Associated notes	49
3.3	Two kinds of maximization " <i>I</i> "	50
3.3.1	Calculation formula	50
3.3.2	"Lower-case" maximization	50
3.3.3	Profit maximization	51
3.4	A multi-unit strategy and a collective Designer	52
3.4.1	The Firm as a set of operational units	52
3.4.2	A collective choice; election vs. negotiation	53
3.4.3	Summary	54
3.5	System/process and its borders	55
3.5.1	System/process defined	55
3.5.2	Internal vs. external events	55
3.5.3	START and END of a system/process	56
3.5.4	Multi-unit START and END	56
3.5.5	START and END of a production cycle	57
3.6	Default rules as gap fillers	58
3.6.1	Incompleteness of IE-representation	58
3.6.2	Managerial gap-filling	59
3.6.3	Incomplete orders; default rule I	59
3.6.4	Conflicting orders; default rule II	59
3.7	Miscellaneous notes	60
3.7.1	Regulation ex ante and ex post	60
3.7.2	Properties of SP-representation	60
3.7.3	Demand	60
3.7.4	Pseudo-beneficiary	61
3.7.5	Kinetics vs. dynamics of a system/process	61
3.7.6	Pseudo-condition	62
3.7.7	Task vs. plan of action	62
4.	Selected implications	63
4.1	Economic theory	63
4.2	Legal scholarship and BPM	64

PART II. Commentary	65
Comment 1. Designer's choices; the case of a contract.....	69
5. Life insurance	70
5.1 Assumptions, simplifications and notations	70
5.2 Task prescription: Negotiation 2	71
5.2.1 Insurer's task.....	71
5.2.2 A third-party Beneficiary.....	71
5.2.3 Other Nominees	72
5.2.4 Justifiability	72
5.2.5 Justifiability: example 1	72
5.2.6 Justifiability: example 2	73
5.2.7 Natural language	73
5.3 Contract formation: Negotiation 1	73
5.3.1 Optimization.....	73
5.3.2 Ill-defined participants	74
5.4 Associated problems, topics and notes.....	74
5.4.1 Contract of adhesion	74
5.4.2 Voting powers.....	75
5.4.3 Order correctness; zero justifiability	75
5.4.4 Hierarchy	76
5.4.5 A task to contract	76
5.4.6 Default rules	76
5.4.7 Lower-level designs.....	77
5.4.8 Further problems	77
6. Contract for sale and purchase	78
6.1 Example.....	78
6.1.1 Two-unit two-phase system/process	78
6.1.2 Comparisons with life insurance	79
6.2 Contract formation: Negotiation 1	80
6.2.1 Design-orders	80
6.2.2 An organized market place.....	80
6.2.3 Horizontal vs. vertical relationship.....	81
6.3 Task prescription: Negotiation 2	82
6.3.1 Nominees.....	82
6.3.2 Correctness	82
7. Associated notes.....	83
7.1 Market for contractual shares.....	83
7.1.1 Content of the share.....	83
7.1.2 Developments of the share's value	83
7.2 The role of a Manager	84
7.2.1 A collective Manager	84
7.2.2 Managerial failure	84
7.2.3 Competence of the Court	85
7.3 Oligopoly and game	85

Comment 2. Multi-unit strategies; the case of a <i>JOIN</i>	87
8. Two-unit two-phase production	87
8.1 Introduction	87
8.1.1 A sole internal Supplier	87
8.1.2 Simplifications and notations	88
8.1.3 Non-standard environment	89
8.2 Contours of prescribed output	89
8.2.1 Conceivable states and domains	89
8.2.2 Magnitude vs. time of delivery	89
8.2.3 Time of delivery vs. competitiveness	90
8.2.4 Magnitude vs. competitiveness	91
8.3 Rationing vs. outsourcing	91
8.3.1 Ex ante pre-determined Supplier	91
8.3.2 Contractual outsourcing	92
8.4 Whose optimum?	92
9. Three-unit two-phase production; the case of a <i>JOIN</i>	92
9.1 Introduction	92
9.2 Time vs. time	93
9.3 Magnitude vs. magnitude	94
9.4 Two kinds of maximization " <i>II</i> "	95
9.4.1 Complexity of a design	95
10. One-unit production; outsourcing	97
10.1 One-unit one-phase production	97
10.2 Rivalry between external Suppliers	98
10.3 External substitution for an internal Supplier	99
10.3.1 <i>JOIN</i>	99
10.3.2 Failing Supplier	99
Comment 3. Stages of a task; the case of a breach	101
11. Contractual delict and sanction	102
11.1 Example	102
11.1.1 <i>SPLIT</i>	102
11.1.2 Present vs. future agent	103
11.1.3 Offender	103
11.1.4 Multidimensionality of a breach	103
11.1.5 Legal norm	104
11.1.6 Nominees	104
11.2 Manager	104
11.2.1 Collective Manager	105
11.2.2 Decision "not to claim"	105
11.2.3 Necessary condition	105
11.3 Soft (pseudo-)conditions	106
11.3.1 Excuses and cures I	106
11.3.2 Variant vs. unique prescriptions	106
11.3.3 Soft vs. hard prescription	107

11.4 Discrete set of states	107
11.4.1 Example	107
11.4.2 Foreseen risk	108
11.5 Pseudo-sanction	109
11.6 LS-parlance	110
11.6.1 Repudiation and revocation	110
11.6.2 Excuse, waiver and estoppel	110
11.6.3 Lack of action; omission	111
11.6.4 Plaintiff's contribution	111
11.6.5 Compensatory damages	112
12. Tort and crime	112
12.1 Legislator as a pseudo-Designer	112
12.1.1 Contractual gap filler	113
12.1.2 Comparison	114
12.1.3 Associated notes	114
12.2 Legislator as a genuine Designer	114
12.2.1 Introduction	114
12.2.2 Nomination vs. design of a Beneficiary	115
12.2.3 Design of a Prosecutor	115
12.2.4 Levels vs. phases	117
12.2.5 Anonymity and collectiveness of a Designee	118
Comment 4. Nominees; the case of a Manager	119
13. Management of a sale and purchase	120
13.1 Introduction	120
13.1.1 Negotiation 2	120
13.1.2 Change of notation	120
13.2 Contractual Market-Organizer	122
13.2.1 Market-Participant	122
13.2.2 Managerial contract	122
13.2.3 Horizontal vs. vertical systems/processes	123
13.2.4 Inter-dependent systems/processes	124
13.2.5 Infinite recursion	124
13.3 Multi-order	125
13.3.1 Double-Beneficiary	125
13.3.2 Insurance claim	125
13.4 Order routing	126
13.4.1 Lower-level managerial strategy	126
13.4.2 Phases of managerial operations	126
13.4.3 Who is the Designer	127
13.5 Monetary value of an order's stage	128
14. Management of a production	129
14.1 IE-representation	129
14.2 Stability of a validation outcome	130
14.2.1 Example	130

14.2.2	Time of validation	130
14.2.3	Practical solutions.	132
14.2.4	Efficiency of validation	132
14.2.5	Expected vs. factual data.	132
15.	Managerial failure	133
15.1	Manager's delict and sanction	133
15.1.1	Sources of Beneficiary's frustration	133
15.1.2	Multidimensionality of a breach	134
15.2	Management of Manager's sanction	134
15.2.1	Additional sanctionative branch	134
15.2.2	Sanctionative Manager	135
15.2.3	Sanctionative order routing	135
15.3	Partial fulfillment and breach.	136
16.	Digression: Tokens	137
16.1	Example.	137
16.1.1	Order routing	137
16.1.2	Subsequent phases	138
16.1.3	Other cases	140
16.2	Associated notes.	140
16.2.1	Trivial condition	140
16.2.2	Macro-task – parallel setting.	141
16.2.3	Macro-task – serial setting.	142
16.2.4	Infinitesimal conditions.	143
Comment 5.	One-unit strategies; the case of the Firm	145
17.	Elemental tool-kit of micro-economics	146
17.1	Two kinds of maximization " <i>III/F</i> "	146
17.1.1	Major contribution to the theory	146
17.1.2	Demand and an indirect utility (profit) function.	147
17.2	Marginal product and costs	147
17.2.1	Iso-profit lines	147
17.2.2	Cost function.	148
18.	Regulation of a Producer.	149
18.1	Existence problem	149
18.1.1	Optimum not existing	149
18.1.2	Domain of a mapping	151
18.2	Feasibility vs. conceivability	151
18.2.1	Profit function; domain and conceivability	151
18.2.2	Example	152
18.2.3	IF-THEN representation	152
18.2.4	Distance from satisfaction.	154
18.3	Forbearance to act; shut-down conditions	154
18.3.1	Confusion I: a zero-action	154
18.3.2	Confusion II: a delivery of peace and quiet	156
19.	A Representative state	157

19.1 Example	157
19.2 Present efficiency vs. future production	158
19.2.1 Representative efficiency	158
19.2.2 "Mistaken" representative efficiency	158
19.2.3 Weighted averages	159
19.2.4 Entitled agent	159
19.3 "Wrongful" representative state	160
19.3.1 Feasibility of a state vs. that of a behavior/action	160
19.3.2 Alternative representation	161
19.3.3 "Budgetary" constraint	162
19.3.4 Task breached vs. inefficient	164
20. Peculiarities of real-world designs	165
20.1 Analytically unfriendly variables	165
20.1.1 Example	165
20.1.2 Executors	165
20.1.3 Magnitudes	166
20.1.4 Places of delivery	167
20.2 Structure of conditions	168
20.2.1 Exclusions	168
20.2.2 Exceptions to exclusions	169
Comment 6. One-unit strategies; the case of the Consumer	170
21. Strategy No. 2	171
21.1 Two kinds of maximization " <i>III/C</i> "	171
21.1.1 Major contribution to the theory	171
21.1.2 Consumption cycles	171
21.1.3 Demand and an indirect utility function	172
21.2 Existence problem	173
21.2.1 Task existing	173
21.2.2 Task not-existing	174
21.3 Feasibility of states	174
21.3.1 Conceivability	174
21.3.2 Indirect utility function	175
22. Constraints to consumer behavior/action	176
22.1 Minimal level of utility	176
22.2 Consumer's behavior/action	176
22.2.1 Optimal task	176
22.2.2 Zero saving	177
22.2.3 Non-action vs. zero action	178
22.3 Expenditure function	180
22.3.1 Designer's saving	180
22.3.2 Expenditure minimization; duality	181
23. Endowment	183
23.1 Maximization problem	183
23.2 Endogenous vs. exogenous variables	183

23.3 Budget line	184
23.4 Self-transfer of wealth	185
23.4.1 Action / non-action	185
23.4.2 Pseudo-non-action	186
24. Miscellaneous notes	186
24.1 Additional regulation	186
24.1.1 Maximization problem	186
24.1.2 Feasible tasks	187
24.1.3 Feasible states	187
24.2 Multi-unit strategy	188
24.3 "Partial" conditions	189
Comment 7. Stages of a task; validity and effectiveness	192
25. Universal architecture of an insurance contract	193
25.1 Harmed / injured victim ("HIV")	193
25.2 Comparison	193
25.3 Anonymous and collective Beneficiary	195
25.3.1 Nominees	195
25.3.2 Pseudo-insurance of a non-human object	195
25.4 Universal structure	196
26. Exclusions from a condition	196
26.1 Example	196
26.2 Examples	197
26.2.1 Insured period	197
26.2.2 Insured diagnoses	198
26.2.3 Domain of justifiability	199
27. Repeated prescriptions of a task	200
27.1 Introduction	200
27.2 Misleading "equivalence"	200
27.2.1 Introduction	200
27.2.2 Domains of time	201
27.2.3 Different recoveries of the same diagnosis	201
27.2.4 Domains of diagnoses	201
27.3 Associated notes	202
27.3.1 Mixed cases	202
27.3.2 Overlapping domains	203
27.3.3 Infinite number of events	204
27.4 Rivalry between repeated tasks	205
28. Substantive vs. procedural conditions	205
28.1 SP-representation	205
28.2 Impact on coverage	207
28.3 Ex ante demand	208
29. Validity vs. effectiveness of design and re-design	209
29.1 Validity of design	209
29.2 Effectiveness of design	209

29.2.1 Insurance period	209
29.2.2 Postponed effectiveness	210
29.2.3 Retro-active effectiveness	211
29.2.4 Ex ante retro-active order	212
29.3 Consensual re-design	212
29.3.1 Consensuality of a transition	213
29.3.2 Example	213
29.3.3 Rivalry between original and new design	214
29.4 Enforceable re-design	214
29.4.1 Enforceability of a transition	214
29.4.2 Methodological notes	216
Comment 8. Multi-unit strategies; the case of a <i>SPLIT</i>	217
30. Pseudo-split.	217
30.1 Example 1	217
30.1.1 Simplifications and notations	217
30.1.2 Variant verdicts.	218
30.1.3 Graphical representation.	219
30.1.5 Classification of verdicts	219
30.2 Example 2	220
30.2.1 Macro-tasks	220
30.2.2 Macro-Executor.	221
30.2.3 Classification of verdicts	221
30.3 Digression: analytically “friendly” arrangements	222
30.3.1 Continuum of states and prescriptions	222
30.3.2 Binary abstraction.	223
31. <i>SPLIT</i> proper	223
31.1 Three-unit two-phase production	223
31.1.1 Multi-unit Phase 2	223
31.2 Rivalry/competition	224
31.2.1 Overlapping domains	224
31.2.2 Solutions to the conflict.	226
31.2.3 Non-conflicting heterogeneity	227
31.3 Vertical integration and disintegration.	227
31.3.1 Two-plant and two-product designs.	227
31.4 Associated notes	229
31.4.1 Executors	229
31.4.2 Beneficiaries	229
31.4.3 Further notes.	229
Comment 9. Re-allocation of wealth between future agents	230
32. Introduction	231
32.1 Essential identities and notation	231
32.1.1 Operational situations	231
32.1.2 Allocation vs. re-allocation; transfer	232

32.1.3 Closeness	232
32.2 Persons and roles	233
32.2.1 Designees	233
32.2.2 Designer's welfare	233
32.3 Generalized production function	234
32.4 Two kinds of maximization "IV"	234
32.5 Associated notes	236
32.5.1 Behavioral cycles	236
32.5.2 Present vs. future behavior/action	236
32.5.3 Acceptance of a transfer	237
32.5.4 Self-design	237
32.6 Variant social contexts	237
33. The case of two Plants	238
33.1 Introduction	238
33.1.1 Essential identities and notation	238
33.1.2 Donor vs. Collector	239
33.2 Two kinds of a maximization "IV-a"	239
33.2.1 Revenue functions	239
33.2.2 "Lower-case" maximizations	240
33.3 Present agent	240
33.3.1 Maximization problem	240
33.3.2 Equality of marginal revenues	241
33.3.3 Graphical representation	242
33.3.4 Example	243
33.3.5 Interior vs. corner optima	243
33.4 Utility (production) possibility frontier	244
33.4.1 Future agents	244
33.4.2 Revenues	245
33.4.3 Linear revenues	246
33.4.4 Reverse revenue function	247
33.4.5 Inverse problem	249
33.5 Inter-personal preferences	250
33.5.1 Introduction	250
33.5.2 Complex structure of a task	251
34. The case of the Firm and its Bank	252
34.1 The nature of banking services	252
34.1.1 Collector vs. Donor	252
34.1.2 Simplifications	252
34.1.3 Feasible transfers	253
34.2 Digression: terminology	253
34.2.1 Investor vs. dis-Investor	253
34.2.2 Lender/Creditor vs. Borrower/Debtor	254
34.3 Two kinds of a maximization "IV-b"	254
34.4 Present agent	255
34.4.1 Equality of marginal revenues	255

34.5 Revenue functions	256
34.6 Solvency problem	257
34.6.1 Relevance of an endowment	257
34.7 Zero endowments	259
34.8 Utility possibility frontier	261
34.8.1 Borrowing	261
34.8.2 Lending	262
35. The case of two Consumers	263
35.1 Introduction	263
35.1.1 Essential identities and notation	263
35.1.2 Generalized production and revenue functions	264
35.2 Present agent	265
35.2.1 Generalized utility function	265
35.2.2 Welfare function – discounting	265
35.2.3 Socio cultural distance	266
35.2.4 Budget constraint	266
35.2.5 Donor vs. Collector	267
35.3 Analytical and graphical solution	268
35.3.1 Kuhn-Tucker in action	268
35.3.2 Equality of marginal utility	268
35.3.3 Graphical representation	269
35.3.4 Digression – utility of money	269
35.3.5 Infeasibility and sensitivity	270
35.4 Physical vs. monetary representation	271
35.4.1 Edgeworth box representation	271
35.4.2 Iso-wealth lines	272
35.4.3 Efficiency, equilibrium, optimality and social justice	273
35.4.4 Welfare function – physical representation	273
35.4.5 Optimal iso-wealth line	274
35.4.6 Digression: two-Plant case	275
35.5 Associated notes	276
35.5.1 Post-transfer developments	276
35.5.2 Variant choices	277
35.5.3 Designer’s motivation	278
36. The case of a Consumer and a Bank	279
36.1 The nature of banking services	279
36.1.1 Collector vs. Donor	279
36.1.2 Reverse overall revenue	279
36.2 Present agent	280
36.2.1 Welfare function	280
36.2.2 Intra- vs. inter-temporal choice	280
36.3 Analytical and graphical solution	281
36.3.1 Kuhn-Tucker in action	281
36.3.2 Utility possibility frontier	282
36.3.3 Zero endowments	283

TABLE OF CONTENTS

36.3.4 Lender/Creditor vs. Borrower/Debtor	283
36.4 Additional external income	284
36.4.1 Consumer's debt	284
36.4.2 Present agent	285
36.4.3 Edgeworth box representation	287
37. The case of a Robinson Crusoe economy	288
37.1 The case of a Consumer and Manufacturer	288
37.1.1 Endowments	288
37.1.2 Donor vs. Collector	288
37.1.3 Behavioral cycles	289
37.1.4 Present agent – a graphical representation	290
37.2 Persons and roles	291
37.2.1 Desert island	291
37.2.2 Nominees	291
37.3 Four-unit two-phase system/process	291
Comment 10. Designer's choices; the case of an uncertain profit	293
38. Assumptions, simplifications and notations	294
38.1 A choice from a set of profit-making Firms	294
38.1.1 Heterogeneous strategies	294
38.1.2 Discrete variants and their discrete states	295
38.2 Two kinds of maximizations "V"	295
38.2.1 Formula for the optimal firm	295
38.2.2 Two-step "procedure"	296
38.3 Associated notes	296
38.3.1 Existing (actual) vs. new (offered) strategy	296
38.3.2 Change of notation	296
39. Generalized utility	297
39.1 Utility of money	297
39.2 Utility of the Firm	298
39.2.1 Text-book notation	298
39.2.2 Utility vector as an overall measure of utility	298
40. Uncertainty	299
40.1 Representative level of utility	299
40.1.1 Representative state	299
40.1.2 Example	299
40.1.3 Preferential ordering of variant firms	299
40.2 Problems trivialized	300
40.2.1 Profit as Designer's utility	300
40.2.2 Probability distribution	300
40.2.3 Mean (expected) value of profit	301
40.2.4 Example	301
40.3 Uncertainty vs. risk	302
41. Mean/expected utility of profit	303
41.1 Referential interval of profits	303

41.2 Fifth Axiom of Rationality	305
41.2.1 Axioms of rationality	305
41.2.2 Subjective probability of winning	306
41.2.3 Subjective-objective probability	307
41.3 "Psychology" of uncertainty	307
41.3.1 Properties of subjective probability	307
41.3.2 Economics vs. "psychology"	307
41.4 Homogenization of heterogeneity	308
41.4.1 Fifth Axiom in action	308
41.4.2 Simultaneous occurrence of events	309
41.4.3 Resultant criterion	310
41.5 Multi-dimensionality reduced	311
42. Binary choice " <i>I</i> "	311
42.1 Introduction	311
42.2 Two-state strategy	312
42.2.1 Bad vs. good states	312
42.2.2 Example – two-state lottery	312
42.2.3 Expected (mean value of) profit	313
42.2.4 Subjective probability	314
42.2.5 Expected utility	315
42.2.6 Referential profit	317
42.2.7 The third criterion	318
42.3 Two-strategy (yes-or-no) choice	319
42.3.1 Notation	319
42.3.2 Two-state strategies	320
42.3.3 Representative states	320
42.3.4 Action vs. non-action	322
42.4 Associated notes	322
42.4.1 Pseudo-design of a Designer	322
42.4.2 Facts finder	323
43. One strategy certain	324
43.1 Introduction	324
43.1.1 Notation	324
43.1.2 Associated notes	324
43.2 Action towards uncertainty	324
43.2.1 Introduction	324
43.2.2 The criterion of action	325
43.2.3 Variety of arrangements	326
43.2.4 Fairness	326
43.2.5 Digression: pseudo-normativity of economics	327
43.3 Action towards certainty	327
43.3.1 Example 1: Renting of an uncertain firm	327
43.3.2 Example 2: Insurance of an uncertain firm	328

Comment 11. Designer’s choices; the case of a *game* 330

44. Assumptions, simplifications and notations 330

 44.1 A choice from a set of profit-making Firms 330

 44.2 Binary choice “II” 331

 44.2.1 Two-strategy (yes-or-no) choice 331

 44.2.2 Two-state and homogeneous strategies 332

 44.2.3 Certainty vs. uncertainty 332

 44.2.4 Expected utility 332

 44.3 Example 332

 44.3.1 Persons and roles 333

 44.3.2 Actual vs. offered strategies 333

 44.3.3 Competitiveness/rivalry 333

 44.3.4 Other persons and roles 333

45. Pay-off matrix 334

46. A set of optimal strategies 337

 46.1 Analytical symmetry of counter-Players 337

 46.2 Probability distribution 337

 46.2.1 Bad vs. good state 337

 46.2.2 “Objectiveness” of probabilities 338

 46.2.3 The counter-Player 338

 46.3 Summary 339

 46.3.1 IF-THEN representation 339

 46.3.2 The simplest analytical question 339

 46.3.3 Action vs. non-action 340

 46.4 Example 340

 46.4.1 Distribution of labor and profit 340

 46.4.2 Distribution of wealth 341

47. External interventionist 342

 47.1 External preferential ordering 342

 47.2 Interventionist’s discontent; examples 343

 47.3 Interventionist’s task 343

Register 345