α-property, 577, 587–8	bureaucracies
acyclicity, 585, 644	efficiency of, 373-80
agenda setters	and government size, 222, 523-7
and budget referenda, 371-3, 668-9	incentives in, 362–3
in bureau-sponsor situations, 363–8	monitoring of, 367
in logrolling situations, 118–20	objectives of, 362-3, 368-71
with majority rule cycles, 112-4, 360-1	output of, 362–3
alienation, 232–3	power within, 360-2, 371-3
allocative efficiency	size of, 362–8, 371–3
with bureaucracies, 363-8	
with clubs, 183-6, 194-9, 677	cabinet stability, 290-5
and collective choice, 179-81, 675-9	campaign expenditures
with demand-revealing process, 162-6	determinants of, 486–8
with externalities, 25–7	empirical evidence, 481-96
under majority rule, 140-3	informative, 476–7
with point voting, 172–3	models of, 476–81
and prisoners' dilemma, 9–14	persuasive, 477–81
and public goods, 10–1, 18–25	and votes for candidates, 481
versus redistribution, 138–46, 675–7	and voting by representatives, 489–96
and social welfare function, 564, 578	welfare effects of, 497–500
under voting-with-the-feet, 186–94, 202–4	cancellation axiom, 152
see also Pareto postulate	candidates
anarchy	entry and exit of, 242–3
cooperation within, 12–4	objectives of, 230, 241–3, 278–80, 442–3,
distribution out of, 9–10, 577	489–96
anonymity axiom, 134, 152, 569	provision of information, 476–7
approval voting, 148–52, 156–7	cardinal utility
Arrowian SWF, see social welfare function (Arrow)	and Arrow's SWF, 591, 596
auction voting process, 168–9, 179–81, 678	
autocratic government, see dictatorship	and Bergson-Samuelson SWF, 565–8
autocratic government, see dictatorsinp	and demand-revealing procedure, 174
0 597 0	and Harsanyi's SWF, 569–71
ß-property, 587–8	and point voting, 174
Banks set, 125	central bank independence, 465–6
bargaining problem (Nash), 576–7	central party, 284
bargaining set, 118, 125	centralization of government, 227–9
Baumol effect, 510–1, 531	chicken, game of, 16–8
Benthamite SWF	choice function, 586
normative properties of, 569–71, 578–81	choice set, 152
and probabilistic voting, 254, 256-7	closed-minimal-range hypothesis, 282–4
see also social welfare function	clubs
Bergson-Samuelson SWF, see social welfare function	and Arrow theorem, 590
(Bergson-Samuelson)	and core, 186, 194-7
black markets, 539–44	optimality properties, 183-6, 194-7, 677
Borda count, 149–57, 590–1	for redistribution, 48

coalition theories, multidimensional issue space,	deadlocks between president and Congress, 395-9
285–9, 666	decisionmaking costs, see transactions costs
coalition theories, one-dimensional issue space,	decisive set, 584
280–4, 665	decisiveness axiom, 134
Coase theorem,	deficits, 466–9
and core, 30–32	degree of publicness, 246–7
experimental results, 29–30, 73 generalization of, 32–4	demand-revealing process, 162–8, 179–81, 594, 678
with more than two players, 30–32, 35–40	democracy, economic performance of, 420–5, 553 dimension-by-dimension median, 286–9
and property rights, 30–2, 34–5	deviation from proportionality, 277–8
statement of, 27–30	deterministic voting, 249–52
competitive solution to a game, 118, 124–5	d'Hondt formula, 267, 269, 278
Condorcet criterion, 124, 147–52	dictatorship
Condorcet jury theorem, 128–33	definition of, 406–7
conflict issues, 627, 631	dilemma of, 416–7
congressional dominance	economic performance of, 420–4
through administrative procedure, 388	goals of, 409–12
through administrative structure, 386–8	origins of, 407–9, 417–20
with judiciary, 399-401	survival of, 414–6, 417–20
president dominates, 393-5	difference principle, 599-602, 604-7, 609, 612
over president, 391–2	direct democracy, 531-3
consistency axiom, 152-3	dominant strategy
constitutions	under approval voting, 156
and Arrow axioms, 583, 595	definition of, 10, 12
constraints on bureaucracy and government,	under demand-revealing process, 160–3
380–2	of minimax-regret voter, 307–8
as contracts, 615–6, 634–6, 637–9	in prisoners' dilemma, 12
as conventions, 636–9	and uncovered set, 237–40
emergence from anarchy, 9–10, 577	Droop quota, 267, 269, 278
fairness of, 615	Duverger's law, 271–6, 296, 299
obligations under, 631–4	accompanie foredom and amough 552 A 560
and Paretian liberal rights, 652–4	economic freedom and growth, 553–4, 560
within Rawls's theory, 602 rights under, 631–4, 652–4	economic man assumption, 1–2, 230, 476, 479–80 effective number of parties, 273–6, 292–4
as SWFs, 580–1, 620–1, 639	electoral competition and macroeconomic policies,
symmetry constraint under, 624–5, 627	437–46, 456–9
uncertainty and, 615–7, 619–24	see also two-party and multiparty systems
and voting rule choices, 622–3, 625–7, 629–31	electoral rules
see also social contract	defined, 265–71
contractarian theory, 6, 141, 144, 598–9, 676	and degree of proportionality, 276–8
Coombs system, 147–52, 157	and number of parties, 271–6
coordination games, 14-6	elimination of indifferent individuals axiom, 568–9
core	entitlement principle, 607-8, 609
and Coase theorem, 30-2	ethical voter hypothesis, 322-5, 329-32
with clubs, 186, 194-7	envy, and difference principle, 606
definition of, 30–1	evolutionary game theory, 15-6
and difference principle, 604-5	experimental economics,
and heart, 286	and Coase theorem, 29-30, 73
in majority rule experiments, 123-6	and cycling, 123–6
corruption, 544–5	and public goods provision, 40–42
cycling	expressive voter hypothesis, 320–22, 329–32
under logrolling, 107–9	externalities
under majority rule, 84–5, 98–9	and Coase theorem, 27–34
and Paretian liberal theorem, 644	definition of, 25
under a qualified majority rule, 99–103	and Pareto optimality, 25–7
tests for, 120–6, 658, 662–3	extremal restriction, 94–7
under two-party competition, 232, 249–52	European Union
and transitivity axiom, 586-8	budget, 226–7

decision making in, 401–5	inflation, 461–6
redistribution in, 59–63, 226–7	interest groups
taxation in, 533	and campaign expenditures, empirical evidence, 481–9
fairness, see justice	and campaign expenditures, theory, 475-81
faithfulness axiom, 152-3	effect on growth of nations, 555-60
federalism	and electoral equilibria, 255-7
assignment problem, 209-13	formation of, 473–5
centralization under, 227-9	and government size, 519-23, 532
grants under, 215–27	and lobbying, 496-7
logrolling under, 213–5	and rent seeking, 347–53, 554
and government size, 213-5, 223-7, 533	welfare effects of, 497-500, 680
finite sensibility units, 575-6	
fiscal illusion, 221-3, 527-30	judiciary
flypaper effect, 221–3	goals of, 399-401
free-rider principle, 13, 35–40, 473–5, 658, 666–8	interaction with other branches, 399
1.00 1.001 primorpre, 10, 20, 10, 170 2, 000, 000 0	justice
government	as fairness, 598–9
autocratic, see dictatorship	general conception of, 599, 608–9
constitutional constraints on, 380–2	institutions favoring, 599–600
efficiency of, 371–80	and SWF, 570–5
reasons for, see externalities, public goods,	special conception of, 599–602, 606
redistribution, transaction costs	two principles of, 599–602, 604–9
see also government size	T ' d 11.0
government size	Leviathan model of government
and Baumol effect, 510–1, 531	empirical evidence of, 382–3
and black markets, 539-44	theory of, 380
bureaucracy and, 222, 523-7, 531-2	lexicographic orderings
and corruption, 544–5	within Bergson-Samuelson SWF, 565-6
demand for public goods and, 506–11, 530	within difference principle, 600–2, 604–6
and direct democracy, 531-3	of two principles of justice, 600, 604
and economic growth, 548–60	liberal rights
federalism and, 213-5, 223-7, 533-4	over actions, 646-8, 650-1
fiscal illusion and, 527-530	versus constitutional rights, 652-4
interest groups and, 354-5, 519-23, 532, 545-60	definition of, 643–4
as monopolist, 380–2	Paretian paradox, 643-4
and productivity, 545-8	Rawlsian, 599–600, 604, 607–8
redistribution and, 511–9	resolutions of paradox, 644-50
statistics on, 501-6, 511-2, 520	over states of the world, 643-4, 650-1
and tax elasticity, 528-9	limited voting, 270–71
and transaction costs, 521–2	Lindahl tax price
grants, intergovernmental, 215–27	and demand-revealing process, 168–9
growth of nations, 548–59	and public good provision, 71–2, 197–8
growth of hattons, 540 55	and public provision of private good, 81–2
Hare formula, 267, 269, 278	lobbying, 496–7
Hare system, 147–52, 157	logrolling, 104–12, 118–20, 213–5, 234, 670
Harsanyi SWF, see social welfare function	
(Harsanyi)	majority rule
heart, political, 285-7	and agenda manipulation, 112–4
	allocative efficiency under, 140-3, 519-20
ideology	axiomatic equivalence, 133-6
and party policies, 440–46, 447–59, 470–1, 665	and Condorcet jury theorem, 128-33
and representative voting, 489-96	cycling under, 84–5, 107–9
Imperiali formula, 267, 269, 278	definition of, 133
independence of infeasible alternatives, 590	equilibrium under, with homogeneous preferences,
independence of irrelevant alternatives, 583, 590-6	97–101
indifference of voters, 232-3	equilibrium under, with nonspatially defined
individualism, 676	preferences, 94–7
,	F, - · ·

	and the second s
majority rule (cont.)	parties, see candidates, multiparty systems, two-party
equilibrium under, with spatially defined	systems
preferences, 85–93	partisan business cycle, 440–46, 447–59, 470–1, 665
May's theorem, 133–6	path independence, 587–8
and minimum-winning-coalitions, 281–4, 290–1	Pigouvian tax, 27
normative case for, 76–8 Rae-Taylor theorem on, 136–7	plurality rule, 147–52, 157
redistribution under, 53–6, 79–84, 138–43, 145–6,	point voting, 169–74, 179–81, 594, 678
511–9	political business cycle evidence of, 446–59
tyranny under, 106–7, 122	opportunistic, 437–40, 451–9, 469–71
unanimity rule, comparison with, 138–46	partisan, 440–46, 447–59, 470–1, 665
May's theorem, 133–6, 145, 670	political man hypothesis, 476, 479–80
maximin strategy, 601–2, 609–11	Popitz's law, 227–8
median voter theorem	popularity functions, 429–36
and candidate positions, 231–2	positive association axiom, 592
empirical testing of, 243–6	positive responsiveness axiom, 134
with multidimensional issues, 87–93	power, 360–2, 371–3, 411
and redistribution, 511–9	president and Congress
with single-dimensional issues, 85-6	Congress controls president, 391–2
midterm cycle, 445–6, 455–7	deadlocks, 395–9
minimal-connected-winning coalition, 282-4, 290-1	president controls Congress, 393-5
minimal-winning-coalition, 281-4, 290-1	primary goods, 600-1
minimax-regret strategy for voting, 307-9	prisoners' dilemma
minimum-winning-coalition, 281-4, 290-1, 669	and campaign spending, 498-500
multiparty systems	and government intervention, 9-14
coalitions within, multidimensional issue space,	under logrolling situations, 118-9
285–9	and number of players, 12-4, 35-9, 473-5
coalitions within, one-dimensional issue space,	and Paretian liberalism, 646-8
280-4	and public goods, 10-11, 35-42, 473-5
electoral rules to create, 265–71	supergames, 12
number of parties under, 271–6	probabilistic voting models
proportionality under, 276-8	critique of, 261–2
reasons for, 264–5, 298–301, 678	equilibria under, 252–3
and social stability, 295–6	evidence for, 259–60
stability of, 290–5	and interest groups, 255–7
strategic voting in, 297–8	normative characteristics, 253–7, 260–1, 679–80
N. A. CWE	taxation with, 257–9
Nash SWF	property rights
normative properties of, 578–81	and Coase theorem, 34–5
and probabilistic voting, 254 von Neumann-Morgenstern utilities, 570	and majority rule, 134–5, 138–40, 143
von Neumann-Morgenstern utmittes, 370 von Neumann-Morgenstern solution, 84, 118	and multiplicative SWF, 577 origin of, 10–11
neutrality axiom, 134	proportional representation, see multiparty systems
nondictatorship axiom, 583, 585–6, 592–4	public choice
1011dicutionship anioni, 303, 303 0, 372	definition of, 1
openness of economy, 507-8	critique of, 657–9, 662–68
optimal majorities, 74–8, 99–104	development as field, 2–6
obligations, constitutional, 631–4	methodology of, 2, 3, 659–62, 671–4
ordinal utility	and normative political theory, 670–1
and Arrow's SWF, 591	testing models of, 668–70
and Bergson-Samuelson SWF, 565-8	public goods
and May's theorem, 133	and allocative efficiency, 19-24, 68-71
and voting by veto, 174	characteristics of, 10–1
original position, 598–603	and chicken game, 16–8
	clubs and provision of, 183-6, 194-9
Paretian liberal theorem, see liberal rights	and collective choice, 9-18, 39-40, 63-72
Pareto postulate, 583, 585, 644-6	demand for, 243-6, 506-11
see also allocative efficiency	and prisoners' dilemma, 10-1

theory and development of public choice, 3	Sainte-Lagué formula, 267, 269, 278
voluntary provision of, 18–25, 40–2	Samuelsonian condition, 19, 24, 70
and voting-with-the-feet, 186–94	Schelling point, 15
and weakest-link-technology, 22-5	selfish voter hypothesis, 325–32
	sincere voting, 119n, 131–3
quasi-transitivity, 586	single-nontransferable vote, 271
	single-peakedness, 85-6, 589-90, 595
Rae-Taylor theorem, 136–7, 145	single-transferable vote, 269-70
range axiom, see unrestricted domain	sixty-four percent majority rule, 99-103
rational ignorance, 303-4, 380-2, 680	social contract
rational voter hypothesis	compliance problem, 603-7, 609-11
evidence, 308-20	and positive public choice, 612-3
logic, 304-8, 329-32	process vs. end state rules, 607-9
redistribution	theory of, 597–9, 603–7
and allocative efficiency, 51-3, 138-46, 675-7	social welfare function (Arrow)
within constitution, 679	axioms underlying, 583, 585-9, 595-6
difference principle, 599-602, 604-7, 609, 612	see also individual axioms
and distribution of income, 58-60	definition of, 582
entitlement principle, 607–8, 609	proof of impossibility, 584–5
evidence of, 56–8, 61–3	and public choice's development, 2–5, 677
and fairness norms, 49–51	and real valued SWFs, 582
and government intervention, 45–53	and strategy proofness, 592-5
and government size, 511–9	social welfare function (Bergson–Samuelson)
under Harsanyi SWF, 571–5	additive (Benthamite), 565–6
as insurance, 45–7, 50–1, 679	and axiomatic SWF, 582
and interest groups, 61–3, 343–53, 519–23,	definition of, 563–5
554-6	impossibility of, 565–8, 670, 677–8
under majority rule, 53–6, 679	multiplicative (Nash), 565–6
Pareto optimal, 47–51	and Pareto optimality, 564–5
with unanimity rule, 45–53, 143–4	and public choice's development, 2–5
under voting-with-the-feet, 192–4, 200–1, 202–4	social welfare function (Fleming), 568–9
referenda, outcomes under, 245, 371–3, 531–2	social welfare function (Harsanyi)
regulation, 343–7	axioms underlying, 568
rent seeking	and constitution, 580–1, 620–1, 639
dissipation of rents and entry, 337–40	defined, 570
dissipation of rents and returns to scale, 335–7	realism of, 575
dissipation of rents and risk preferences, 340–1	and risk, 571–4
and government expenditures, 354–5	unanimous agreement to, 572–5
and interest groups, 347–53	social welfare function (Nash), 576–81
reasons for, 333–5	social welfare function (Ng), 575–6, 678
regulation and, 343–7	sociotropic voting, 460–1
significance of, 345–7, 352–3, 355–7	sophisticated voting, 119n, 131–3, 155–6
and trade policy, 348–53	spatial voting models
rent seeking contests, design of, 342–3	of candidate competition, 231–41, 658, 663–5
representative democracy, need for, 230	of committee voting, 85–93, 97–102, 112–3,
see also candidates, government as monopolist,	115–7
multiparty systems, two-party systems	in multiparty systems, 280–9, 665–6
representatives voting, 489–96	split-ticket voting, 445–6, 455–6
revolution, 204–6	status quo
rights, constitutional, 631–4, 652–4	and multiplicative SWF, 576–7
risk preferences, effects	and unanimity rule, 138–9, 143–4
on bureaucrat's behavior, 370–1	strategic voting, 296–8
on distributional preferences, social contract,	see also sophisticated voting
601–2, 604–5	strategy-proofness, 592–5
on redistribution, observed, 56–8	structure-induced equilibria, 115, 116–20
on rent dissipation, 340–2	symmetry axiom, 577
on SWF choice, 571–5, 578–80	symmetry as a constitutional constraint, 624–5,
on voting, 307–8	627
on roung, 507 o	√2 ·

taxation	universalism, 122, 215
elasticity, 528–9	underground economy, 539-44
harmonization, 533	unrestricted domain, 583, 589-90, 595, 644
model of, 257–9	utilitarianism, 597, 605, 608-9
welfare loss from, 536–9	, , ,
totalitarianism, see dictatorship	valence of issues and equilibria, 240-1
trade policy, 348–53	veil of ignorance, 598–607, 610–1
transaction costs	voluntary exchange approach, 5–6, 179–81
and choice of voting rule, 74–8, 627–31	vote functions, 429–33
and congressional dominance, 389–91	vote trading, see logrolling
and constitutional rights, 631–4	voter attitudes
and government intervention, 39–40, 521–2	toward government size, 516
and unanimity rule, 72–3	toward macroeconomic conditions, 440–3
transitivity axiom, 94, 583, 586–8, 595	as selfishly motivated, 323–5
two-party systems	voter behavior
outcomes with deterministic voting, 231–41,	and alienation, 232–3
249–52, 658, 663–5	empirical studies of, 308–20, 459–61
outcomes with probabilistic voting, 252–63, 658,	as ethical act, 322–5, 329–32
663–5, 679–80	as expressive act, 320–2, 329–32
and SWFs, 680	and indifference, 232–3
and 5 77 1 5, 000	information gathering, 303–4, 380–2, 680
unanimity axiom, see Pareto postulate	myopia, 438–9, 459–60
unanimity rule	as rational act, 304–8, 329–32, 439–40, 444–6,
and allocative efficiency, 67–72	459–60, 658, 666–8, 689
assumptions favoring, 137–46	as retrospective act, 443–4, 459–60
and contractarian theory, 137–46, 597–9, 603, 615,	as selfish act, 325–32, 460–1
680	sociotropic, 460–1
and decisionmaking costs, 72, 143–4	split-ticket voting, 445–6, 455–6
and majority rule, 138–46	voting by veto, 174–81, 594, 678
and property rights, 137–8, 680	voting-with-the-feet
and public good provision, 67–72	and Arrow theorem, 590, 595
and redistribution, 143–4	distributional consequences, 192–4, 200–1,
and social welfare function, 572–5	202–4
uncertainty	empirical testing, 199–202
and congressional dominance, 389–91	optimality properties, 186–94, 677
and constitutions, 602, 615–7, 619–24, 639–40	optimality properties, 100–54, 677
and power, 360–2	Wagner's law, 531
and redistribution rules, 609	weak-majority preference criterion, 576
and social contract, 598–9	weakest-link technology of public good provision,
uncovered set, 125, 236–41	22–5
uncovered Set, 123, 230 41	22 ⁻³