

Index

- Aalbers, R. 217
Abramowitz, M. 42
absorptive capacity 177
academies 16, 25, 26, 28
Academy of Sciences 22
Acemoglu, D. 33
actionplan eEurope 2005 168
Adams, W.J. 211
Adler, P.S. 81
Adorno, T.W. 30
Aerospaciale Satellites (now Alcatel Space Industries) 141
agency 63, 240–41
Aghion, P. 82
agriculture 31, 32
AIDS 62
Aiginger, K. 194, 195
Alberdingk Thijm, C. 217
Albert, R. 85
Albino, V. 134
Alcatel Space Industries (formerly Aerospaciale Satellites) 141
alchemy 31
Alder, K. 15, 32
Allan, D.G.C. 31
Allen, P.M. 51
Amazon.com 211–12
American Digital Millennium Copyright Act (1998) 212
Amin, A. 77, 80
Ancori, B. 131, 223, 224, 226, 239
Andersen, E.S. 57, 58, 59
André, C. 186, 189, 195
anti-trust law 213
Antonelli, C. 140
Aoki, M. 47
Apache community 78, 79, 80–81, 91, 95–6
apprenticeship system 16
Archer, M.S. 241, 245
Arrow, K.J. 51
Arthur, W.B. 46, 51
articulated knowledge 132, 145, 148, 224–5, 228
articulation process 131–2, 135, 152
artificial intelligence (AI) 222, 226–7
Arundel, A. 163, 203
asset base 105, 107, 108, 120, 121, 122, 123, 124
asset stocks 107
associations, *see* clubs and associations
astronomy 27, 29
asymmetric information 161–2
AT&T Paradyne 141
Athreye, S. 2
Atos Origin 136
Audretsch, D.B. 159, 206, 209
Australia 189, 193
Austria 188, 189, 190
Austrian school 186, 243
authority 132, 134–5, 142, 152
Autio, E. 103
Avadikyan, A. 129

Bacon, Francis 10, 11–12, 27
Baden Württemberg 61
Baldwin, C.Y. 81
Bandura, A. 201
Banks, Joseph 13–14, 15, 25
Barabási, A.L. 85
Barbaras, R. 244
Barber, E. 159, 164
Barney, J. 103
Barr, N. 184, 190
Barrios, S. 196
Bartlett, A. 241
Basque region 56
Bathelt, H. 55
Bauer, W. 35
Baumol, W.J. 2, 18, 200, 208, 215
Bayma, T. 45
Beccatini, G. 55, 61
Becker, G. 166, 179
Becker, M.C. 125

- Beijing 28
 Belgacom 177
 Belgium 56, 169, 171, 176, 188, 190; *see also* Flanders
 beliefs 9, 129, 134, 135
 Bell, G.C. 106
 betweenness centrality 89, 90, 93–5, 96
 Bezroukov, N. 82, 84, 95
 Bhidé, A. 102, 103
 Bickhard, M.H. 231, 232, 235, 236, 237, 238, 239, 244
 Biggiero, L. 55
 Bijker, W. 166
 Bikchandani, S. 83
 biomedical firms 110, 112, 113, 115, 118, 119, 121–4
 Black, Joseph 11, 31
 Blaug, M. 203, 204, 205
 Blaut, J.M. 30
 body 230–31, 232, 233, 242
 Boldrin, M. 215
 Bonacich, P.F. 89
 Booher, D. 161, 166
 books 28; *see also* encyclopedias
 Borrás, S. 44, 66
 bounded rationality 86, 125, 228
 Bourde, A.J. 14
 Bourdieu, P. 179
 Bowers, B. 12
 Bowles, S. 97
 Boyer, R. 182, 187, 191, 193, 195
 Braczyk, H.-J. 47, 55
 Brady, A. 22
 Bradzych, H.J. 2
 brain 226–7, 229, 231
 Braverman, H. 45
 Brier, S. 242
 British Glorious Revolution (1688) 17
 broadband 168, 175, 177
 Brock, W.H. 31
 Brockliss, L. 16
 Brown, J.S. 77, 78, 133, 134, 238
 Bruner, J.S. 244
 Brusoni, S. 52
 Bruun, H. 242
 Buchanan, J.M. 183, 186, 190
 Burke, P. 10, 25, 28
 Burlamaqui, L. 195, 197
 Burt, R.S. 63
 Butler, T. 241
 cable networks 171, 172, 174–5, 177
 California school 30
 Callon, M. 46, 54, 61
 Camagni, R.P. 2
 Cambridge region 56
 Campbell, D.T. 244
 Campbell, R.L. 232, 237
 Campodall’Orto, S. 61
 Canada 188, 189, 193
 Cantner, U. 222
 capitalism 69, 186, 188, 194–5
 cardinal utility functions 203
 Cardwell, D.S.L. 10
 Carlos, A. 34
 Carlsson, B. 54, 56, 60
 Casson, M. 58, 217
 Castells, M. 135, 159, 163, 194, 196
 Catalonia 55, 61
 centralization, degree of 78
 CES production function 209
 Chambers of Commerce 111
 Chang, H.J. 190, 197
 Chell, E. 109
 Chen Menglei 28
 China 14, 17, 23–9 *passim*, 50
 Ching, J. 29
 Christensen, W.D. 234, 237
 Chu Shun-Shui 28–9
 Church 25
 Churchill, N.C. 103
 Cilliers, P. 226, 227, 242
 Cimoli, M. 56
 Cipolla, C. 33
 Clark, A. 245
 Clark, K.B. 81
 ‘clean rooms’ 174
 ‘clerisy’ 24
 Club Hi’Tech 140, 150
 clubs and associations 138, 139, 140–42, 150–52
 clusters 55, 77, 137, 144, 152, 208; *see also* Telecom Valley
 Cobb–Douglas production function 206, 208–9
 codification of knowledge 15, 43, 44–5, 49, 50–51, 52, 54, 63, 66, 67, 86, 130–32, 201, 223, 224, 226, 235, 237, 239, 242
 inside a network 132–5
 in Telecom Valley 142–53

- non-neutrality of 131, 148–9
- codified knowledge 44, 131, 133, 145, 149, 223, 224, 225, 226, 228, 238, 239
- coffeehouses 15
- cognitive dimension 133, 135, 148–9, 152
- cognitive distance 152
- cognitivism 222, 224, 226–30, 234, 241
- Cohen, H.F. 8, 11, 31, 35
- Cohendet, P. 77, 80, 81, 84, 125, 129, 130
- collaborative agreements 147
- collective goods, *see* public goods
- collective knowledge 223, 239–40
- collective memory 245
- collusion 215
- commercial base 104, 106, 107, 108, 115, 120–21, 123, 124
- commitment, degree of 86, 87, 90–91, 93, 95
- communication 202, 206
 - costs of 206–17 *passim*
- communitarian experience 80–81
- communities of practice Ch. 3, 132, 134, 143, 238–9
- competences 103, 104, 106, 107, 123, 124, 129
 - codification of 143–52
- competitive advantages 44, 55, 61, 64, 108–9, 163
- complementarity 150–51
- computer metaphor 226–8
- conflationism 241
- Confucianism 27
- connectionism 227
- consciousness 228–9
- consultants 15, 31, 117, 121, 138, 139
- consumer surplus 205
- context-dependency 164, 167, 178, 238
- contract enforcement 17, 209
- convergence theory 187
- Cooke, P. 1, 55, 137
- Cool, K. 107
- Cope, J. 109
- copyright 203, 210–15 *passim*
- Coriat, B. 103
- corporatist welfare state 189
- cost–benefit analysis 205
- cotton industry 9
- Council of the European Communities 70
- Coveney, P. 44
- Cowan, R. 1, 43, 44, 66, 77, 86, 130–31, 158, 223, 224, 226, 238, 244
- Cowen, T. 204, 205
- craft guilds 18–20
- creative destruction 52, 194, 195, 196–7
- credit 25
- critical incident technique 109
- crude knowledge 239
- Cullen, William 11, 31, 32
- culture 60, 176, 231, 239
- cumulative causation 191, 195
- customs 97
- Cyert, R.M. 109
- D’Espagnat, B. 233
- Daft, R.L. 239, 240
- Dahl, M.S. 77
- Damasio, A. 234
- Darnton, R. 14, 35
- Darwinian theory 231–2, 242, 243
- Dasgupta, P. 222–3
- Data Base Forum 140
- databases 210, 212
- Daumas, M. 32
- David, P.A. 24, 42, 43, 223
- Davis, J. 2
- De Bary, W.T. 26, 29
- De la Mothe, J. 158
- degree centrality 88–90, 91–3, 95–6
- deindustrialization 61
- delayed growth 115, 116
- Delmar, F. 111
- Delorme, R. 186, 195
- democracy 157, 159, 160, 162–3, 165–6, 178, 185
 - in Flanders 171, 173–4, 175, 176–7
- demographic trends 182, 183, 184, 190, 194
- Denison, E.F. 200, 206
- Denmark 188, 190, 193
- Denzau, A.T. 202
- Depew, D.J. 231, 232
- deregulation 185, 187, 193
- Desaguiliers, John T. 33
- Desouza, K.C. 241
- Deyon, P. 33

- Diani, M. 81
 Dickinson, H.W. 31
 Diderot, Denis 12, 13, 14
 Dierickx, I. 107
 differential productivity growth puzzle 47
 diffusion
 knowledge 89, 137, 144, 147, 151, 152, 167, 172, 196, 202, 215–16
 produced goods 46, 55, 61
 Digital Equipment Corporation 120, 136, 141
 Dikötter, F. 29
 discursive knowledge 65–6
 discussion forum 79
 division of labour 10, 103, 119, 133, 149, 150
 Divry, C. 132
 Dobbs, A. 161
 Dolfsma, W. 2, 4, 196, 201, 202, 208, 212, 213, 215, 217, 223
 domain of focus 79, 80, 96
 dominant design 61
 Donald, M. 228–9, 242
 Dopfer, K. 243
 Dosi, G. 47, 49, 58, 103, 125, 202
 Douglas, M. 201
 Dow Chemical 136
 Drache, D. 182, 187
 Drayton, R. 32
 dualism 227, 230, 232, 233
 Dudley, L. 206, 207, 208, 209
 Duguid, P. 77, 78, 133, 134, 238
 Dunnewijk, T. 163, 169, 170
 Dunt, E. 213
 dynamic capabilities approach 103, 104, 109
 dynamic scale effects 52
 dynamic welfare theory 4, 200, 205–10, 215, 216–17

 e-inclusion 175
 Eamon, W. 34
 Eastern Europe 50
 EC, *see* European Commission
 Eccles, J.C. 232
 economic geography 2
 economies of scale 191, 209
 Eden treaty (1786) 21

 Edqvist, C. 54, 56, 60
 education, mass 16
 Eisenhardt, K.M. 104, 109, 111
 Ekelund, R.B. 18
 Elliott, P. 33
 Elman, B. 26, 27
 Elvin, M. 28
 emergence 230, 231, 232, 233
 Emmeche, C. 232, 233, 244
 Encaoua, D. 211, 213
 encryption 212–13
 encyclopedias 14–15, 27, 28
Encyclopédie 14–15, 35
 endogenous economic growth 164
 enlightened despots 26
 Enlightenment 3, Ch. 1
 Entralgo, P.L. 233
 entrepreneurship 104, 161, 164, 176
 epistemic communities 129, 130, 133–5, 143, 145, 149, 152, 153
 Epstein, S.R. 15, 19
 Erdős, P. 85
 Esping-Andersen, G. 182, 183, 186, 188–9, 190, 194, 197
 ETSI (European Telecommunications Standards Institute) 141
 Etzioni, A. 179
 Etzkowitz, H. 48, 52, 53, 56, 65, 67, 68, 69
 European Commission 42, 168–9, 176, 192
 European Committee of Regions 70
 European Directive on Copyright (2001) 212
 European Parliament 70
 European Union 47, 52, 56, 61, 158, 163, 168–9, 182, 190, 191
 Evans, P. 190, 197
 Eves, H. 179
 evolutionary games 58, 59
 evolutionary theory 29, 42, 103, 104, 106, 108, 125, 195, 222, 223–4, 231–4, 238, 240, 242, 243
 triple helix model as 56, 68
 eVRT 175, 176, 177
 expectations, knowledge-based 50–51, 53, 57, 65, 66, 69
 expertise, individual 80
 explicit knowledge 152, 224, 225–6

- externalities 2, 147, 148, 163, 164, 172, 173, 174, 176, 177, 191, 196, 208, 215
- fabricants* 13, 27, 202
- Fagerberg, J. 192
- Fang-I-Chih 27
- Faraday, Michael 12
- Faust, K. 88
- federalization 171, 176–7
- feedback concept 226
- Ferguson, E.S. 32
- Finland 169, 188, 190, 193
- first-mover advantages 166
- Fisher, W. 212
- Fitoussi, J.P. 197
- Flanders
 - innovation dynamics in 56
 - IST policies in 4, 168–78
- Florida, R. 159, 164
- focal awareness 225
- Fodor, J.A. 226
- Foray, D. 1, 42, 43, 67, 86, 130, 131, 223
- Fordism 182, 183, 184, 187, 191, 192, 193, 195
- forking 84
- Foss, N.J. 82, 102, 104, 106, 108, 125
- Fourier analysis 12–13
- Fox, R. 16
- France 169, 186, 188, 189, 190, 197
- France Telecom 136, 141
- Fransman, M. 129
- free trade doctrine 20–21
- Freeman, C. 52, 55, 179, 187
- Freeman, L.C. 89
- Freenet project 80
- French Revolution 21, 22
- Frenken, K. 52, 55, 61, 67
- Frey, B.S. 217
- friendly societies 26
- Friesen, P.H. 103
- Fujigaki, Y. 52
- Fukuyama, F. 159
- functionalism 277–8
- Galbraith, J.K. 51, 52, 64
- Galbraith, J.R. 54
- Gandon, F. 153
- Garanger, A. 32
- Garnsey, E. 103, 104, 106, 108, 109, 111, 112, 123, 124
- Garud, R. 166
- Gascoigne, J. 31, 32
- Gay, P. 26
- general purpose technology 158
- generic policies 163
- geodesics 89, 95
- geometry 15, 28, 31
- Germany 186, 188, 189, 190
- Gernet, J. 34
- Ghoshal, S. 241
- Gibbons, M. 53, 56, 61
- Gillispie, C.C. 14, 34
- Gingras, Y. 48
- Gintis, H. 97
- Glasgow 11
- globalization 43, 44, 47, 50–53 *passim*, 61, 163
 - and the welfare state 182–94
- Godin, B. 42, 48
- Goldstone, J.A. 30
- Golinski, J. 11
- Google 1
- governance mechanisms Ch. 6
- government employment 188
- government expenditure 185–7, 189–90, 191
 - social 188, 190
- Grabiner, J.V. 31
- grain trade, regulation of 20
- grandes écoles* 16
- Granovetter, M.S. 86, 89, 129
- Granstrand, O. 45, 52, 203
- graphics-media firms 110, 115
- Gray, J. 30
- Gray, R.D. 231
- Greece 188, 190
- Greenwald, B. 166
- Greig, A. 30
- Greiner, L.E. 103, 105
- Griffiths, P.E. 231
- Grimaldi, R. 133
- group mind 240
- growth indicators 108, 109, 111, 123
- growth paths 111, 112, 114, 124
 - explanations for 118–23
- growth plateaus 115–17
- growth poles 2
- growth reversal 117, 118

- Gu Donggao 28
 Guibault, L. 217
 Guignet, P. 33
Gujin tushu jicheng 28
 Gunasekara, C. 68
 Gurbaxani, V. 208
- Haas, P.M. 129, 134, 152
 Hajer, M.A. 159
 Håkansson, L. 131, 132, 148, 152
 Hall, P.A. 60, 135
 Hanks, S.H. 105
 Hansen, M.T. 86, 217
 Hanusch, H. 222
 Harley, C.K. 30
 Harris, J.R. 32
 Hay, M. 103
 Hayek, F. 2, 186
 Heffernan, P. 111, 112
 Helpman, E. 33
 heretics 24
 Hermalin, B.E. 82
 Herman, A. 22
 Hertel, G. 87
 Hesse, J. 162
 Hettinger, E.C. 203, 217
 Hewlett-Packard/Compaq 139, 141
 Hicks-Kaldor compensation criteria 203–4
 high-speed trains 52–3
 Highfield, R. 44
 Hills, R.L. 31
 Hirschman, A.O. 135
 Hobsbawm, E. 30
 Hodgson, G.M. 77, 106, 125, 241, 245
 Hollander, A. 211, 213
 Holzauer, R. 210, 217
 Hooke, Robert 201
 Hooker, C.A. 234, 237
 Horkheimer, M. 30
 Horn, J. 19, 33
 households, ICT usage in 168, 169, 171, 176, 193
 Huggins, R. 137
 Hugo, O. 112, 124, 125
 Hui, K.-L. 217
 human activity 231
 human capital formation 163
 Hume, D. 24, 34
- Hunter, M. 32
 Husserl, E. 64
 Huygens, M. 215
- I-C model, *see* interactivist-constructivist (I-C) model
 I–O matrix 196
 IBM 141
 iDTV 175
 IMEC 171, 172–3, 177
 impossibility theorem 204
 income redistribution 210
 industrial districts 55, 61
 Industrial Revolution 3, 7, 8, 9, 11, 13, 16, 17, 202
 information and communication technologies paradigm 187
 informational cascade 83
 informational mimesis 83, 84, 88–9, 95, 96
 Inkster, I. 30–31
 Innes, J. 161, 166
 innovation policy 158
 innovative milieu 2
 INRIA 141, 144
 institutional progress 17–23
 intangible assets 176, 203
 InTech'Sophia 140, 141
 intellectual property rights 4, 25, 162, 200, 203, 208, 210–17
 intelligence 234
 interaction effects 51
 interactions 79, 80, 143, 235–6, 239, 242
 interactive Digital TV (iDTV) 175
 interactive TV (eVRT) 175, 176, 177
 interactivist-constructivist (I-C) model 233–8
 implications of 238–42
 interdisciplinary research centres 53
 interfaces 44, 45, 48, 51, 52, 53, 54, 55, 59, 60, 64, 67, 68
 internal accumulation 109
 internalization 237
 Internet 1, 42, 97, 116, 137, 168, 169, 170, 175, 196, 213
 inter-subjectivity 240
 intra-category inequalities 197
 Ireland 188, 190, 193
 IST domain 159–60

- IST policies 157–68, 178
 EC directives on 168–9
 in Flanders 4, 168–78
 Italy 55, 61, 188, 189, 190
- Jackson, M.O. 85
 Jacob, M.C. 10, 33
 Jacobins 22
 Jacobson, M. 227–8, 244
 Jaffe, A.B. 45, 217
 Japan 55–6, 186, 188, 189
 Jenkins, R. 31
 Jessop, B. 183, 191
 Jiangnan 27–8
 Jiao Xun 28
 Johannisson, B. 116
 Johnson, B. 130, 131, 223
 Johnson, M. 227, 230, 244
 Jonard, N. 77
 Jones, C. 215
 Jones, E.L. 7, 8, 24
 Jones, S.R.H. 34
*Journal of National Philosophy,
 Chemistry, and the Arts* 13
 journals, scientific 13–14
- Kanniainen, V. 211
kaozheng school 26–8, 29
 Kaplan, S.L. 20
 Karnøe, P. 166
 Kauffman S.A. 231
 Kazanjian, R.K. 103, 105, 111, 118
 Kemp, R. 55
 Kerremans, B. 171
 Keynes, J.M. 30
 Keyser, B.W. 11
 Kindlebeger, C.P. 21
 Kingston, W. 52
 Kirman, A. 83
 Kitch, E.W. 217
 Klaes, M. 215
 Kline, S. 51
 KMP project 142–53
 knowledge-based network organization
 118–20
 knowledge-based theory of the firm 77
 knowledge management (KM) projects
 241
 knowledge services firms 110, 113, 115,
 118–21, 123
 knowledge workers 200
 Knudsen, T. 130
 Koelman, K. 212, 214
 Kogut, B. 77, 82, 95, 129, 133
 Kornai, J. 159
 Krafft, J. 129
 Kranakis, E. 12
 Krauss, G. 61
 Kreps, D.M. 98
- labour mobility 172, 194, 195
 Lakhani, K.R. 79, 80, 97, 98
 Lakoff, G. 227, 230, 244
 Lancaster, K.J. 55
 Landes, D.S. 8
 Landes, W.M. 203, 217
 Langford, C.H. 68
 Langlais, R. 242
 Langlois, R.N. 81
 language
 inner 226–7
 shared 60, 130–31, 143, 146, 148,
 149, 152
 as social operator 237–8, 240
 of technology 15
 languages, Belgian 171
 Larédo, P. 47
 Latin America 56
 Latour, B. 62, 148
 Lave, J. 78
 Lawson, C. 3, 143
 Lawson, T. 243, 245
 Lazaric, N. 129, 131, 132, 135, 148
 Le Grand, J. 185, 186, 190, 217
 lead users 134, 146–7, 148, 149
 leadership
 disputes on building of 135
 functions and attributes of 82–4
 model of leadership building 84–8
 conclusions 96–7
 numerical analysis 88–91
 results 91–6
 learning process 202, 236–7
 collective 60, 77, 79, 86, 96, 106, 136,
 145, 158, 167
 learning regions 2
 lecturers, itinerant 33
 legitimacy 84, 97, 132, 135, 142,
 149–52
 Leibenstein, H. 80, 81

- Leiden University 121
 Lerner, J. 34, 84, 217
 Lessig, L. 212, 214, 217
 Leuven 172, 173
 Lev, B. 203
 Levere, T.H. 15
 Levie, J. 103
 Levin, R. 203, 210
 Levine, D. 215
 Levinthal, D.A. 217
 Lewis, V.L. 103
 Lewontin, R. 56, 67
 Leydesdorff, L. 2, 45, 47, 48, 52, 55, 56,
 58, 63, 65, 67, 68, 69, 201
 Li, T.-Y. 48
 liberal welfare state 189
 libraries 28
 licences 212, 214
 limitations to growth 105
 Lindley, R.M. 197
 Lindqvist, S. 32
 links 63, 65, 66, 98
 Linnaeus 10, 32
 Linux community 78, 91, 95, 132
 Lipsey, R.G. 8, 179
 Lisbon strategy 42, 158, 160, 179
 List, F. 46
 literacy 16
 living tissue 212
 Llerena, P. 77, 125, 129
 lobbying 149
 local development institutes (LDIs)
 138, 139
 lock-ins 46, 51–2, 61, 64, 69, 116, 161,
 163, 171
 Lombardia 61
 Longhi, C. 136
 longitude 12
 Lorenz, E. 129, 135, 148, 245
 Lucas, R.E. 7, 222
 Luhmann, N. 48, 63, 68, 186
 Lunar Society of Birmingham 15, 33
 Lundvall, B.-A. 1, 42, 44, 45, 47, 55,
 56, 60, 62, 66, 223
 Luther, Martin 24, 25, 26

 Maastricht Treaty 70
 Mackenzie, A. 44
 macrogenetic processes 236
 Maddison, A. 186

 Mäki, U. 201
 Malerba, F. 68
 Mangolte, P.-A. 132
 manufacturing sector 191, 192, 194
 March, J.G. 109
 market failure 160–61
 markets 157, 159, 160, 161–2, 165–6,
 178, 196
 in Flanders 173, 175, 177
 Martin, J.K. 104, 109, 231
 Martin, P. 244
 Marx, K. 46
 masonic lodges 26
 mathematics 12, 15, 27, 28, 29
 Matra Communication 136
 Maturana, H.R. 52, 63, 235
 Maurer, S.M. 212
 McClellan III, James 16
 McGrath, R.G. 108
 McLuhan, M. 46, 67
 McNamara, J.E. 106
 meaning 227, 240, 242
 mediation 82–3, 84, 88, 90, 95, 96, 147
 Mei Wending 27
 Meijers, A.W.M. 240, 244
 mentoring 117–18
 mercantilism 18, 20–21
 mergers 122, 174–5
 Merkel, W. 190
 Merleau-Ponty, M. 230
 Merton, R.K. 42, 159, 164
 metaphysics 232–3, 243
 meta-stabilization 44, 51–2, 53–4
 Metcalfe, J.S. 105, 222, 245
 Metiu, A. 77, 82, 95
 Meyer, K. 164
 microgenetic processes 236, 237
 Microsoft Netherlands 120
 Microsoft NT applications 120
 Microsoft Workflow 120
 Milgrom, P. 206
 Miller, D. 103
 mind 226–34 *passim*, 237, 242
 Mingers, J. 230, 241
 Minier, J.A. 159, 163
 Mishan, E.J. 205
 Mishra, R. 184–5, 186
 ‘Mode 2’ 53, 56, 61–4
 model building 130–31
 modern synthesis 231

- modular structure 81–2
 Mokyr, J. 3, 7, 13, 29, 30, 31, 201, 202, 205, 206, 215
 Monge, Gaspard 15, 32
 monopolies 21, 51–2, 166
 Morgan, K. 2
 Moso, M. 56
 Mowery, D.C. 51
 Muller, P. 81, 84, 85, 97, 98, 132
 multinational corporations 46, 52, 55, 182, 185
 music industry 215
 mutual empathy 85

 Napster 97, 213
 Nathanson, D.A. 54
 nation-building 171, 177
 nation-states 45, 46, 47, 61, 182, 185, 187, 191
 national innovation systems 2, 46, 47, 55–6, 60, 61, 63, 163
 Naturalist approach 233, 238–43
 passim
 naturalists 31–2
 Nauwelaers, C. 168, 170
 Navarro, V. 184, 187–8
 Navier, C.-L. 12–13
 Needham, J. 14
 Nelson, K. 4, 244
 Nelson, R.R. 2, 4, 45, 47, 55, 56, 57, 58, 103, 108, 125, 161, 203, 205, 206, 208, 217, 222, 223, 226, 244, 245
 neoclassical growth models 222
 neo-Schumpeterian accord 182, 195
 Netanel, N.W. 217
 Netherlands 169, 186, 188, 190
 Neurath, O. 69
 neurobiology 226–30, 243
 new economics of science 222–3, 226
 new firms, growth of Ch. 4
 new growth theory 200
 New Zealand 193
 Newell, A. 234
 newly industrialized economies (NIEs) 193
 Newton, Isaac 10, 12, 201
 niches 54–7, 61, 141, 164, 176
 Nicholas, S. 34
 Nicholson, William 13
 Nicholson's Journal 13
 Nightingale, P. 130, 223, 228, 229–30
 Noble, D. 44, 45, 46
 nodes 63, 65, 66, 98, 227
 value creation 137–9
 non-competition clause 115, 116
 Nonaka, I. 44, 132
Nong Shu (Books of agriculture) 14
 Nooteboom, B. 85, 137, 217, 223, 243
 Norberg, K. 20
 norms 9, 80, 81, 84, 97, 162
 North, D.C. 17, 202
 Norway 188
 Novartis 122
 Nowotny, H. 53, 56, 62

 O'Connor, T. 232, 244
 OECD 52, 56, 200, 217
 Ogilvie, S. 19
 oil crises 52
 Olazarán, M. 56
 oligopoly 215
 Olson, P.D. 103, 111, 118
 Omnès, R. 232
 open key coordination procedure 179
 open source software (OSS)
 development, communities of
 practice in Ch. 3
 opportunities 104, 105, 108, 115, 116, 124, 143
 opportunity environment 3, 106–7
 organizational slack 109
 Orléan, A. 83
 Orlikowski, W.J. 241
 Overton, W. F. 224, 230
 Oyama, S. 244

 PACA region 150, 152
 Pannebecker, J.R. 32
 Paracelsus 24
 Paretian welfare theory 4, 200, 203–5, 210
 parliament 22, 171, 172, 173
 Parsons, T. 48
 Pasteur, Louis 164
 patents 12–13, 15, 17, 21, 32, 33, 44–5, 55, 122, 203, 210–12, 214
 patronage 24, 25
 Pavitt, K. 58
 Pedersen, C.Ø.R. 77

- Penrose, E.T. 3, 102, 104, 105, 106, 108, 115
- Perez, C. 52
- perfect competition 203
- Perroux, F. 2
- PERSAN 140
- Persson, G. 20, 21, 34
- Peterson, W. 27
- Petit, P. 182, 192, 195
- Pettigrew, A.M. 111
- pharmaceutical products 212
- philosophes* 12, 22, 26
- physiocrats 18, 20
- Piaget, J. 236
- Pierre, J. 159
- Pigou, A.C. 210
- Pirenne, H. 33
- Pittaway, L. 109
- planning 157, 159, 160–61, 166, 178
in Flanders 172–3, 175, 176–8
- planning cycles 50, 54
- PMI 140
- Png, I.P.L. 217
- Polanyi, M. 201, 224–6, 228–31
- political dimension 133, 135, 149, 152
- political economy 20, 21
- Pomeranz, K. 8, 30
- Popper, K. 232
- Porter, M.E. 52, 55
- Porter, R. 10, 14, 30
- Portugal 188, 190
- Posner, R.A. 203, 217
- Powell, W.W. 116
- price mechanism 51, 54, 63
- Priestley, Joseph 31, 33
- privatization 185, 187
- prizes 142
- procedural authority 152
- production function 45, 57
CES 209
Cobb–Douglas 206, 208–9
- productive base 104, 106, 107, 108–9, 115, 118, 120, 121, 122, 123, 124
- productive opportunity 108
- profit maximization 57, 59, 60, 204
- property rights 17, 18, 196; *see also*
intellectual property rights
- propositional knowledge 202
- prototype-building 144, 148
- public choice theory 183, 186, 190
- public expenditure 185–7, 189–90, 191
social 188, 190
- public goods 145, 152, 182, 184, 187, 191, 194, 216
- public–private partnerships 157, 163
- publications 55, 79
- quantum physics 232–3
- R&D agreements 121
- R&D programmes 50
- Rabeharisoa, V. 61
- Ramlogan, R. 222, 245
- random graphs 85, 87, 90
- Raskind, L.J. 217
- Rathe, K. 104, 107
- recruitment behaviours 83
- reductionism 229, 230, 233, 241
- Reed, M. 241
- reflexive communications 62, 63, 65, 66, 67, 238
- regional development agencies 118
- regional innovation systems 2, 55, 56, 61
- Renaissance 25
- rent-seeking 18–21, 22, 211–12
- Rényi, A. 85
- repertoire of resources, shared 79, 80, 96
- representation 226–7, 235–6
- Republic of Letters 24, 25
- reputation 24, 83–4, 87–8, 90, 93, 97, 104
- Rescher, N. 233
- research institutes 136, 138, 139–40, 142, 147
- reservation price 25
- resource-based perspective 103, 104, 108
- resource generation process 112–13
- retraining 120
- revolution 21, 22
- Reynolds, T.S. 11
- Rhône-Alpes 61
- Riba-Vilanova, M. 55
- Ricardo, D. 34
- Richardson, G.B. 107, 150
- Rip, A. 44
- Riskin, J. 35
- Rizzello, S. 226

- Roberts, J. 147, 206
 Roberts, K.H. 240
 Robinson, John 11
 Rockwell International 141
 Rodrik, D. 33
 Romanelli, E. 106
 Romer, P. 2, 200, 205, 215, 222
 Root, H. 20
 Rosanvallon, P. 197
 Rosell, S. 158, 167
 Rosenberg, N. 46, 51, 59, 203, 209
 Rostow, W.W. 8
 Rothschild, E. 22
 Rothwell, R. 52
 Rouby, E. 145
 routines 57, 58, 59, 103, 132, 193
 Roy, J.-M. 230
 Royal Institution 13, 15–16
 Royal Society 13, 15, 32
 rules 129, 135, 142, 161, 224, 226, 227

 Sahall, D. 45, 49
 Sakurai, N. 196
 Salter, W.E.G. 45
 SAME (Sophia Antipolis Micro Electronics) 150
savants 13, 27, 202
 Saviotti, P.P. 55
 Saxenian, A. 2, 208, 217
 Sayer, A. 115
 scale-free networks 85
 scarcity of attention 83–4
 Scharnhorst, A. 51
 Schelling, T. 82–3
 Schienstock, G. 197
 Schofield, R. 15, 33
 Schumpeter, J. 45, 46, 52, 179, 205–6
 Scitovsky, T. 201
 Scottish enlightenment 18
 SCP 164
 Searle, J. 228, 229
 second-best theorem 204
 selection environment 57, 58, 59, 64, 65
 self-organizing agents 234–7
 Selten, R. 215
 Sen, A. 159, 162, 165, 205
 serendipity 10, 157, 159, 160, 163–4, 166–7, 178
 in Flanders 173, 174, 175, 176, 177–8
 services sector 192, 195

 Shaikh, A. 206
 Shane, S. 177
 Shapiro, C. 166, 203, 208
 Sharpe, L. 162
 Shavell, S. 217
 Shinn, T. 53
 shipbuilding firms 110, 113, 115
 Shipley, W. 31
 Shleifer, A. 18
 similarity 150–51
 Simon, H.A. 83, 222, 224, 228, 229, 230, 234
 Sivin, N. 28, 34, 35
 Skak, A. 164
 Skolnikoff, E.B. 42, 47
 small worlds 85
 Smeaton, John 15
 Smil, V. 8
 Smith, Adam 19, 20–21, 22, 31, 33
 Smith, D.W. 222, 232
 Smith, P. 31
 Smith-Doerr, L. 116
 social democratic welfare state 189, 194
 social norms, *see* norms
 social practices 240–41
 social public expenditure 188, 190
 socialism 185
 Society of Arts 15, 21, 31, 32
 Soete, L. 2, 161, 179, 187, 192, 196
 software, legal protection of 210–12
 Sophia-Antipolis Foundation (FSA) 140
 Sophia-Antipolis network 3, 129–30, 135–53; *see also* Telecom Valley
 Sophia Start-Up Club 140–41
 Sorenson, O. 104
 Soskice, D.W. 60
 source code 79, 95
 Spain 188, 190
 specialization 10, 80, 82, 96, 98, 132, 196
 Spence, J. 27
 Spender, J.-C. 239
 spillovers, *see* externalities
 spin-offs 174
 Sprat, T. 32
 Srivastava, R.K. 125
 Stacey, R. 242
 stage models of growth 102, 103, 105, 124

- Stam, E. 104
standards institutes 136, 138, 139, 141
Stankiewicz, R. 54, 60
state, economic role of Ch. 7; *see also*
 governance mechanisms
steel 12, 32
Steindl, J. 109
Steinmuller, W.E. 130, 131, 241
Stewart, L. 10, 33
Stiglitz, J. 166, 214, 215, 217
Stjernfelt, F. 244
Storey, D. 102, 103, 111, 123
Storper, M. 45, 57
Strogatz, S.H. 85
strong contextualization 62
strong ties 85, 86
subception 201
subcontracting 102, 106
subjective knowledge 243
subsidiary awareness 225, 228
subsidies 161, 172, 173–4
Sweden 188, 190, 193
Switzerland 188
symbolic technologies 241–2
Szulanski, G. 151, 152
- tacit knowledge 15, 66, 86, 131, 134,
 145, 152, 201, 203, 222, 223,
 224–6, 228, 230, 239, 242
- Takalo, T. 211
Takeuchi, H. 44, 132
Takeyama, L.N. 210
tariffs 18
 internal 21
taxation 187
teams 80
technical drawing 32
technological regimes 49, 50, 58, 69
technological trajectories 49, 50, 51,
 57–9, 69, 141, 191
technopoles 139
Teece, D.J. 103, 109, 125
Telecom Valley 129–30, 140, 141–2
 codification and structuration in
 142–53
telecom value chain 137–40, 148
Telenet 171, 172, 174–5, 177
Ter Weel, B. 2
Terpstra, D.E. 103, 111, 118
Terveen, L. 235, 237, 244
- test-beds 175, 176
Teubal, M. 60
Texas Instruments 141
Thomas, C. 145
Thompson, E. 235
Thompson, William, Count Rumford
 13, 15
Thomson Sintra 136
Thurik, A.R. 159
Tirole, J. 34, 82, 84
Tollison, R.D. 18
Torrise, S. 133
Torvalds, Linus 78, 91
total factor productivity 193–4
Towse, R. 210, 217
training 142, 225; *see also* retraining
Trajtenberg, M. 45
transaction costs 55, 77, 147, 209,
 217
transborder regions 56
Treaty of Amsterdam (1997) 70
Trionfetti, F. 196
triple helix model 48, 56–7, 64, 65–7
Trivium methodology 145
trust 81, 84, 85, 87, 97, 121, 129, 132,
 135, 142, 148, 152, 159, 163
Tsoukas, H. 239, 240
Tullock, G. 190
Turner, G.L.E. 15
turning points 105, 109, 111, 123, 124
Tushman, M.L. 106
- Uglow, J. 15
Ulanowicz, R.E. 56
unattended neural images 228
uncertainty 44, 57, 58, 60, 83, 87, 98,
 162, 163, 195, 205
unemployment 192, 194, 197
United Kingdom 186, 188, 190
United States 186, 188, 189, 192, 193,
 197, 200, 210–12
universalism 189
universities 16, 25, 28, 135, 136
 links with industry/government 48,
 52, 53, 56, 64, 65, 68, 121, 122,
 139, 140, 143, 172, 196
Urry, J. 44, 64
useful knowledge 10, 11–12, 24–5, 29,
 30, 202, 210
user–producer relations 59–61, 65

- uses-oriented methodology 144, 146, 148
 utility maximization 204
 Utrecht University 122

 Vaessen, P.M.M.V. 111
 validity 134–5, 144, 152
 value chain, telecom 137–40, 148
 value creation nodes 137–9
 van de Poel, I. 202
 van den Belt, H. 44
 van den Besselaar, P. 47
 van den Brande, Luc 171–2, 177
 van der Eijk, R. 217
 van der Paal, G. 158
 van der Panne, G. 2, 208, 217
 van Geenhuizen, M.S. 109
 van Ypersele, T. 217
 Vandermonde, A. 34
 Vanderstraeten, R. 240
 Varela, F.J. 52, 63, 235
 Varian, H. 166, 203, 208
 variation 58–9
 Veblen, T. 201–2
 venture capital 115, 121, 122, 123, 162, 193
 Viale, R. 61
 Vickers, J. 203
 Ville, S. 34
 Vishny, R. 18
 visibility 83
 vision, shared 143, 145, 148, 171
 Viskovatoff, A. 244
 VLSI Technology 136
 Vohara, A. 125
 Von Hippel, E. 77, 79, 80, 97, 98, 134
 Von Krogh, G. 77, 80, 87, 132
 von Mises, L. 183, 186
 Vygotsky, L.S. 236–7

 wage–labour nexus 195
 Wagenaar, H. 159
 Wagner, C.S. 45
 Walsh, J.P. 45

 Wasserman, S. 88
 Watt, James 11, 15
 Watts, A. 85
 Watts, D.J. 85
 Watts, G. 109
 weak contextualization 62
 weak ties 85–6
 web-based forums 98
 Weber, B.H. 231, 232
 Weber, M. 84
 Weick, K.E. 239, 240
 Weingast, B. 17
 welfare state, reconfiguration of Ch. 7
 welfare theory
 dynamic 4, 200, 205–10, 215, 216–17
 Paretian 4, 200, 203–5, 210
 welfare triangles 204, 205
 Wenger, E. 78, 79, 96, 134
 Werker, C. 2
 Whitley, R.D. 42, 60
 Williams, J. 215
 Williamson, O.E. 55, 67, 77
 Windrum, P. 68
 Winter, S.G. 45, 47, 57, 58, 103, 125, 131, 132, 222, 223, 226, 244, 245
 Wintjes, R. 163, 168, 170
 Witt, U. 77, 104, 107
 Wolff, H.-G. 61
 Wolinsky, A. 85
 Wong, H.Y. 244
 Wong, R.B. 30
 Woolthuis, R.K. 137

 Yan Roju 28
 Yeo, R. 14
 Yorke, J.A. 48
 Young, A. 14
 Young, Thomas 32

 Zegveld, W. 52
 Zilsel, E. 13
 Zollo, M. 132
Zollverein 21
 Zubiri, X. 233
 Zucker, L.G. 121