A
abstractions 125
academic publishing 200
access 256
control 7
accountability 5, 8
actor network theory 5, 23
adaptive structuration 161
air-pump 10
altruistic learning 149
analogue divide 234
anthropology 5, 57
anti-realism 141
applications technology teams (ATs) 80
appropriation 168
archive(s) 112, 235
archiving infrastructure 202
argumentation theory 183
ARPANET 78
articulation work 74
artificial intelligence 30, 176, 213, 217, 219, 221, 231
arXiv 110
Aspen Center for Physics 109
astronomy viii, 6, 54, 57, 67, 138, 183, 236
audio-conferencing 155, 160
authorities 209
authorship practices 159
B
Babbage 77
bandwidth 7, 68, 77, 257
Benasque Center for Science 109
Berlin declaration 197
bibliometric 145
biodiversity xi, 21, 31, 34, 40, 67, 161, 168, 185
conservation 32
bioinformatics 6, 57
biological diversity 31
biologists 78
biomedical research 13
blackboard 53, 102, 107
Blackboxing 124
botanists 51
boundary 11, 152
object 89
Boyle, Robert 10
bridging practices 146
British National Corpus 182
browser development 57
bulletin board 112
business model 9

C
centrality xv, 207, 220
centralization 174
CERN 101, 111
chemistry 55, 68, 120, 126, 131, 139, 142, 176, 236, 240
chemists 78
co-authorship 148, 212, 218
learning 149
presence 103, 109, 113, 135
training model 209
Codices Electronici Ecclesiae
Coloniensis project 199
collaboration 7, 23, 78, 100, 101, 102, 149, 160, 184, 199, 207, 212, 244, 260
collaborative
culture and publishing 199
tools 56
collaboratories 77, 207
commercial
publishers 196
publishing houses 190
commodification 197
communalism 17
communication ix, 5, 101
networks 103, 165, 268
protocol 11
communicators 238
communities
of concern 88
of promise 72
community memory 150
computation 50
computational
e-science x
linguistics 181, 213, 217, 219, 221, 225
computer
science 48, 57, 110, 150, 203, 221, 236, 239, 273
-based education 30
-mediated collaboration 77
computerization 28
movement xi, 28
organizations (CMOs) 34
connectivity 207, 230, 256
constructive technology assessment 203
constructivism 5, 21
constructivist 101, 141, 186, 276
consumption 74
content analysis 209
contractual law 197
corpus
of spoken Dutch 182
-based linguistics xiv
counter-computerization movement 36
cross-disciplinary collaboration 18
cultural
identities 168
studies 5
cyberinfrastructures viii, 1, 40, 54, 65, 92, 189, 200, 205
cyberscience 22, 65, 189, 190, 195, 202, 244, 272

D
Darwin Initiative 32
data xi, 5, 6
protection 7
repositories 4, 157
sharing x, 6, 16, 20, 27, 56, 147
Index 281

databases xi, 31, 100, 168, 235
death of distance 11
democratizing science 16
demonstration 3
demonstrator projects 63
Department of Culture, Media, and
Sport 32
designation challenge fund 33
determinism 5, 12, 52
developing world 248, 253, 261, 265
diffusion
model 88
research 190
digital
apparatus 122
divide 234, 244
images 33
imaging 54, 273
information xvi, 32, 122, 203, 241, 276, 278
knowledge bases xv, 208
libraries 168
rights management (DRM) 198
digitization 32, 39, 43, 60, 64, 168, 182, 192
disciplinarity xii
disciplinary
boundaries 170
difference ix, 197
expertise 147
framework 146
practice ix, 78, 147, 149, 157
training 169
discourse communities 170
discursive practice 72
distributed 100
cognition 104
collaborations 99, 104, 114, 162, 175
and collaborative work ix
computing 54, 56
knowledge research collaborative (DKRC) 145
tinkering 107
division of labor 171
domain knowledge 84, 147

E
E-Content Programme 212
e-infrastructures 207
e-mail xiii, 13, 61, 99, 106, 114, 191, 235, 240, 252, 260
communicators 238
e-preprint servers 191
e-publishing 189, 192, 197, 201
e-science 1, 10, 18, 20, 37, 44, 49, 54, 62, 70, 74, 116, 100, 168, 183, 203, 247, 257, 271
infrastructures 50
topics for STS analysis 6
e-social science 3, 20, 24, 55, 274, 275
economics 236
editorial board 248
education 18, 23, 30, 67, 84, 117, 145, 150, 162, 171, 252, 263, 270, 275
educational
localism 254
qualification 253, 269
ego-networks 207, 215, 223, 228
e-journals 191, 194, 195, 235
electron microscopy 2
electronic
archiving 6
conferences 210
networks 64, 207, 122, 225, 243, 274
ELSnet 207
empiricism 141
enabling technologies teams (ETs) 80, 84
environmental hydrology 82, 145
epistemic
cultures xii, 48, 50, 58, 62, 100, 114, 164, 170, 186

Copyright © 2006, Idea Group Inc. Copying or distributing in print or electronic forms without written permission of Idea Group Inc. is prohibited.
practice 71, 74, 79, 85, 94, 99
-IT 72
ESPRIT Programme 212
ethnographers ix
ethnographic 9, 101, 145
ethnography x, 22, 64, 165, 272
European Commission 212
expectation statements 72
experimental
method 10
science 12, 51, 64, 165, 272
experiments 3, 14, 38, 51, 60, 105, 118, 126, 160, 180
F
face-to-face xiii, 103, 140, 160, 245, 250, 259
fair use rules 198
family obligations 254
fieldwork support 57
Flora of North America 158
fraud 198, 201
functional dependence 173, 177, 181
G
gender 59, 235, 247, 250, 262, 271, 277
inequity 247, 252
roles 246, 252, 254
genetics viii, 168, 181
genomics 37
geographic
boundaries 103
distance 78
mobility 105, 114, 250, 254
Global Biodiversity Information Facility (GBIF) 34, 41, 43
globalization 173, 277
Google 209, 215, 216
government laboratories 218
grant funding 148
graphical material 137
Grid 49, 80
technologies 1, 5, 7, 16, 19, 24, 65, 190
group
interaction 144
of institutions 228
H
hard science 5, 7, 16, 19, 24, 168, 172, 183, 190
herbaria 33
high-energy physics xiv, 168
HITS algorithm 209
House of Lords Select Committee on Science and Technology 31
Hubs 209
HUGO (human genome project) 199
Human Language Technologies Programme 212
humanities 50
hybrid divide xvi, 233, 237, 241, 245
hyperbooks 194
hyperlinks xv, 193
I
I-WAY project 54
IBM 9, 66, 216
identification key 33
immutable mobile 12
impact analysis 191
INCO International Co-Operation Programme 212
indegree 211
indirect knowledge 124
informal communication 138, 175
information
access 174, 233, 234, 241
processing 4, 16, 21, 28, 29, 39, 50, 57, 67, 70, 92, 144, 168, 184, 201, 229
infrastructure 100, 190
inlinks 221, 222, 223
inscriptions 12, 66, 124, 126, 131
intellectual
  communities 170
property (IP) 8, 186, 197, 203
  rights (IPR) 8
intercorporeality 138
interdependence xiv, 166, 176, 177, 179, 183
interdisciplinarity xii
interdisciplinary 76
  collaboration xii, 79, 83, 143, 153, 161, 169, 179, 181
  network 78
international collaboration 199, 247, 260
internationalization 61
internet
  access 236, 237, 258, 264, 270
  research 4, 96, 231, 243
intra-team boundaries 153
invisible college 170, 234
ISI Science Citation Index 212
Issue Crawler Project 8

J
journals 235, 248

K
Kerala, India xvi, 247
Kerala Model of Development 251
knowledge
  and distributed intelligence (KDI) 145, 147, 151, 163
  bases 139, 173, 183, 199, 206, 211, 220, 231
  domains 144, 168
  interdependencies 149
  production 6, 48, 72, 92, 189, 229, 241, 273
  representation 193, 200

L
labor
  process 71, 75
  relations xii
laboratory x
  study 101
Language Engineering Programme 212
Large Hadron Collider (LHC) 183
learning practices xiv
liability 8, 33, 258
libraries 111
link structure 208, 224
Linnaeus 40
literary
  studies 51
  technology 11, 13, 19, 23
localism 248, 255, 264
localized 5
Long Term Ecological Research (LTER) Network 158
Los Alamos National Laboratory (LANL) 110

M
mapping research networks 214
marginality xv
marital values 254
Marx 73
Matthew Effect 220
“maximum-entropy” algorithms 209
medical computing 30
memory 149, 150, 165, 166, 273
Mertonian norms 17, 91
meta-language 81
meteorologists 78
middleware 55, 58, 67, 70
mobile telephony 14
mobility xi, 7, 16, 78, 105, 199, 250, 265
monograph 37, 172, 178, 194, 232
multi-authorship 199

Copyright © 2006, Idea Group Inc. Copying or distributing in print or electronic forms without written permission of Idea Group Inc. is prohibited.
multidisciplinary 77  
Multilingual Information Society  
Programme 212  
multimedia 190, 192, 200, 212  
multivariate analyses xv  
mutual dependence 172, 179, 183  

N  
Naïve Bayes model 209  
naming conventions 157  
nanotechnology 145  
National  
Computational Science Alliance 79  
Science Foundation (NSF) 25, 54, 72, 76, 86, 91, 145, 163, 189  
networked perspective of innovation 7  
next generation scholarly publishing 193  
numerical models 100  

O  
oceanographers 78  
office automation 30, 61  
online identification 31  
Open Publication Licence (OPL) 198  
oracle 9  
organizational  
configurations 75, 82  
localism 248, 256  
outdegree 211, 223  

P  
PageRank 209  
paperless office 13  
particle physics viii, xiii, 6, 101, 110, 183  
patrifocal xvi, 246, 256, 265  
patrifocality 246  
personal computing 30  
phenomenological 74  
physical geography 168, 172  
physicists 64, 78, 101, 110, 118, 140, 150, 166, 175, 183  
plagiarism 198  
policy recommendations 190  
political economy 182  
positivism 141  
post-colonial theory 5  
power  
distribution 241, 179  
relations 173, 183  
PPARC (Particle Physics and Astronomy Research Council) 183  
practice of promise 49  
pragmatic technologies 161  
precision/relevance 208  
preprint 196  
prestige xv, 193, 215, 207, 220, 230, 268, 253  
Princeton Institute of Advanced Study 111  
print  
publishing xv, 193  
-only 194, 202  
printing press 77  
priority disputes 113  
privacy 201, 257  
private companies 225  
procedural knowledge 149  
production 74  
territories 88  
promotion and tenure (P&T) 148  
prospective texts 73  
prospects 72  
psychology 5, 12, 25, 150, 177, 236, 242  
public discourse 28, 30, 42  
publication 15, 38, 102, 148, 172, 190, 201, 248  

Q  
QSR NVivo 252  
qualitative 6, 58, 66, 77, 145, 247, 256
data 157, 252
quality control xv, 70, 110, 193
quantitative
data 6, 157
research 56
quasars 2

R
R&D 55, 216, 218, 236, 240
rating 195
RBG Kew 41
reappropriation 197
recall 208, 254, 260, 263
reflexive process 60, 83
reinforcing mechanism 228
related pages 209
reliability 33, 258
reproduction 73, 94, 229
research
apparatus 105
assessment exercise (RAE) 180
centers 86, 103, 145, 219, 257
evaluation 230
fronts 170
infrastructures 67, 105, 144
institutes 105, 114, 217, 251, 258, 262
networks 206, 224, 230
responsibility 8, 39, 133, 149, 258, 179
retrospective narrativity 90
reviewing mechanism 110
risk 8, 44, 69, 89, 95, 138, 179
Royal Entomological Society 35

S
scholarly
associations 196, 201, 203
communication 148, 171, 191, 198, 200
system 191, 198
publishing system xv
skywriting 192
science
and technology studies 1, 20, 27, 50, 120, 190
as culture 51
policy implications 229
studies 121
science, technology, and society 72
scientific
communities 54, 84, 168, 173, 206, 252
object 121, 125
practice 4, 17, 26, 100, 101, 122
scientometric x, xv, 195
security 54, 67, 70
self-
archiving 190, 197
organization 228
silent researcher 238, 240
simulation x, 6, 14, 56, 63, 78
situating action 74
SLAC 111, 113
social
capital 247, 255, 264
change 28, 248, 261, 265
inclusion and exclusion 49
networks 7, 145, 152, 250, 261
order 241, 249
relations 7, 20, 51, 61, 86, 155
shaping 5, 20, 67, 229
studies of science viii
/cultural geography xiv
sociology 5, 21, 51, 121, 150, 170
of science 43, 52, 150
of scientific knowledge (SSK) 122
software 9, 49, 77, 149, 157, 202, 252
specificity xiii, 48, 75, 79, 82
specimen collections 31
standard view 121, 141
standardization 127, 174, 202, 176, 181

Copyright © 2006, Idea Group Inc. Copying or distributing in print or electronic forms without written permission of Idea Group Inc. is prohibited.
status groups 236, 240, 241
strategic
dependence 173, 177, 183
uncertainty 173, 176
structural chemistry 126
subjectivity 121
summer centers 109
Sun 9
Supercomputers Centers 76
Swiss Delphi study 194
synchronization 113, 151
systematics xi, 31
Systematics Association 37

T
tacit xiii
dimension 132
knowledge 132, 140, 144
talk physics 106
task uncertainty 172, 176, 183
taxonomic impediment 31
technical uncertainty 173
technological
action frame 30, 34, 36
determinism 5, 52
privacy 257
technology assessment (TA) x, 190
teleconferencing 8, 69
temporal boundaries 153
text encoding initiative (TEI) 182
textual analysis 57
theoretical
chemistry 124, 134
particle physics 101
theories of place 135
theory construction 102
time zones 159
topology 154, 208, 211, 224
trading zones 180
trajectories 153
transactive memory 149
translation 82, 124, 129, 131, 212, 219
transmission delays 160
travel 252, 255

U
UK E-Science Core Programme 6
uncertainty xiv, 90, 140, 158, 167, 172, 183
urban information systems 30
use-tracking 190, 195, 201

V
vBNS 54
videoconferencing 138, 155, 160
virtual
communities 210
witnessing 1, 10, 17
orientation 137
virtuality 13
visualization 56, 63, 81, 145

W
weather prediction 6
web
communities 207, 228
presence 206, 207
webmetrics xv
will to produce xii, 72
witnessing xi, 3
work scheduling xiv
workplace studies 20
World Wide Web xv, 32, 101, 110, 229, 236
Wundt, Wilhelm 12, 25

Copyright © 2006, Idea Group Inc. Copying or distributing in print or electronic forms without written permission of Idea Group Inc. is prohibited.