Index

Note: indexed material from figures, tables, and boxes is noted with an (fxx.x), (tyy.y), or (bzz.z), respectively, and immediately follows the page number on which that item appears.

abduction 36, 71–2
action research 413–14
active voice, in writing 427
actor-network theory 247(b15.2)
addressee/addressor 55
adjustment models 350(b20.1)
avocacy 413–14
aerial photography 233–4
interpretation 163
sensors 158–9
agricultural land use model 367
American Guide series 236
anecdotes, use of 428
angle of friction/repose 98
antipodal points 317
arguments, in writing 429–30
arithmetic mean see mean
Arizona Community Data Set (ACDS) 337, 338
assessment, ecological 251
Association of American Geographers, professional ethics 420, 421(b24.3)
atmospheric effects, on solar radiation 157
Atmospheric General Circulation Models (AGCMs) 126
see also global climate models (GCMs)
attributes 45–6
autocorrelation, spatial 300, 311
average see mean

basic employment 337
bell curve see normal distribution
Berger, John, on observation 70
best fit lines 292, 293(f17.3), 301
binaries 11(t2.1), 401
binomial distribution 289
biogeographers 138, 151
biomass, measure of 147
bird’s eye view
Syracuse, NY 223, 225(f14.1)
US cities 230–1
boundary, shear stress 98
Bunge, William, and Detroit Geographical Expedition 414
Bureau of Census, US
economic census 183
micro-data 182
sampling 182
undercounting 184
carbon dioxide, atmospheric measurements 128–9
Cartesian coordinate system 317
cartography
art and science of 262(b16.2)
as a communication science 263
Casetti, Emilio, expansion method 311
catalyst effect see causal relations, types of
catalyst variables 299
causality 45(b4.1)
discrete/embedded 14(b2.1)
causal relations 43–4, 298
types of 299(f18.1)
censuses 78
census records, for historical data 236
central tendency 284–5, 286
Chebyshev’s inequality 287
Chi-square statistic 291(b17.2)
citation of sources 430
city directories, for historical data 231–2
classical models see theoretical and process-based models
climate change measurements
atmospheric CO₂ 128–9
“hockey stick” graph 130
mean surface temperature 129
reconstructed proxy data 130
satellite derived temperatures 130–1
time series trends 128–31
climate classification 125
climate data see data, climate
climate research
checklist 120–2(b8.1)
methods 124–6
climatology, definition 117
cluster sampling see probability sampling
coding interview responses 202
coefficient of determination 304
coefficient of variation 288
communication model 54–5
cartographic 263(f16.2), 264
comparative analysis 72–3
composite numbers 324
conceptual models, physical geography 356–7
conclusion, in academic writing 431
confidentiality 418
constant, linear regression 301–2
consulting 413–14
content analysis 202, 393
contingency tables 289–90
correlation 44, 45(b4.1), 301–4
correlation coefficient 290, 292
county histories and atlases 233
coupled climate models 126
co-variation 48
Cramer’s V 291(b17.2)
critical discourse analysis (CDA) 398–400
critical realism 18–19, 42
critical understanding 264
cultural landscape analysis
approaches 226(b14.3)
archives and data 227, 228–30, 236–7
as discourse materialized 224, 226(b14.2)
interdisciplinary study of 223(b14.1)
cumulative frequency distribution 281
curvilinear relationship see non-linear relationship
cycle of erosion, theory of 29–30
data
accessibility of 178
ambiguity of categories 183
climate 118, 119, 123
coding for survey research 198
collection and storage of 177
coverage 182
digital secondary 175
geographic 377
matrix 48–9
National Marine Fisheries Service 175
primary 173
resolution 182
secondary 173–4
sifting 324–5
spatial 377
storage of 175
data about data see metadata
database, georeferenced 377
datasets, gaps in 182
Davis, William Morris, cycle of erosion 106–7
deception, in research 416
deconstruction 250, 400–5
deduction 71–2
deductive reasoning 32–6
degree of variability 83–4
Deleuze, Gilles
basis of human existence 9–10
everyday embeddedness 15
dendrochronology 139
dependent variables 43, 298
Descartes, René
enlightenment 16
mind as knowledge agent 16(t2.3)
deterministic models 361–2
de Tocqueville, Alexis, travel account 234
deviation 286
diameter breast high (DBH), of trees 147
dichotomous nominal variables see dummy variables
digital image processing 163–4
digital information see data, digital
discharge, river 100
discourse analysis, of interviews 202
discrete causality 14(b2.1)
distribution, normal 284
distributions, frequency 280
Distributive Law 325
double-blind experiment 301
Drift Analysis of Regression Parameters (DARP) 311(b18.1)
driving and resisting forces 98
dummy variables 304
Dundee (UK) satellite data station 160
dynamic equilibrium 107

Earth Observing System Data and Information System (EOSDIS) 161
ecological assessment 251
ecological fallacy 180, 385
economic base analysis 336, 337–6
economic specialization 338
electromagnetic radiation 157
El Niño-Southern Oscillation (ENSO) 118–19
embedded causality 14(b2.1)
emitted radiation 157
empirical models 360–1
employment, basic/nonbasic 337
endogenic process 97
enlightenment, concept of 16
ensemble modeling, climate research 126
environmental determinism 29–30
environmental gradients 138
environmental history, oral 252–3
environmental perception 248
EOS data gateway 160
epidemiology, spatial 366, 367(b21.3),
368(t21.1)
episodic processes 104
epistemology 15, 61
equation, regression line 301
Equator 317
equifinality 64(b5.2)
Eratosthenes
Earth’s circumference 320–3
mathematics 316
prime numbers 323–5
ergodic reasoning 106, 35(b3.2)
EROS Data Center 160
error, in measurement 88
error sum of squares 303
ESRI (Environmental Systems Research Institute) 387
ethics
professional 420–1, 421(b24.3)
research 416–20, 418(b24.2)
survey research 203
ethnographic research, discussion 210–19
ethnographic study, using interviews or focus groups 199
Euclidian geometry 316, 319–20, 327
EUMETSAT satellites 158
exhaustive, nominal measurement 50
exogenic process 97
Expedia 377
experimental methods, on humans 301
explanation, scientific research 41–2
exploratory data analysis, spatial 189
extensive research 67–9
extraction mapping 252
extrinsic thresholds 100
factorization 325
false analogies 299
farm legislation, deconstruction of 402–3(b23.2)
Feyerabend, Paul, study of meaning 70
fire insurance maps 231
first drafts, of writing 426
flood frequency curve 105(b7.2)
floristic provinces, biogeographic 138
focus group research 199–202
formulas
determining sample size 84
vegetation surveys 150(t9.2)
four color theorem, map design 328–9
frequency distributions 280
frequency polygon 283
functional economic specialization 338
Fundamental Theorem of Arithmetic 325
Gaussian distribution see normal distribution
gazetteers 233
generalization, cartographic 272
Geographical Expedition, Detroit 414
geographically weighted regression 311
graphic data 377
graphic information science 378, 387–9
geometric correction 162
Index

geomorphic threshold 101
geomorphology, definition 94
depth-referencing 162
geospatial data see geographic data
Geospatial One Stop 386
geostationary satellites 158
geo-visualization, applied to secondary data 189
Gilbert, G. K., geomorphic process and form 108
GIScience see geographic information science
global climate models (GCMs) 361
see also Atmospheric General Circulation Models (AGCMs)
Global Historical Climatology Network (GHCN) 123
global positioning systems, error 88
Global Precipitation Climatology Project 123
GOES satellites 158
Google Earth 378
mashups 274, 378
Gould, Stephen J.
human race classification 53
objectivity in science 69–70
government data 86, 174, 386
ground reference data 168
ground truth see ground reference data
group interviews see focus group research
Hack's Law 68(b5.3)
Hägerstrand, Torsten, model 370
hardware models see physical models
hermeneutics 42
histogram 282
historic preservation records 234–5
homoscedasticity 307
human dimensions research 250
human-environment research
boundaries and categories 248–50
flows and connections 244–7
impacts and influences 250–3
overview of methods 241–2
human impacts 251–2
humanism
and epistemology 62
and observation 33
humanistic geography 18
humans, experiments using 301
hybrid phenomena 12–13
hypothesis testing see scientific method
hysteresis 103
image processing, computer-based 163–4
images, conveying information 392–3
independent variables 43, 298
induction 71–2
infrared energy see electromagnetic radiation
inhomogeneities 119, 122–3
innovation diffusion model 370
input-output models 350(b20.1)
in situ observations 117
INSPIRE project 386
intellectual property rights 417
intensive research 67–9
Intergovernmental Panel on Climate Change
(IPCC) 126, 128
interval 100–1
interval, measurement 51–2
interview research 199–202
intrinsic threshold 100
inventory, remote sensing 165, 167
irradiance, solar 157
isotropic 383
Jordan Curve Theorem, for mapmaking 330–1
Kantian view of space 66
Kant, Immanuel, space–time 12
Kelvin temperature scale 52
knowledge, goal of 42
knowledge, understanding of see epistemology
Kuhn, Thomas, theory-determined observation 70
kurtosis 284
laboratories, physical modeling 358
landform elements 96(f7.1)
Landsat 158
landscape, cultural see cultural landscape analysis
landscape denudation 98
landscape paintings, for historical data 236
large-scale map 329(b19.2)
latitude and longitude 316
law of large numbers 72
Leibnizian view of space 66
levels of measurement 49
Lewis, Peirce
  meaning of landscape 226(b 14.3)
  trade journals 227
Library of Congress
  bird's eye views 231
  fire insurance maps 231
Likert scale 50–1, 52
linear regression 301
  for regional analysis 346–9
Linnaeus, Carl, classification 53(b4.3)
livelihood analysis 244
local knowledge research 249
local records 234
logical positivism 27–8
longitude and latitude 316
MacEachren cartography model 265, 266
magazines and journals, for historical
  data 227
magnitude and frequency 104
map design, elements of 268–74
mapping, remote sensing 167
map projections 268, 271
  mathematics of 327–8
MapQuest 377
maps, definition 259–60
map scale 272
marginal multiplier 346
margins of error 87(b6.1)
marijuana 45
Marx, Karl, purpose of research 62
mashups, Google Earth 378
Massey, Doreen, space and time 13
material evolution 223
mathematical models, physical
  geography 360–4
matrix, data 48–9
Mauna Loa Observatory 128–9
maximum variation sampling see non-
  probability sampling
mean 285
meaning
  analysis of 393
  objective of inquiry 42
measurement, levels of 49
messages, in geographic research 55
metadata 119, 385
  for measurements 85
meta-model, regional analysis 336–7(f20.1)
Metropolitan Statistical Areas
  (MSAs) 281(t17.1)
Mission to Planet Earth 161
mixed methods
  applied to fisheries data 187, 189
  geographic inquiry 42–3
  human-environment study 241–4
mode 285
models
  adjustment 350(b20.1)
  agricultural land use 367
  calibration of 362–3
  communication 54–5
  conceptual 356–7
  definition 354–5
  deterministic 361–2
  empirical 360–1
  epidemiology 366, 367(b21.3), 368(t21.1)
  evaluation 362–3(b21.2), 371, 372
  global climate (GCM) 361
  Hägerstrand 370
  human geography 364–71
  ice cap dynamics 362–3(b21.2)
  innovation diffusion 370
  input-output 350(b20.1)
  mathematical 360–4, 362–3(b21.2)
  nine unit landsurface 95, 97(f7.2)
  physical 357–60
  process-based 361
  regional economic analysis 346–9,
    350(b20.1)
  river channels 358–9(b21.1)
  social accounting 350(b20.1)
  spatial interaction 370
  stochastic 361–2
  theoretical and process-based 365–71
  von Thünen 367
Modifiable Areal Unit Problem (MAUP) 181, 385
monism/dualism 11, 15
monitoring, remote sensing 167–8
moral values 411
multicollinearity see also causal relations
multiple regression analysis 304–6
multipliers, economic base 336, 340–1
multispectral image analysis 163–4
multispectral imaging systems 159
multi-stage and multi-phase sampling see probability sampling
multi-temporal imagery 168
Index

multivariate causal relation  see causal relations
multivariate statistics  280
mutually exclusive, nominal measurement  50

narrative analysis, interview responses  202
National Aerial Photography Program  234
National Geographic magazine
  content analysis of  394–6
  deconstruction of  404
  discourse analysis of  399–400
National Marine Fisheries Service (NMFS) data
  analysis using mixed methods  187–9
  coverage and type  175
  resolution of  182
  self-reporting fisheries data  177–8
  sources of error  185
  used by social scientists  175, 176
neighborhood effect  300
neighborhood texts, content analysis  396(b23.1), 397(t23.1)
newspapers, for historical data  236
Newtonian view of space  66
nominal measurement  49–50
  in survey research  198
nominal variables  281(t7.2)
non-basic employment  337
non-earnings income  341
non-essentialist understanding  401
non-Euclidian geometry  328
non-linear relationship  310
non-parametric statistics  280
non-probability sampling  81
normal distribution  284
North Atlantic Oscillation (NAO)  124
numerical modeling, climate research  126

objectives, of scientific research  41–3
observation
  differing geographic perspectives  32
  evolving concept of  38
  and geographic inquiry  27
  in physical geography  35
underpinnings of  33
observations, population of  300
Ocean Global Climate Models (OGCMs)  126
ogives  284

on-site recruiting, interview participants  201
ontology  10–11, 61
Open Geospatial Consortium (OGC)  386
oral history, environmental  252–3
  in survey research  198
ordinal measurement  50–1
ordinal variables, examples  282(t7.3)
ordinary least-squares (OLS) multiple regression  305
  for regional analysis  346–9
Ordinance Survey (UK), maps  234
outliers, regression lines  307–8

Palimpsest, geographical  222, 227–8
palynology  139
paradigms, in geographical research
  critical realism  18–19
  humanism  18
  poststructuralism  19
  spatial science  17–18
summary of  20–1(t2.4)
parameters, linear regression  301–2
parametric statistics  280
partial regression coefficients  305
partial size analysis  99(b7.1)
participant observation research
  conversation about  210–19
  human-environment  246–7
  written account of  207–9
participants, number needed  199–201
participatory appraisal  246
participatory research, fishing communities  189
passive remote sensing  157
passive voice, in writing  427
past landscape reconstruction  106
Pearson’s correlation coefficient  292–3, 304
Peirce, Charles, on abduction  71
percentiles  285
perception, environmental  248
physical landscapes, measures  94–5
physical models  357–60
  laboratories for  358
pixel  382
place-based analysis  382
placebo effect  301
plagiarism  416–17, 417(b24.1)
plant macrofossils  143
point of view, cultural landscapes  224
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>politics of research</td>
<td>412–16</td>
</tr>
<tr>
<td>pollen analysis</td>
<td></td>
</tr>
<tr>
<td>diagram</td>
<td>144(f9.1)</td>
</tr>
<tr>
<td>fossil</td>
<td></td>
</tr>
<tr>
<td>laboratory techniques</td>
<td>143</td>
</tr>
<tr>
<td>laboratory techniques</td>
<td>143</td>
</tr>
<tr>
<td>Polls</td>
<td>87(b6.1)</td>
</tr>
<tr>
<td>Popper, Karl, falsification</td>
<td>31(b3.1)</td>
</tr>
<tr>
<td>population, survey research</td>
<td>196</td>
</tr>
<tr>
<td>population of observations</td>
<td>300</td>
</tr>
<tr>
<td>positionality</td>
<td>417</td>
</tr>
<tr>
<td>positivism, and epistemology</td>
<td>62</td>
</tr>
<tr>
<td>post-positivistic perspectives</td>
<td>28</td>
</tr>
<tr>
<td>poststructuralism</td>
<td>19, 400</td>
</tr>
<tr>
<td>practices, conveying information</td>
<td>392–3</td>
</tr>
<tr>
<td>precision, of measurements</td>
<td>48</td>
</tr>
<tr>
<td>prediction error</td>
<td></td>
</tr>
<tr>
<td>Prime Meridian</td>
<td>317</td>
</tr>
<tr>
<td>prime numbers</td>
<td>324</td>
</tr>
<tr>
<td>privacy, and research</td>
<td>418</td>
</tr>
<tr>
<td>probability sampling</td>
<td>81–3</td>
</tr>
<tr>
<td>process-based models</td>
<td>361</td>
</tr>
<tr>
<td>production, critical discourse</td>
<td>399</td>
</tr>
<tr>
<td>analysis</td>
<td></td>
</tr>
<tr>
<td>professional ethics</td>
<td>420–1</td>
</tr>
<tr>
<td>proxy data, cultural landscapes</td>
<td>227</td>
</tr>
<tr>
<td>Pruitt, Evelyn, remote sensing</td>
<td>156</td>
</tr>
<tr>
<td>history</td>
<td></td>
</tr>
<tr>
<td>of atmospheric conditions</td>
<td>117–18</td>
</tr>
<tr>
<td>physical principles</td>
<td>157</td>
</tr>
<tr>
<td>sensors and platforms</td>
<td>158</td>
</tr>
<tr>
<td>remote sensing</td>
<td></td>
</tr>
<tr>
<td>and geographic information systems</td>
<td>164–5</td>
</tr>
<tr>
<td>calibration and validation</td>
<td>168</td>
</tr>
<tr>
<td>characteristics</td>
<td>158</td>
</tr>
<tr>
<td>geometric correction</td>
<td>162</td>
</tr>
<tr>
<td>interpretation</td>
<td>162–4</td>
</tr>
<tr>
<td>sources</td>
<td>160</td>
</tr>
<tr>
<td>representation, process of</td>
<td>54–7</td>
</tr>
<tr>
<td>research</td>
<td></td>
</tr>
<tr>
<td>action</td>
<td>413–14</td>
</tr>
<tr>
<td>ethics of</td>
<td></td>
</tr>
<tr>
<td>extensive</td>
<td>67–9</td>
</tr>
<tr>
<td>human dimensions</td>
<td>250</td>
</tr>
<tr>
<td>intensive</td>
<td>67–9</td>
</tr>
<tr>
<td>local knowledge</td>
<td>249</td>
</tr>
<tr>
<td>politics of</td>
<td>412–16</td>
</tr>
<tr>
<td>purpose of</td>
<td>62–4</td>
</tr>
<tr>
<td>social relevance</td>
<td>413</td>
</tr>
<tr>
<td>theory-determined</td>
<td>70</td>
</tr>
<tr>
<td>theory-laden</td>
<td>70</td>
</tr>
<tr>
<td>theory-neutral</td>
<td>69–70</td>
</tr>
<tr>
<td>research agendas, influences on</td>
<td>412–3</td>
</tr>
<tr>
<td>research framework</td>
<td>2–3</td>
</tr>
<tr>
<td>research sites, ethical issues</td>
<td>419</td>
</tr>
<tr>
<td>residual, linear regression</td>
<td>302–3</td>
</tr>
<tr>
<td>respondent</td>
<td>78</td>
</tr>
<tr>
<td>response rate</td>
<td>197</td>
</tr>
</tbody>
</table>
return period 104, 105(b7.2)
revision, research papers 431–2
risk perception analysis 248
river channel models 358–9(b21.1)
river discharge, measurement 100
Rose, Gillian, critical visual methodology 224–5
sample means 285–6
sample size, formula for 84
samples, site selection to obtain 141–2
sampling
frame 78
method 79
unit 78
see also probability sampling and non-probability sampling
Sanborns, fire insurance maps 231, 232(f14.2)
satellite imagery, archives 160
Sauer, Carl, cultural landscape tradition 224(b14.2)
Sayer, Andrew
observation 70
rational abstractions 65
scalar quantity 124
scale, aerial photographs 163
scale models see physical models
scales, atmospheric phenomenon 118–19
scatter diagrams (scatter plots) 290
scientific method 63(b5.1)
scientific nomenclature 146
scientific research, objectives 41–3
secondary data
archives 222–3, 228
definition 173–4
limitations 179–85
magazines and trade journals 227
metadata 86
retrieval and analysis 185
sources of 174–6
sediment analysis, field techniques 141
sediment transport rate 102
semi-structured interviews 201
shear strength 98
signifier 393
simple linear regression 301–4
skew 284
skewness, and regression 308–9
slope angle 98
slope process-units 97(f7.2)
small-scale map 329(b19.2)
snowball technique, interviewing 201
see also non-probability sampling
social accounting models 350(b20.1)
social relevance of research 413
social structures, critical discourse analysis 398
social surveys 196–7
soil landscape modeling 95
spatial
autocorrelation 300, 311
data see geographic data
epidemiology 366, 367(b21.3), 368(t21.1)
exploratory data analysis 189
interaction models 370
interpolation 125, 383
parameter variation 311
resolution 158, 382
science 364
thinking 378–86
units of observation 44
species, plant
composition and abundance 138
density 146–7
 richness 138
spectral resolution 158
spectral signature 157
standard deviation 287
standard error (of the estimate) 303
Standard Metropolitan Statistical Areas (SMSAs) 281(t17.1)
standard scores see z-scores
state historic preservation offices (SHPOs) 235
statistical inference 300
statistic, definition 280
stereographic transformation 327
stochastic models 361–2
Strahler, Arthur N., geomorphic process and form 108
stratified random samples 197
stratified sampling see probability sampling
structuralism, and observation 34
style, writing 427
sum of squares 303
Sun-synchronous satellites 158
survey data analysis 198
surveyors notes, for historical data 234
<table>
<thead>
<tr>
<th>Term</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>survey research</td>
<td>196–8</td>
</tr>
<tr>
<td>ethics</td>
<td>203</td>
</tr>
<tr>
<td>standards</td>
<td>202–3</td>
</tr>
<tr>
<td>surveys, human-environment</td>
<td>244–5</td>
</tr>
<tr>
<td>suspended sediment concentration</td>
<td>102</td>
</tr>
<tr>
<td>symbolization, cartographic</td>
<td>273–4</td>
</tr>
<tr>
<td>synergy variables</td>
<td>299</td>
</tr>
<tr>
<td>systematic sampling</td>
<td>see probability sampling</td>
</tr>
<tr>
<td>target population, identification of</td>
<td>78</td>
</tr>
<tr>
<td>techniques for writing</td>
<td>426</td>
</tr>
<tr>
<td>temporal resolution, remote sensing</td>
<td>158</td>
</tr>
<tr>
<td>texts, conveying information</td>
<td>392–3</td>
</tr>
<tr>
<td>theoretical/process-based models</td>
<td>365–71</td>
</tr>
<tr>
<td>theory-determined research</td>
<td>70</td>
</tr>
<tr>
<td>theory-laden research</td>
<td>70</td>
</tr>
<tr>
<td>theory-neutral research</td>
<td>69–70</td>
</tr>
<tr>
<td>Thiessen polygons</td>
<td>383</td>
</tr>
<tr>
<td>thresholds and critical values</td>
<td>100–1</td>
</tr>
<tr>
<td>TIGER mapping system</td>
<td>331</td>
</tr>
<tr>
<td>Tobler’s First Law of Geography</td>
<td>383</td>
</tr>
<tr>
<td>topographic maps</td>
<td>233–4</td>
</tr>
<tr>
<td>transect line</td>
<td>147–8</td>
</tr>
<tr>
<td>transformation, stereographic</td>
<td>327</td>
</tr>
<tr>
<td>travelers’ accounts, for historical data</td>
<td>234</td>
</tr>
<tr>
<td>tree-ring analysis</td>
<td></td>
</tr>
<tr>
<td>field techniques</td>
<td>141–2</td>
</tr>
<tr>
<td>laboratory techniques</td>
<td>145</td>
</tr>
<tr>
<td>see also dendrochronology</td>
<td></td>
</tr>
<tr>
<td>triangulated irregular networks (TINs)</td>
<td>385</td>
</tr>
<tr>
<td>triple-blind experiment</td>
<td>301</td>
</tr>
<tr>
<td>Trollope, Frances, travels</td>
<td>234</td>
</tr>
<tr>
<td>Tufte, Edward, visualization</td>
<td>379</td>
</tr>
<tr>
<td>understanding, scientific research</td>
<td>42–3</td>
</tr>
<tr>
<td>unit of analysis</td>
<td>79</td>
</tr>
<tr>
<td>measurement</td>
<td>47</td>
</tr>
<tr>
<td>observation</td>
<td>44</td>
</tr>
<tr>
<td>University Consortium for Geographic Information Science (UCGIS)</td>
<td>387</td>
</tr>
<tr>
<td>US Census Bureau</td>
<td>78</td>
</tr>
<tr>
<td>US Geological Survey</td>
<td></td>
</tr>
<tr>
<td>land-use classification system</td>
<td>86</td>
</tr>
<tr>
<td>spatial data standards</td>
<td>86</td>
</tr>
<tr>
<td>topographic maps</td>
<td>234</td>
</tr>
<tr>
<td>US Historical Climatology Network (USHCN)</td>
<td>123</td>
</tr>
<tr>
<td>validity, of measurement</td>
<td>46, 88</td>
</tr>
<tr>
<td>variability, in explanation</td>
<td>42</td>
</tr>
<tr>
<td>variables</td>
<td></td>
</tr>
<tr>
<td>catalyst</td>
<td>299</td>
</tr>
<tr>
<td>dependent</td>
<td>43, 298</td>
</tr>
<tr>
<td>dummy</td>
<td>304</td>
</tr>
<tr>
<td>independent</td>
<td>43, 298</td>
</tr>
<tr>
<td>interval</td>
<td>51–2</td>
</tr>
<tr>
<td>nominal</td>
<td>49–50</td>
</tr>
<tr>
<td>ordinal</td>
<td>50–1</td>
</tr>
<tr>
<td>ratio</td>
<td>52</td>
</tr>
<tr>
<td>synergy</td>
<td>299</td>
</tr>
<tr>
<td>variation</td>
<td>286</td>
</tr>
<tr>
<td>coefficient of</td>
<td>288</td>
</tr>
<tr>
<td>Vatnajökull Ice Cap, Iceland</td>
<td>362–3(b21.2)</td>
</tr>
<tr>
<td>vector quantity climate data</td>
<td>124</td>
</tr>
<tr>
<td>vegetation</td>
<td></td>
</tr>
<tr>
<td>and past climates</td>
<td>139–45</td>
</tr>
<tr>
<td>canopy structure</td>
<td>138</td>
</tr>
<tr>
<td>composition</td>
<td>138</td>
</tr>
<tr>
<td>cover</td>
<td>147</td>
</tr>
<tr>
<td>reconstruction</td>
<td>139</td>
</tr>
<tr>
<td>surveys</td>
<td>150(t9.2)</td>
</tr>
<tr>
<td>verbal research methods</td>
<td>195</td>
</tr>
<tr>
<td>vernacular landscape</td>
<td>222</td>
</tr>
<tr>
<td>visual variables, cartographic</td>
<td>273</td>
</tr>
<tr>
<td>volunteer sampling</td>
<td>see non-probability sampling</td>
</tr>
<tr>
<td>von Thünen, Johan H., model</td>
<td>367</td>
</tr>
<tr>
<td>weathering</td>
<td>98</td>
</tr>
<tr>
<td>weighted sampling</td>
<td>84</td>
</tr>
<tr>
<td>working outline, for writing</td>
<td>427</td>
</tr>
<tr>
<td>writing techniques</td>
<td>426</td>
</tr>
<tr>
<td>z-scores</td>
<td>288</td>
</tr>
</tbody>
</table>