

Author index

- Abel, Niels Henrik, 27
 Achilles, the heel, 126
 Aczél, János D., 27
 Adams, John Couch, 134
 Ames, Adelbert Jr, 132
 Arbuthnot, John, 136
 Aristotle, 4
- Banach, Stefan, 6
 Barnard, George A., 198
 Bateman, Frederick, 120
 Bayes, Rev. Thomas, 112, 377, 425, 499
 Beethoven, Ludwig van, 9
 Bell, Eric Temple, 665
 Berger, James O., 251, 407, 415, 420
 Berlioz, Hector, 9
 Bernardo, José M., 120
 Bernoulli, Daniel, 137, 203, 315, 321, 398
 Bernoulli, James, 43, 82, 112, 119, 163, 204, 284, 315, 493
 Bertrand, Joseph L., 195, 386, 486
 Bierce, Ambrose, 397
 Biot, Jean-Baptiste, 124
 Birnbaum, Alan, 251
 Blackwell, David, 247
 Bloomfield, Peter, 521
 Bohr, Niels Henrik David, 328
 Boltzmann, von Ludwig, 315, 440
 Boole, George, 9, 49, 315
 Borel, Emil, 386
 Boring, Edwin Garrigues, 120
 Box, George E. P., 314
 Brahe, Tycho, 203
 Bredin, Jean-Denis, 127
 Bretthorst, G. Larry, 125, 207, 473, 497, 505
 Broad, Charlie Dunbar, 155
 Brouwer, Luitzen Egbertus Jan, 673
 Burns, Arthur, 505
- Caesar, Julius, 126
 Cantrell, Hadley, 132
 Cardano, Gerolamo, 315
 Carnap, Rudolf, 279, 383, 574
 Carroll, Lewis, 671
- Charles II, 306
 Chernoff, Herman, 374, 400, 419, 420, 514
 Copi, Irving M., 16
 Cornfield, Jerome, 479
 Cournot, August Antoin, 137, 315
 Cox, Richard T., 27, 37, 325, 425, 492, 655
 Craig, John, 87, 116
 Cramér, Harald, 317, 329, 511, 562, 669, 673
 Crick, Francis, 139
 Cromwell, Oliver, 306
 Crow, Edwin L., 526
- Darwin, Charles, 312
 Davis, Frances A., 526
 Dawid, Philip A., 470
 de Finetti, Bruno, 37, 279, 317, 372, 425, 453, 464, 653
 de Groot, Morrie, 248, 420
 de Morgan, Augustus, 198, 214, 316
 de Moivre, Abraham, 112
 Dirac, Paul Adrien Maurice, 667
 Dyson, Freeman J., 668
- Edwards, Anthony W. F., 251, 335
 Edwards, Harold M., 665
 Einstein, Albert, 132, 135, 139, 229
 Elias, Peter, 439
 Ellis, Robert Leslie, 315
 Euclid, 656
 Euler, Leonhard, 203, 589
- Fechner, Gustav Theodor, 92
 Feller, William, 69, 88, 94, 211, 268, 321, 329, 404, 464, 466, 492, 505, 525, 663
 Fermat, Pierre de, 315
 Fine, Terrence L., 657
 Fisher, Sir Ronald Aylmer, 45, 150, 175, 197, 211, 243, 251, 253, 279, 315, 405, 492, 493
 Fitts, Gary, 440, 442
 Folks, Leroy, 251
 Fraser, D. A. S., 251, 378, 470, 478
- Galileo Galilei, 672
 Galton, Sir Francis, 227, 239

- Gardner, Martin, 197
 Gauss, Carl Friedrich, 84, 204, 230, 315, 451, 485
 Geisser, Seymour, 479, 496
 Gell-Mann, Murray, 673
 Gibbs, J. Willard, 315, 332, 674
 Glymour, Clark N., 97
 Gnedenko, Boris Vladimirovich, 386
 Gödel, Kurt, 45, 422, 423
 Goldstein, Herbert, 318
 Good, Irving John, 93, 116, 119, 125, 144, 317
 Gossett, William Sealey (aka Student), 495
 Gould, Stephen J., 196, 232
 Graunt, John, 306
 Grosser, Morton, 134
- Haldane, John Burdon Sanderson, 166, 575
 Halley, Edmund, 307
 Hamilton, John Barkley, 16
 Hansel, Charles Edward Mark, 126
 Hansen, William W., 193, 439
 Hardy, Godfrey Harold, 668, 671
 Harr, Alfréd, 377
 Hartigan, John A., 378
 Hausdorff, Felix, 672
 Hedges, Larry V., 257
 Helmholtz, Hermann von, 490, 503
 Hempel, Carl Gustav, 143
 Hermite, Charles, 668
 Herschel, Sir John Frederick William, 134, 200
 Hill, Bruce, 456
 Hipparchus, 203
 Hirsch, Warren M., 404
 Holmes, Sherlock, 62
 Howson, Cowlin, 126
 Hoyt, William G., 139
 Hume, David, 279, 310, 499
 Hurwicz, Leonid, 407
 Huzurbazar, Vasant Shankar, 494
- Jaynes, Edwin Thompson, 374
 Jeans, Sir James, 494
 Jefferson, Thomas, 372
 Jeffrey, Richard C., 139
 Jeffreys, Sir Harold, 37, 135, 155, 166, 206, 243, 251, 279, 316, 326, 377, 383, 472, 478, 479, 492, 493, 496, 524, 566
 Jevons, William S., 316
 Johnson, Rodney W., 97
 Johnson, William Ernes, 155, 279
 Johnson-Laird, Philip N., 132
- Kac, Mark, 664
 Kadane, Joseph B., 453
 Kahneman, Daniel, 128, 132
 Kempthorne, Oscar, 251
 Kendall, Sir Maurice, 88, 386, 387, 404, 492
 Kepler, Johannes, 503
 Keynes, John Maynard, 10, 17, 37, 40, 118, 206, 211, 233, 493
 Kline, Morris, 451, 665, 673, 674
- Kolmogorov, Andrei Nikolaevich, 49, 466, 651
 Kronecker, Leopold, 665
 Kurtz, Paul, 126
- Landon, Vernon D., 204
 Lane, David, 496
 Laplace, Pierre Simon, 9, 24, 42, 44, 84, 112, 124, 136, 155, 204, 230, 243, 279, 314, 315, 321, 336, 377, 399, 492, 589
 Lebesgue, Henri Léon, 668
 Legendre, Adrien Marie, 315
 Lehmann, Erich Leo, 510
 Leverrier, Urbain Jean Joseph, 134, 138
 Lighthill, Sir Michael James, 668
 Lincoln, Abraham, 659
 Lindley, Dennis Victor, 120, 479, 561
 Lovecraft, Howard Phillips, 196
 Lowell, Percival, 139
- McTaggart, John McTaggart Ellis, 671
 Maxfield, Margaret W., 526
 Maxwell, James Clerk, 4, 201, 315, 655
 Mendel, Gregor, 139
 Middleton, David, 404, 426, 510, 670
 Misner, Charles, 146
 Moran, Patrick Alfred Pierce, 386, 387
 Morgenstern, Oskar, 407
 Moses, Lincoln E., 374, 400, 419, 420, 514
 Mosteller, Frederick, 386
- Newton, Sir Isaac, 139, 306
 Neyman, Jerzy, 204, 404, 492, 495, 496, 673
 Northrop, Eugene P., 386
 Nostradamus, Michael, 478
 Nyquist, Harry, 207, 521
- Olkin, Ingram, 257
 Orwell, George, 328
- Pascal, de Blaise, 315
 Pasteur, Louis, 503
 Peano, Giuseppe, 116, 560
 Pearson, Egon Sharpe, 404
 Pearson, Karl, 230, 495
 Penrose, Oliver, 60
 Poincarè, Henri, 116, 316, 333, 337, 378, 386, 387, 560, 670, 672
 Poisson, Simeon Denis, 315
 Pólya, George, 6, 37, 134, 138, 242, 268
 Pontryagin, Lev Semenovich, 377
 Popper, Karl, 61, 276, 310, 326, 499
 Pratt, John W., 117
 Press, William H., 57
- Quetelet, Adolphe, 235, 239
- Ramanujan, Srinivasa Ramanujan Aiyangar, 422
 Reid, Constance, 496
 Rescher, Nicholas, 5
 Rosenkrantz, Roger D., 37

Author index

723

- Routh, Edward John, 318
 Ruelle, David, 118
 Russell, Bertrand, 116, 560, 672
- Savage, Leonard J., 186, 335, 400, 407, 420, 492, 552, 657, 672, 674
 Schaefer, Brad, 139
 Schervish, Mark J., 453
 Schwartz, Laurent, 667
 Seidenfeld, Teddy, 453
 Shannon, Claude Elwood, 521
 Shewhart, Walter Andrew, 114
 Siegert, Arnold, 431
 Simon, Herbert A., 5, 404, 438, 510
 Smart, William Marshall, 134
 Smith, Adam, 233
 Soal, Samuel George, 120, 126
 Sommerfeld, Arnold, 667
 Stewart, Gloria, 120
 Stigler, Stephen M., 92, 116, 490, 499
 Stone, Mervyn, 378, 455, 470
 Stove, David Charles, 310
 Stuart, Alan, 88
 Székely, Gébor J., 451
- Tax, Sol, 232
 Tell, William, 416
 Temple, George, 668
 Titchmarsh, Edward Charles, 669, 671
 Titterton, Donald Michael, 238
 Tombaugh, Clyde, 139
 Tribus, Myron, 25, 37, 116, 440, 442
 Tukey, John W., 505
 Turing, Alan, 116
- Tutankhamen, 659
 Tversky, Amos, 128, 132
- Ulam, Stanislaw, 6
 Urbach, Peter, 126
 Uspensky, James Victor, 386
- Valavanis, Stefan, 514
 Venn, John, 204, 279, 315, 495
 von Mises, Richard, 386, 492
 von Neumann, John, 7, 22, 407
- Wald, Abraham, 404, 425, 438
 Wason, Peter Cathcart, 132
 Watson, George Neville, 452
 Watson, James D., 659
 Wegener, Alfred, 139
 Weierstrass, Karl, 665
 Weldon, Walter Frank Raphael, 230, 335
 Weyl, Hermann, 378, 389, 672, 673
 Whitehead, North Whitehead, 116, 132
 Whittaker, Edmund Taylor, 452
 Whyte, Anthony J., 139
 Wiener, Norbert, 509
 Wigner, Eugene Paul, 332, 377, 378, 389
 Wilks, Samuel Stanley, 673
 William of Ockham, 613
 Wolf, Rudolf, 334
 Wolpert, Robert, 251
 Wrinch, Dorothy, 155
- Zabel, Sandy L., 155, 316, 499
 Zellner, Arnold, 423, 497
 Zidek, James, V., 470

Subject index

- a-priori* probabilities, 87
 accuracy of computations, 224
 adequate sets, 13, 34, 35, 652
 admissibility, 408
 alternative hypotheses, 135
 ambiguity of probabilistic notation, 472
 Ames room, 132
 ancillary information, 253
 angular momentum, 318
 archaeologist, 62
 Aristotelian logic, 9, 23
 Aristotelian proposition, 9, 146
 arrogance of the uninformed, 338
 aurora borealis, 524
 automobile seat belts, 126
 autoregressive model, 80

 backward inference, 80
 barber paradox, 672
 basic desiderata, 17
 Bayesian intervals, 673
 Bayesian jurisprudence, 144
 Bayesian periodicity analysis, 526
 Bernoulli trials, 163
 Bernoulli urn, 52
 betting, 655
 bias, 412
 bills of mortality, 305
 binary experiment, 164
 binary hypothesis testing, 90
 binomial identities, 69
 binomial monkey prior, 160
 biology, 327
Biometrika, 230
 black crows, 143
 Boolean algebra, 9, 166, 464
 Borel–Kolmogorov paradox, 110, 467, 654
 Bourbakist, 452
 bridge hands, 321
 business transactions, 421

 caloric theory, 146
 Canadian rat, 608

 canonical inverse, 594
 Cauchy distribution, 502
 causal dependence, 92
 causative factor, 327
 chain consistency, 259
 change-point problem, 474
 cheating, 317
 chi-squared test, 135
 clever tricks, 73, 267
 coherence, 373, 425, 655
 coin, biased, 318, 320
 common language, 21
 common sense, 29
 comparative probability, 656
 comparative theories, 20
 complete class theorem, 408, 415
 complete ignorance, 113, 376
 composite hypotheses, 114
 conditionality principle, 251
 confidence intervals, 673
 conjugate prior, 481
 conjunction, 10
 consistency, 65, 101, 108
 continuous hypotheses, 107
 convergence of opinions, 127
 convolutions, 677
 Copenhagen interpretation, 328
 correlations, 75
 countable additivity, 466
 Cox’s theorems, 117, 143, 486, 657
 Cramer–Rao inequality, 412
 criminal behavior, 422
 cumulants, 677

 Darwin–Fowler method, 440
 Darwinian evolution, 229
 de Finetti system, 655
 de Finetti theorem, 337
 deception, 123, 128
 decibel, 91
 decision theory, 96, 405, 427, 591
 delta-functions, 111
 denial, 10
 desiderata, 26

Subject index

725

- direct probabilities, 84
 disaster mongers, 504
 disjunction, 10
 disjunctive normal form, 15, 34
 divergence of opinions, 127, 131
 divine providence, 136
 Dreyfus affair, 127
 drug, unsafe, 130
- education, 658
 efficiency, 520
 efficient estimator, 377, 412
 eigenvector, 78
 electrical noise, 205
 elves and pixies, 196
 Emperor of China fallacy, 258, 337
 entropy, 121
 enzymes, 327
 epistemological, 22
 equally likely outcome, 322
 equations of condition, 664
 Establishment, 330, 405
 evidence, 91
 evolution, 316
 exchangeable distribution, 62
 exchangeable sequences, 663
 exchangeability, 81
 exchangeable, 620
 expectation, 66
 expert witnesses, 197
 exploratorium, 132
 extrasensory perception, 119, 301
- false correlations, 535
 feasible set, 595
 fine-grained propositions, 261
 finite additivity, 464
 finite-sets policy, 43
 Fisher information matrix, 257
 fluctuation-dissipation theorems, 232
 Fredholm integral equation, 482
 frequency interpretation, 315
 fundamental domain, 332
 future theories, 423
- gamesmanship, 267
 Gauss hypergeometric function, 56
 Gaussian distribution, 494, 501
 Gödel's theorem, 83
 grass, 205
 group invariance, 40
- Hanbury Brown–Twiss interferometer, 206
 Hausdorff sphere paradox, 672, 674
 Hermite polynomials, 237
 Hilbert space, 483
 Huygens principle, 428
 hypergeometric binomial limit, 70
 hypergeometric distribution, 56, 59, 67, 68, 95, 150
- ideology, 332
 ignorance priors, 372
 implication, 12
 improper prior, 487
 independence of tosses, 335
 indeterminacy, 328
 induction, 310, 326
 industrial quality control, 326
 inequality of Jupiter and Saturn, 203, 234
 infinite population, 82
 infinite regress, 324
 inflation, 126
 insurance, 400
 intuition, 40
 irrationalists, 310
 irreversible process, 80
- jackknife, 174
 Jeffreys' prior, 422
- Kelvin temperatures, 43
 Kolmogorov system, 651
- labor mediator, 421
 Lagrangian, 334
 lattice theory, 657, 658
 law of large numbers, 337
 Lebesgue–Stieltjes notation, 111
 likelihood, 89
 without credence, 196
 likelihood principle, 250, 505
 likelihood ratio, 90
 limb sawing, 659
 Lindemann's theorem, 143
 Liouville's theorem, 332
 location parameter, 491
 logic function, 13
 logical dependence, 92
 logistic, 116, 560
 loss function, 415, 421, 430
- magnification, 659
 marginal posterior pdf, 481
 marginalization paradox, 166, 244, 470
 Markov chain, 77
 Markovian approximation, 80
 matched filter, 439
 maximum entropy, 373
 maximum likelihood, 175
 estimate, 414
 Maxwellian velocity distribution, 494
 Maxwell's demon, 206
 measure zero, 469
 mechanics under the clouds, 329
 medical malpractice, 146
 medical testing, 325
 medicine, 327
 Mengenlehre, 672
 meta-analysis, 257
 meteorites, 124

- midparent, 227
 mind projection fallacy, 22, 23, 74, 83, 92, 108, 131, 212, 315, 411
 mind projection mythology, 608
 minimax criterion, 431, 435
 minimax strategies, 407
 miracles, 124
 moments of binomial distribution, 295
 morality, 424
 mottled soap, 671
 moving average, 521
 multidimensional theories, 20
 multiple hypothesis testing, 98, 103
 multiple-valued logic, 23
 multiplicity, 55
 Murphy's law, 203

 NAND, 16
 National Bureau of Standards, 573
 natural selection, 133
 Neptune, discovery of, 134
 news reports and the media, 128, 156, 504
 newspeak, 328
 Newtonian theory, 147
 Neyman–Pearson criterion, 436
 Neyman–Pearson theory, 431
 noble-sounding names, 409
 non-Aristotelian proposition, 146
 nonconglomerability, 453, 659
 nonsense, 423
 NOR, 16
 normal approximations, 122
 notation, 55
 nuisance parameter, 527
 null hypothesis, 524
 numerical values, 37
 Nyquist noise, 207, 609

 objective, 45
 objectivity, 86
 ontological, 22
 optical illusions, 133
 optional stopping, 96, 166
 ordinary least squares estimate, 609
 original sin, 673
 orthodox statistics, 316

 paradox, 451
 barber, 672
 Borel–Kolmogorov, 110, 467, 654
 Emperor of China, 258, 337
 Hausdorff sphere, 672, 674
 of intuition, 144
 marginalization, 244
 mass production of, 485
 parameter estimation, 409
 parlor game, 452
 partition function, 659
 pathological, exceptional cases, 192

 penguins, 48
 periodicity, 520
 photoelectric effect, 327
 physical probabilities, 319, 324, 327, 330
 physical reality, 328
 Pitman–Koopman theorem, 247
 Pluto, 139
 Poisson distribution, 170
 polhodes, 318
 pooled data, 260
 population dynamics, 229
 post-data question, 502
 posterior odds, 90
 posterior probability, 89
 pre-data question, 500, 501
 pre-filtered data, 521
 predicate calculus, 23
 predictive probability, 463
Principia Mathematica, 560
 principle of indifference, 40, 386, 387, 395, 573
 principle of maximum entropy, 207
 prior information, 88, 267, 484
 prior odds, 90
 prior probability, 87, 420
 probability, 41
 and frequency, 67
 product rule, 26, 29, 34
 propensity vs. logic, 60
 propositional calculus, 23
 pseudoproblem, 485
 psychokinesis, 92, 167
 psychological tests, 132
 psychology
 of concealing sin, 466
 of easy success, 487
 of perpetuated errors, 451
 public health education, 326
 purpose in Nature, 231

 quantum theory, 327
 quarantine, 673

 random drawing, 74
 random experiments, 324
 random variables, 500
 random walk, 459
 randomization, 73
 redescending psi function, 174
 redundant information, 166
 resurrection of dead hypotheses, 104, 134
 risk, 408
 robot, 9, 86, 87, 92, 94, 96, 99, 406, 409
 robustness, 174
 rock classification, 658
 Rothamsted, 494
 Royal Society, 306
 rule of succession, 155, 279, 339

Subject index

727

- sample re-use, 264
- sampling distribution, 84
- sampling theory, 51
- sampling with replacement, 72
- Sam's broken thermometer, 654
- scientific inference, 84
- semiliterate, 339
- set of all integers, 672
- shortest confidence interval, 377
- sigma-field, 651
- significance test, 84, 137, 521, 523
- sociology of science, 147
- Solvay Congress, 329
- soteriology, 147
- sound propagation, 62
- spilled milk, 195
- spooks, 325
- St Malo, 195
- St Petersburg game, 399
- state of Nature, 405, 409, 423
- statistical inference, 409
- statistician, 316
- strategy, 408
- strong domination, 407
- strong inconsistency, 455
- subjective, 44
 - Bayesian, 372
- sufficiency, 245
 - and information, 428
- sufficient statistic, 245
- sum rule, 30, 34
- syllogism, 4, 133
- symmetry, 323, 331
 - arguments, 331
 - equations, 40
- systematic error, 258
- taxicab problem, 190
- Tchebycheff inequality, 186
- temperature scales, 42
- tetrahedra, 459
- transformation equations, 39
- transformation group, 372, 380
- transitivity, 407, 656
- truth table, 13
- truth value, 10
- Turing machines, 16
- two-valued logic, 23
- types, theory of, 560
- unbiased estimator, 377, 511
 - pathology, 516
- unbiased minimum variance, 412
- undecidability, 47
- uninformative priors, 485
- universal comparability, 656
- urn, contents of, 155
- utility of money, 399, 424
- value judgment, 146
- Venn diagram, 47, 261, 651
- Venus, 329
- vested interest, 327
- viruses, 327
- visual perception, 132
- vitamins, 327
- warfare between science and theology, 324
- weather forecaster, 142, 402
- Weber–Fechner law, 95
- widget problem, 440