

References

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References I

- [1] M. Abramowitz and I. A. Stegun, editors.
Handbook of Mathematical Functions.
Dover Publications, New York, 1974.
- [2] L. Adamic, R. Lukose, A. Puniyani, and B. Huberman.
Search in power-law networks.
Phys. Rev. E, 64:046135, 2001. pdf (田)
- [3] M. Adler.
Stardom and talent.
American Economic Review, pages 208–212, 1985. pdf (田)
- [4] R. Albert and A.-L. Barabási.
Statistical mechanics of complex networks.
Rev. Mod. Phys., 74:47–97, 2002. pdf (田)
- [5] R. Albert, H. Jeong, and A.-L. Barabási.
Error and attack tolerance of complex networks.
Nature, 406:378–382, 2000. pdf (田)
- [6] P. W. Anderson.
More is different.
Science, 177(4047):393–396, 1972. pdf (田)
- [7] R. Axtell.
Zipf distribution of U.S. firm sizes.
Science, 293(5536):1818–1820, 2001. pdf (田)
- [8] R. Badii and A. Politi.
Complexity: Hierarchical structures and scaling in physics.
Cambridge University Press, Cambridge, UK, 1997.
- [9] P. Bak.
How Nature Works: the Science of Self-Organized Criticality.
Springer-Verlag, New York, 1996.



References II

- [10] P. Bak, C. Tang, and K. Wiesenfeld.
Self-organized criticality - an explanation of $1/f$ noise.
[Phys. Rev. Lett.](#), 59(4):381–384, 1987. pdf (田)
- [11] M. Balinski and R. Laraki.
A theory of measuring, electing, and ranking.
[Proc. Natl. Acad. Sci.](#), 104(21):8720–8725, 2007. pdf (田)
- [12] P. Ball.
Critical Mass: How One Thing Leads to Another.
Farra, Straus, and Giroux, New York, 2004.
- [13] J. R. Banavar, A. Maritan, and A. Rinaldo.
Size and form in efficient transportation networks.
[Nature](#), 399:130–132, 1999. pdf (田)
- [14] J. R. Banavar, M. E. Moses, J. H. Brown, J. Damuth, A. Rinaldo, R. M. Sibly, and A. Maritan.
A general basis for quarter-power scaling in animals.
[Proc. Natl. Acad. Sci.](#), 107:15816–15820, 2010. pdf (田)
- [15] Y. Bar-Yam.
Dynamics of Complex Systems.
Westview Press, Boulder, CO, 2003.
- [16] A.-L. Barabási and R. Albert.
Emergence of scaling in random networks.
[Science](#), 286:509–511, 1999. pdf (田)
- [17] M. A. Bedau.
Weak emergence.
In J. Tomberlin, editor, [Philosophical Perspectives: Mind, Causation, and World](#), volume 11, pages 375–399. Blackwell, Malden, MA, 1997. pdf (田)



References III

- [18] E. D. Beinhocker.
The Origin of Wealth.
Harvard Business School Press, Cambridge, MA, 2006.
- [19] A. Bejan.
Shape and Structure, from Engineering to Nature.
Cambridge Univ. Press, Cambridge, UK, 2000.
- [20] P. Bennett and P. Harvey.
Active and resting metabolism in birds—allometry, phylogeny and ecology.
J. Zool., 213:327–363, 1987. pdf (田)
- [21] B. J. L. Berry.
Déjà vu, Mr. Krugman.
Urban Geography, 20:1–2, 1999. pdf (田)
- [22] L. M. A. Bettencourt, J. Lobo, D. Helbing, Kühnhert, and G. B. West.
Growth, innovation, scaling, and the pace of life in cities.
Proc. Natl. Acad. Sci., 104(17):7301–7306, 2007. pdf (田)
- [23] S. Bikhchandani, D. Hirshleifer, and I. Welch.
A theory of fads, fashion, custom, and cultural change as informational cascades.
J. Polit. Econ., 100:992–1026, 1992.
- [24] S. Bikhchandani, D. Hirshleifer, and I. Welch.
Learning from the behavior of others: Conformity, fads, and informational cascades.
J. Econ. Perspect., 12(3):151–170, 1998. pdf (田)
- [25] P. M. Blau and J. E. Schwartz.
Crosscutting Social Circles.
Academic Press, Orlando, FL, 1984.
- [26] K. L. Blaxter, editor.
Energy Metabolism; Proceedings of the 3rd symposium held at Troon, Scotland, May 1964.
Academic Press, New York, 1965.



References IV

- [27] J. J. Blum.
On the geometry of four-dimensions and the relationship between metabolism and body mass.
[J. Theor. Biol.](#), 64:599–601, 1977.
- [28] S. Boccaletti, V. Latora, Y. Moreno, M. Chavez, and D.-U. Hwang.
Complex networks: Structure and dynamics.
[Physics Reports](#), 424:175–308, 2006. pdf (田)
- [29] N. Boccara.
[Modeling Complex Systems](#).
Springer-Verlag, New York, 2004.
- [30] J. C. Bohorquez, S. Gourley, A. R. Dixon, M. Spagat, and N. F. Johnson.
Common ecology quantifies human insurgency.
[Nature](#), 462:911–914, 2009. pdf (田)
- [31] J. Bollen, H. Van de Sompel, A. Hagberg, L. Bettencourt, R. Chute, M. A. Rodriguez, and B. Lyudmila.
Clickstream data yields high-resolution maps of science.
[PLoS ONE](#), 4:e4803, 2009. pdf (田)
- [32] S. Bornholdt and H. Ebel.
World Wide Web scaling exponent from Simon's 1955 model.
[Phys. Rev. E](#), 64:035104(R), 2001. pdf (田)
- [33] S. Bornholdt and H. G. Schuster, editors.
[Handbook of Graphs and Networks](#).
Wiley-VCH, Berlin, 2003.
- [34] R. L. Breiger.
The duality of persons and groups.
[Social Forces](#), 53(2):181–190, 1974. pdf (田)



References V

- [35] D. Brockmann, L. Hufnagel, and T. Geisel.
The scaling laws of human travel.
[Nature](#), pages 462–465, 2006. pdf (田)
- [36] S. Brody.
Bioenergetics and Growth.
Reinhold, New York, 1945.
reprint, .
- [37] S. V. Buldyrev, R. Parshani, G. Paul, H. E. Stanley, and S. Havlin.
Catastrophic cascade of failures in interdependent networks.
[Nature](#), 464:1025–1028, 2010. pdf (田)
- [38] J. T. Cacioppo, J. H. Fowler, and N. A. Christakis.
Alone in the crowd: The structure and spread of loneliness in a large social network.
[Journal of Personality and Social Psychology](#), 97:977–991, 2009. pdf (田)
- [39] J. M. Carlson and J. Doyle.
Highly optimized tolerance: A mechanism for power laws in design systems.
[Phys. Rev. E](#), 60(2):1412–1427, 1999. pdf (田)
- [40] J. M. Carlson and J. Doyle.
Highly optimized tolerance: Robustness and design in complex systems.
[Phys. Rev. Lett.](#), 84(11):2529–2532, 2000. pdf (田)
- [41] J. M. Carlson and J. Doyle.
Complexity and robustness.
[Proc. Natl. Acad. Sci.](#), 99:2538–2545, 2002. pdf (田)
- [42] E. Castronova.
Synthetic Worlds: The Business and Culture of Online Games.
University of Chicago Press, Chicago, IL, 2005.



References VI

- [43] I. D. Chase, C. Tovey, D. Spangler-Martin, and M. Manfredonia.
Individual differences versus social dynamics in the formation of animal dominance hierarchies.
[Proc. Natl. Acad. Sci.](#), 99(8):5744–5749, 2002. [pdf](#) (田)
- [44] N. A. Christakis and J. H. Fowler.
The spread of obesity in a large social network over 32 years.
[New England Journal of Medicine](#), 357:370–379, 2007. [pdf](#) (田)
- [45] N. A. Christakis and J. H. Fowler.
The collective dynamics of smoking in a large social network.
[New England Journal of Medicine](#), 358:2249–2258, 2008. [pdf](#) (田)
- [46] R. B. Cialdini.
Influence: Science and Practice.
Alyn and Bacon, Boston, MA, 4th edition, 2000.
- [47] A. Clauset, C. Moore, and M. E. J. Newman.
Structural inference of hierarchies in networks, 2006. [pdf](#) (田)
- [48] A. Clauset, C. Moore, and M. E. J. Newman.
Hierarchical structure and the prediction of missing links in networks.
[Nature](#), 453:98–101, 2008. [pdf](#) (田)
- [49] A. Clauset, M. Young, and K. S. Gleditsch.
On the Frequency of Severe Terrorist Events.
[Journal of Conflict Resolution](#), 51(1):58–87, 2007. [pdf](#) (田)
- [50] J. S. Coleman.
Foundations of Social Theory.
Belknap Press, Cambridge, MA, 1994.
- [51] M. H. DeGroot.
Probability and Statistics.
[Addison-Wesley](#), Reading, Massachusetts, 1975.



References VII

- [52] P. S. Dodds.
Optimal form of branching supply and collection networks.
[Phys. Rev. Lett.](#), 104(4):048702, 2010. pdf (田)
- [53] P. S. Dodds, R. Muhamad, and D. J. Watts.
An experimental study of search in global social networks.
[Science](#), 301:827–829, 2003. pdf (田)
- [54] P. S. Dodds and D. H. Rothman.
Unified view of scaling laws for river networks.
[Physical Review E](#), 59(5):4865–4877, 1999. pdf (田)
- [55] P. S. Dodds and D. H. Rothman.
Scaling, universality, and geomorphology.
[Annu. Rev. Earth Planet. Sci.](#), 28:571–610, 2000. pdf (田)
- [56] P. S. Dodds, D. H. Rothman, and J. S. Weitz.
Re-examination of the “3/4-law” of metabolism.
[Journal of Theoretical Biology](#), 209:9–27, 2001. pdf (田)
- [57] P. S. Dodds and D. J. Watts.
Universal behavior in a generalized model of contagion.
[Phys. Rev. Lett.](#), 92:218701, 2004. pdf (田)
- [58] P. S. Dodds and D. J. Watts.
A generalized model of social and biological contagion.
[J. Theor. Biol.](#), 232:587–604, 2005. pdf (田)
- [59] S. N. Dorogovtsev and J. F. F. Mendes.
Evolution of Networks.
Oxford University Press, Oxford, UK, 2003.



References VIII

- [60] S. Douady and Y. Couder.
Phyllotaxis as a dynamical self organizing process Part I: The spiral modes resulting from time-periodic iterations.
[J. Theor. Biol., 178:255–274, 1996. pdf \(田\)](#)
- [61] S. Douady and Y. Couder.
Phyllotaxis as a dynamical self organizing process Part II: The spontaneous formation of a periodicity and the coexistence of spiral and whorled patterns.
[J. Theor. Biol., 178:275–294, 1996. pdf \(田\)](#)
- [62] S. Douady and Y. Couder.
Phyllotaxis as a dynamical self organizing process Part III: The simulation of the transient regimes of ontogeny.
[J. Theor. Biol., 178:295–312, 1996. pdf \(田\)](#)
- [63] R. M. D'Souza, C. Borgs, J. T. Chayes, N. Berger, and R. D. Kleinberg.
Emergence of tempered preferential attachment from optimization.
[Proc. Natl. Acad. Sci., 104:6112–6117, 2007. pdf \(田\)](#)
- [64] A. E. Economos.
Elastic and/or geometric similarity in mammalian design.
[Journal of Theoretical Biology, 103:167–172, 1983. pdf \(田\)](#)
- [65] W. Feller.
[An Introduction to Probability Theory and Its Applications](#), volume I.
John Wiley & Sons, New York, third edition, 1968.
- [66] R. Ferrer i Cancho and R. Solé.
The small world of human language.
[Proc. R. Soc. Lond. B, 26:2261–2265, 2001. pdf \(田\)](#)
- [67] R. Ferrer i Cancho and R. V. Solé.
Zipf's law and random texts.
[Advances in Complex Systems, 5\(1\):1–6, 2002.](#)



References IX

- [68] R. Foote.
Mathematics and complex systems.
[Science](#), 318:410–412, 2007. [pdf](#) (田)
- [69] J. H. Fowler and N. A. Christakis.
Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study.
[BMJ](#), 337:article #2338, 2008. [pdf](#) (田)
- [70] G. Galilei.
Dialogues Concerning Two New Sciences.
Kessinger Publishing, 2010.
Translated by Henry Crew and Alfonso De Salvio.
- [71] M. T. Gastner and M. E. J. Newman.
Shape and efficiency in spatial distribution networks.
[J. Stat. Mech.: Theor. & Exp.](#), 1:P01015, 2006. [pdf](#) (田)
- [72] R. Gibrat.
Les inégalités économiques.
Librairie du Recueil Sirey, Paris, France, 1931.
- [73] M. Gladwell.
The Tipping Point.
Little, Brown and Company, New York, 2000.
- [74] D. S. Glazier.
Beyond the '3/4-power law': variation in the intra- and interspecific scaling of metabolic rate in animals.
[Biol. Rev.](#), 80:611–662, 2005. [pdf](#) (田)
- [75] D. S. Glazier.
The 3/4-power law is not universal: Evolution of isometric, ontogenetic metabolic scaling in pelagic animals.
[BioScience](#), 56:325–332, 2006. [pdf](#) (田)



References X

- [76] K.-I. Goh, G. Salvi, B. Kahng, and D. Kim.
Skeleton and fractal scaling in complex networks.
[Phys. Rev. Lett.](#), 96:018701, 2006. [pdf](#) (田)
- [77] M. C. González, C. A. Hidalgo, and A.-L. Barabási.
Understanding individual human mobility patterns.
[Nature](#), 453:779–782, 2008. [pdf](#) (田)
- [78] I. Gradshteyn and I. Ryzhik.
[Table of Integrals, Series, and Products](#).
Academic Press, San Diego, fifth edition, 1994.
- [79] M. Granovetter.
Threshold models of collective behavior.
[Am. J. Sociol.](#), 83(6):1420–1443, 1978. [pdf](#) (田)
- [80] M. Granovetter and R. Soong.
Threshold models of diversity: Chinese restaurants, residential segregation, and the spiral of silence.
[Sociological Methodology](#), 18:69–104, 1988. [pdf](#) (田)
- [81] M. S. Granovetter and R. Soong.
Threshold models of interpersonal effects in consumer demand.
[Journal of Economic Behavior & Organization](#), 7:83–99, 1986.
[Formulates threshold as function of price, and introduces exogenous supply curve.](#) [pdf](#) (田)
- [82] J. T. Hack.
Studies of longitudinal stream profiles in Virginia and Maryland.
[United States Geological Survey Professional Paper](#), 294-B:45–97, 1957.
- [83] A. Halevy, P. Norvig, and F. Pereira.
The unreasonable effectiveness of data.
[IEEE Intelligent Systems](#), 24:8–12, 2009. [pdf](#) (田)



References XI

- [84] A. Hemmingsen.
The relation of standard (basal) energy metabolism to total fresh weight of living organisms.
[Rep. Steno Mem. Hosp., 4:1–58, 1950. pdf \(田\)](#)
- [85] A. Hemmingsen.
Energy metabolism as related to body size and respiratory surfaces, and its evolution.
[Rep. Steno Mem. Hosp., 9:1–110, 1960. pdf \(田\)](#)
- [86] A. A. Heusner.
Size and power in mammals.
[Journal of Experimental Biology, 160:25–54, 1991. pdf \(田\)](#)
- [87] C. A. Hidalgo, B. Klinger, A.-L. Barabási, and R. Hausman.
The product space conditions the development of nations.
[Science, 317:482–487, 2007. pdf \(田\)](#)
- [88] R. A. Hill, R. A. Bentley, and R. I. M. Dunbar.
Network scaling reveals consistent fractal pattern in hierarchical mammalian societies.
[Biology Letters, 2008. pdf \(田\)](#)
- [89] T. P. Hill.
The first-digit phenomenon.
[American Scientist, 86:358–, 1998.](#)
- [90] E. Hoffer.
The True Believer: On The Nature Of Mass Movements.
Harper and Row, New York, 1951.
- [91] E. Hoffer.
The Passionate State of Mind: And Other Aphorisms.
Buccaneer Books, 1954.
- [92] B. A. Huberman and L. A. Adamic.
Evolutionary dynamics of the World Wide Web.
[Technical report, Xerox Palo Alto Research Center, 1999.](#)

References

References



References XII

- [93] B. A. Huberman and L. A. Adamic.
The nature of markets in the World Wide Web.
[Quarterly Journal of Economic Commerce](#), 1:5–12, 2000.
- [94] J. S. Huxley and G. Teissier.
Terminology of relative growth.
[Nature](#), 137:780–781, 1936. pdf (田)
- [95] H. J. Jensen.
Self-Organized Criticality: Emergent Complex Behavior in Physical and Biological Systems.
[Cambridge Lecture Notes in Physics](#). Cambridge University Press, Cambridge, UK, 1998.
- [96] N. F. Johnson, M. Spagat, J. A. Restrepo, O. Becerra, J. C. Bohorquez, N. Suarez, E. M. Restrepo, and R. Zarama.
Universal patterns underlying ongoing wars and terrorism, 2006. pdf (田)
- [97] L. Jost.
Entropy and diversity.
[Oikos](#), 113:363–375, 2006. pdf (田)
- [98] E. Katz and P. F. Lazarsfeld.
Personal Influence.
[The Free Press](#), New York, 1955.
- [99] S. Kauffman.
The Origins of Order.
[Oxford](#), 1993.
- [100] M. Kearns, S. Suri, and N. Montfort.
An experimental study of the coloring problem on human subject networks.
[Science](#), 313:824–827, 2006. pdf (田)
- [101] W. O. Kermack and A. G. McKendrick.
A contribution to the mathematical theory of epidemics.
[Proc. R. Soc. Lond. A](#), 115:700–721, 1927. pdf (田)



References XIII

- [102] [W. O. Kermack and A. G. McKendrick.](#)
A contribution to the mathematical theory of epidemics. III. Further studies of the problem of endemicity.
[Proc. R. Soc. Lond. A, 141\(843\):94–122, 1927.](#) pdf (田)
- [103] [W. O. Kermack and A. G. McKendrick.](#)
Contributions to the mathematical theory of epidemics. II. The problem of endemicity.
[Proc. R. Soc. Lond. A, 138\(834\):55–83, 1927.](#) pdf (田)
- [104] [M. Kleiber.](#)
Body size and metabolism.
[Hilgardia, 6:315–353, 1932.](#) pdf (田)
- [105] [J. Kleinberg.](#)
Navigation in a small world.
[Nature, 406:845, 2000.](#) pdf (田)
- [106] [J. M. Kleinberg.](#)
Authoritative sources in a hyperlinked environment.
[Proc. 9th ACM-SIAM Symposium on Discrete Algorithms, 1998.](#) pdf (田)
- [107] [G. Kossinets.](#)
Effects of missing data in social networks.
[Social Networks, 28\(3\):247–268, 2006.](#) pdf (田)
- [108] [G. Kossinets and D. J. Watts.](#)
Empirical analysis of evolving social networks.
[Science, 311:88–90, 2006.](#) pdf (田)
- [109] [M. Kretzschmar and M. Morris.](#)
Measures of concurrency in networks and the spread of infectious disease.
[Math. Biosci., 133:165–95, 1996.](#) pdf (田)



References XIV

- [110] P. Krugman.
The self-organizing economy.
Blackwell Publishers, Cambridge, Massachusetts, 1995.
- [111] T. Kuran.
Now out of never: The element of surprise in the east european revolution of 1989.
World Politics, 44:7–48, 1991. pdf (田)
- [112] T. Kuran.
Private Truths, Public Lies: The Social Consequences of Preference Falsification.
Harvard University Press, Cambridge, MA, Reprint edition, 1997.
- [113] P. Laureti, L. Moret, and Y.-C. Zhang.
Aggregating partial, local evaluations to achieve global ranking.
Physica A, 345(3–4):705–712, 2004. pdf (田)
- [114] L. B. Leopold.
A View of the River.
Harvard University Press, Cambridge, MA, 1994.
- [115] E. Lieberman, J.-B. Michel, J. Jackson, T. Tang, and M. A. Nowak.
Quantifying the evolutionary dynamics of language.
Nature, 449:713–716, 2007. pdf (田)
- [116] A. J. Lotka.
The frequency distribution of scientific productivity.
Journal of the Washington Academy of Science, 16:317–323, 1926.
- [117] T. Maillart, D. Sornette, S. Spaeth, and G. von Krogh.
Empirical tests of Zipf’s law mechanism in open source Linux distribution.
Phys. Rev. Lett., 101(21):218701, 2008. pdf (田)



References XV

- [118] O. Malcai, O. Biham, and S. Solomon.
Power-law distributions and Lévy-stable intermittent fluctuations in stochastic systems of many autocatalytic elements.
[Phys. Rev. E](#), 60(2):1299–1303, 1999. pdf (田)
- [119] B. B. Mandelbrot.
An informational theory of the statistical structure of languages.
In W. Jackson, editor, [Communication Theory](#), pages 486–502. Butterworth, Woburn, MA, 1953.
pdf (田)
- [120] B. B. Mandelbrot.
A note on a class of skew distribution function. analysis and critique of a paper by H. A. Simon.
[Information and Control](#), 2:90–99, 1959.
- [121] B. B. Mandelbrot.
Final note on a class of skew distribution functions: analysis and critique of a model due to H. A. Simon.
[Information and Control](#), 4:198–216, 1961.
- [122] B. B. Mandelbrot.
Post scriptum to 'final note'.
[Information and Control](#), 4:300–304, 1961.
- [123] T. McMahon.
Size and shape in biology.
[Science](#), 179:1201–1204, 1973. pdf (田)
- [124] T. A. McMahon.
Allometry and biomechanics: Limb bones in adult ungulates.
[The American Naturalist](#), 109:547–563, 1975. pdf (田)
- [125] T. A. McMahon and J. T. Bonner.
[On Size and Life](#).
Scientific American Library, New York, 1983.



References XVI

- [126] G. A. Miller.
Some effects of intermittent silence.
[American Journal of Psychology](#), 70:311–314, 1957. pdf (田)
- [127] J. H. Miller and S. E. Page.
Complex Adaptive Systems: An introduction to computational models of social life.
[Princeton University Press, Princeton, NJ, 2007.](#)
- [128] R. Milo, N. Kashtan, S. Itzkovitz, M. E. J. Newman, and U. Alon.
On the uniform generation of random graphs with prescribed degree sequences, 2003. pdf (田)
- [129] M. Mitzenmacher.
A brief history of generative models for power law and lognormal distributions.
[Internet Mathematics](#), 1:226–251, 2003. pdf (田)
- [130] D. R. Montgomery and W. E. Dietrich.
Channel initiation and the problem of landscape scale.
[Science](#), 255:826–30, 1992. pdf (田)
- [131] E. W. Montroll and M. W. Shlesinger.
On $1/f$ noise and other distributions with long tails.
[Proc. Natl. Acad. Sci.](#), 79:3380–3383, 1982. pdf (田)
- [132] E. W. Montroll and M. W. Shlesinger.
Maximum entropy formalism, fractals, scaling phenomena, and $1/f$ noise: a tale of tails.
[J. Stat. Phys.](#), 32:209–230, 1983.
- [133] C. D. Murray.
A relationship between circumference and weight in trees and its bearing on branching angles.
[J. Gen. Physiol.](#), 10:725–729, 1927. pdf (田)
- [134] J. D. Murray.
Mathematical Biology.
[Springer, New York, Third edition, 2002.](#)



References XVII

- [135] S. Newcomb.
Note on the frequency of use of the different digits in natural numbers.
[American Journal of Mathematics](#), 4:39–40, 1881. [pdf](#) (田)
- [136] M. Newman.
Assortative mixing in networks.
[Phys. Rev. Lett.](#), 89:208701, 2002. [pdf](#) (田)
- [137] M. E. J. Newman.
The structure and function of complex networks.
[SIAM Review](#), 45(2):167–256, 2003. [pdf](#) (田)
- [138] M. E. J. Newman, M. Girvan, and J. D. Farmer.
Optimal design, robustness, and risk aversion.
[Phys. Rev. Lett.](#), 89:028301, 2002.
- [139] M. A. Nowak.
Five rules for the evolution of cooperation.
[Science](#), 314:1560–1563, 2006. [pdf](#) (田)
- [140] W. H. Press, S. A. Teukolsky, W. T. Vetterling, and B. P. Flannery.
[Numerical Recipes in C](#).
Cambridge University Press, second edition, 1992.
- [141] D. J. d. S. Price.
Networks of scientific papers.
[Science](#), 149:510–515, 1965. [pdf](#) (田)
- [142] D. J. d. S. Price.
A general theory of bibliometric and other cumulative advantage processes.
[J. Amer. Soc. Inform. Sci.](#), 27:292–306, 1976.
- [143] F. Radicchi, J. J. Ramasco, A. Barrat, and S. Fortunato.
Complex networks renormalization: Flows and fixed points.
[Phys. Rev. Lett.](#), 101:148701, 2008. [pdf](#) (田)



References XVIII

- [144] J. M. V. Rayner.
Linear relations in biomechanics: the statistics of scaling functions.
[J. Zool. Lond. \(A\)](#), 206:415–439, 1985.
- [145] P. J. Rentfrow, S. D. Gosling, and J. Potter.
A theory of the emergence, persistence, and expression of geographic variation in psychological characteristics.
[Perspectives on Psychological Science](#), 3:339–369, 2008. pdf (田)
- [146] C. J. Rhodes and R. M. Anderson.
Power laws governing epidemics in isolated populations.
[Nature](#), 381:600–602, 1996. pdf (田)
- [147] I. Rodríguez-Iturbe and A. Rinaldo.
[Fractal River Basins: Chance and Self-Organization](#).
Cambridge University Press, Cambridge, UK, 1997.
- [148] S. Rosen.
The economics of superstars.
[Am. Econ. Rev.](#), 71:845–858, 1981. pdf (田)
- [149] M. Rubner.
Ueber den einfluss der körpergrösse auf stoffund kraftwechsel.
[Z. Biol.](#), 19:535–562, 1883. pdf (田)
- [150] M. J. Salganik, P. S. Dodds, and D. J. Watts.
An experimental study of inequality and unpredictability in an artificial cultural market.
[Science](#), 311:854–856, 2006. pdf (田)
- [151] P. A. Samuelson.
A note on alternative regressions.
[Econometrica](#), 10:80–83, 1942. pdf (田)



References XIX

- [152] Sarrus and Rameaux.
Rapport sur une mémoire adressé à l'Académie de Médecine.
[Bull. Acad. R. Méd. \(Paris\)](#), 3:1094–1100, 1838–39.
- [153] V. M. Savage, E. J. Deeds, and W. Fontana.
Sizing up allometric scaling theory.
[PLoS Computational Biology](#), 4:e1000171, 2008. pdf (田)
- [154] M. Scheffer, J. Bascompte, W. A. Brock, V. Brovkin, S. R. Carpenter, V. Dakos, H. Held, E. H. van Nes, M. Rietkerk, and G. Sugihara.
Early-warning signals for critical transition.
[Nature](#), 461:53–59, 2009. pdf (田)
- [155] A. E. Scheidegger.
The algebra of stream-order numbers.
[United States Geological Survey Professional Paper](#), 525-B:B187–B189, 1967.
- [156] T. Schelling.
Dynamic models of segregation.
[J. Math. Sociol.](#), 1:143–186, 1971.
- [157] T. C. Schelling.
Hockey helmets, concealed weapons, and daylight saving: A study of binary choices with externalities.
[J. Conflict Resolut.](#), 17:381–428, 1973. pdf (田)
- [158] T. C. Schelling.
Micromotives and Macrobehavior.
Norton, New York, 1978.
- [159] S. S. Shen-Orr, R. Milo, S. Mangan, and U. Alon.
Network motifs in the transcriptional regulation network of *Escherichia coli*.
[Nature Genetics](#), pages 64–68, 2002. pdf (田)



References XX

- [160] G. Simmel.
The number of members as determining the sociological form of the group. I.
[American Journal of Sociology](#), 8:1–46, 1902.
- [161] H. A. Simon.
On a class of skew distribution functions.
[Biometrika](#), 42:425–440, 1955. [pdf](#) (田)
- [162] H. A. Simon.
Some further notes on a class of skew distribution functions.
[Information and Control](#), 3:80–88, 1960.
- [163] H. A. Simon.
Reply to Dr. Mandelbrot's post scriptum.
[Information and Control](#), 4:305–308, 1961.
- [164] H. A. Simon.
Reply to 'final note' by Benoît Mandelbrot.
[Information and Control](#), 4:217–223, 1961.
- [165] C. Song, S. Havlin, and H. A. Makse.
Self-similarity of complex networks.
[Nature](#), 433:392–395, 2005. [pdf](#) (田)
- [166] C. Song, S. Havlin, and H. A. Makse.
Origins of fractality in the growth of complex networks.
[Nature Physics](#), 2:275–281, 2006. [pdf](#) (田)
- [167] D. Sornette.
[Critical Phenomena in Natural Sciences](#).
Springer-Verlag, Berlin, 2nd edition, 2003.
- [168] J. Speakman.
On Blum's four-dimensional geometric explanation for the 0.75 exponent in metabolic allometry.
[J. Theor. Biol.](#), 144(1):139–141, 1990. [pdf](#) (田)



References XXI

- [169] W. R. Stahl.
Scaling of respiratory variables in mammals.
[Journal of Applied Physiology](#), 22:453–460, 1967.
- [170] D. Stauffer and A. Aharony.
Introduction to Percolation Theory.
Taylor & Francis, Washington, D.C., Second edition, 1992.
- [171] S. H. Strogatz.
Romanesque networks.
[Nature](#), 433:365–366, 2005. pdf (田)
- [172] C. R. Sunstein.
Infotopia: How many minds produce knowledge.
Oxford University Press, New York, 2006.
- [173] N. N. Taleb.
The Black Swan.
Random House, New York, 2007.
- [174] D. W. Thompson.
On Growth and Form.
Cambridge University Press, Great Britain, 2nd edition, 1952.
- [175] D. W. Thompson.
On Growth and Form — Abridged Edition.
Cambridge University Press, Great Britain, 1961.
- [176] E. Tokunaga.
The composition of drainage network in Toyohira River Basin and the valuation of Horton's first law.
[Geophysical Bulletin of Hokkaido University](#), 15:1–19, 1966.
- [177] J. Travers and S. Milgram.
An experimental study of the small world problem.
[Sociometry](#), 32:425–443, 1969. pdf (田)



References XXII

- [178] P. Turchin.
Historical Dynamics: Why States Rise and Fall.
Princeton University Press, Princeton, NJ, 2003.
- [179] D. L. Turcotte, J. D. Pelletier, and W. I. Newman.
Networks with side branching in biology.
Journal of Theoretical Biology, 193:577–592, 1998. pdf (田)
- [180] P. B. Umbanhowar, F. Melo, and H. L. Swinney.
Localized excitations in a vertically vibrated granular layer.
Nature, 382:793–6, 1996. pdf (田)
- [181] F. Vega-Redondo.
Complex Social Networks.
Cambridge University Press, 2007.
- [182] S. Wasserman and K. Faust.
Social Network Analysis: Methods and Applications.
Cambridge University Press, Cambridge, UK, 1994.
- [183] D. J. Watts.
A simple model of global cascades on random networks.
Proc. Natl. Acad. Sci., 99(9):5766–5771, 2002. pdf (田)
- [184] D. J. Watts.
Six Degrees.
Norton, New York, 2003.
- [185] D. J. Watts, P. S. Dodds, and M. E. J. Newman.
Identity and search in social networks.
Science, 296:1302–1305, 2002. pdf (田)
- [186] D. J. Watts and S. J. Strogatz.
Collective dynamics of 'small-world' networks.
Nature, 393:440–442, 1998. pdf (田)



References XXIII

- [187] G. B. West, J. H. Brown, and B. J. Enquist.
A general model for the origin of allometric scaling laws in biology.
[Science](#), 276:122–126, 1997. [pdf](#) (田)
- [188] C. R. White, P. Cassey, and T. M. Blackburn.
Allometric exponents do not support a universal metabolic allometry.
[Ecology](#), 88:315–323, 2007. [pdf](#) (田)
- [189] C. R. White and R. S. Seymour.
Allometric scaling of mammalian metabolism.
[J. Exp. Biol.](#), 208:1611–1619, 2005. [pdf](#) (田)
- [190] U. Wilensky.
Netlogo segregation model.
<http://ccl.northwestern.edu/netlogo/models/Segregation>. Center for Connected Learning and Computer-Based Modeling, Northwestern University, Evanston, IL., 1998.
- [191] G. U. Yule.
A mathematical theory of evolution, based on the conclusions of Dr J. C. Willis, F.R.S.
[Phil. Trans. B](#), 213:21–, 1924.
- [192] K. Zhang and T. J. Sejnowski.
A universal scaling law between gray matter and white matter of cerebral cortex.
[Proceedings of the National Academy of Sciences](#), 97:5621–5626, 2000. [pdf](#) (田)
- [193] G. K. Zipf.
Human Behaviour and the Principle of Least-Effort.
Addison-Wesley, Cambridge, MA, 1949.

