Appendix A
Results Cited

> With which my friend Pan, heaving a great sigh, as if confessing his inability to look Infinity in the face, sank back resigned, and swallowed a large bumper of Claret.
>
> William Makepeace Thackeray, *The Snobs of England*

We collect here several results that are cited in the text.

A.1 Algebra and Number Theory

We need the basic idea of equivalence classes in several places. We say that $\sim$ is an *equivalence relation* on a set A if it is *reflexive* ($a \sim a$), *symmetric* ($a \sim b$ implies $b \sim a$), and *transitive* ($a \sim b$ and $b \sim c$ imply $a \sim c$). Let us define the *equivalence class* containing $a \in A$ by

$$[a] := \{b \in A : b \sim a\}. \tag{A.1}$$

Theorem A.1.1. *Given an equivalence relation $\sim$ on a set A, every two equivalence classes $[a]$ and $[b]$ are either equal or mutually exclusive. Consequently, the distinct equivalence classes partition the set A.*

The proof is easy; see Herstein (1964, p. 7).

The next result is needed in the proof of Theorem 4.3.2.

Theorem A.1.2. *Let $J \subset \mathbf{N}$ be closed under addition and satisfy* g.c.d.$(J) = 1$*. Then there exists a positive integer n_0 such that $n \geq n_0$ implies $n \in J$.*

For a proof see Hoel, Port, and Stone (1972, pp. 79–80).

The *Euler φ-function* is defined for each positive integer n by

$$\varphi(n) := |\{1 \leq k \leq n : \text{g.c.d.}(k, n) = 1\}|. \tag{A.2}$$

S.N. Ethier, *The Doctrine of Chances*, Probability and its Applications,
DOI 10.1007/978-3-540-78783-9,

For example, $\varphi(12) = |\{1, 5, 7, 11\}| = 4$. The next theorem, due to Leonhard Euler [1707–1783], is needed in Corollary 9.1.3 and Problem 11.1.

Theorem A.1.3. *If m and n are positive integers with* g.c.d.$(m, n) = 1$, *then $m^{\varphi(n)} \equiv 1 \pmod{n}$.*

For a proof, see Herstein (1964, p. 37).

The next result, known as *Descartes's rule of signs*, is due to René Descartes [1596–1650]. It is needed in the proof of Lemma 9.3.3.

Theorem A.1.4. *The number of positive roots (counting multiplicities) of a polynomial $p(x)$ with real coefficients is equal to the number of sign changes of the nonzero coefficients of $p(x)$ or is less than this number by an even positive integer. The number of negative roots (counting multiplicities) of a polynomial $p(x)$ with real coefficients is equal to the number of sign changes of the nonzero coefficients of $p(-x)$ or is less than this number by an even positive integer.*

For example, the nonzero coefficients of $p(x) := x^3 - x^2 - x + 1$ are $1, -1, -1, 1$, so there are two sign changes, and consequently $p(x)$ has 2 or 0 positive roots. In addition, the nonzero coefficients of $p(-x) = -x^3 - x^2 + x + 1$ are $-1, -1, 1, 1$, so there is one sign change, hence $p(x)$ has one negative root. In fact, $p(x) = (x+1)(x-1)^2$, so $p(x)$ has two positive roots and one negative root.

For a proof, see Albert (1943).

We turn next to the cubic formula, which was first published by Girolamo Cardano [1501–1576] (1545, 1968) and is often called *Cardano's formula*. It is needed in Problems 7.12 and 13.5. Given a cubic equation

$$a_3 z^3 + a_2 z^2 + a_1 z + a_0 = 0, \tag{A.3}$$

we can assume without loss of generality that $a_3 = 1$.

Theorem A.1.5. *The three roots z_1, z_2, z_3 of the cubic equation (A.3) with real coefficients and $a_3 = 1$ can be described as follows. Let*

$$p := a_1 - \frac{a_2^2}{3}, \quad q := -a_0 + \frac{a_1 a_2}{3} - \frac{2a_2^3}{27}, \quad D := \frac{p^3}{27} + \frac{q^2}{4}, \tag{A.4}$$

and define

$$P := \sqrt[3]{\tfrac{1}{2}q + \sqrt{D}}, \qquad Q := \sqrt[3]{\tfrac{1}{2}q - \sqrt{D}}. \tag{A.5}$$

Then

$$z_1 = P + Q - \frac{a_2}{3}, \tag{A.6}$$

$$z_2 = \omega P + \omega^2 Q - \frac{a_2}{3}, \tag{A.7}$$

$$z_3 = \omega^2 P + \omega Q - \frac{a_2}{3}, \tag{A.8}$$

where $\omega := e^{2\pi i/3} = -\frac{1}{2} + \frac{1}{2}\sqrt{3}\, i$ *is a cube root of unity, as is* $\omega^2 = e^{4\pi i/3} = \bar{\omega} = -\frac{1}{2} - \frac{1}{2}\sqrt{3}\, i$.

Remark. The definitions (A.5) are slightly ambiguous because of the nonuniqueness of the cube roots. [If (P, Q) is replaced in the definitions of z_1, z_2, and z_3 by $(\omega P, \omega^2 Q)$ or by $(\omega^2 P, \omega Q)$, then z_1, z_2, and z_3 are simply permuted.] If $D > 0$, then P and Q can be taken to be real and distinct, in which case z_1 is real and z_2 and z_3 are complex conjugates; in particular, z_1, z_2, and z_3 are distinct. If $D = 0$, then P and Q can be taken to be real and equal, in which case z_1, z_2, and z_3 are real and $z_2 = z_3$. If $D < 0$, then we can take $Q = \bar{P}$, in which case z_1, z_2, and z_3 are real and distinct. In fact, writing $\frac{1}{2}q + \sqrt{-D}\, i = re^{i\theta}$, we can take $P = r^{1/3}e^{i\theta/3}$, $Q = \bar{P}$, and

$$z_1 = 2r^{1/3}\cos(\theta/3) - \frac{a_2}{3}, \tag{A.9}$$

$$z_2 = 2r^{1/3}\cos((\theta + 2\pi)/3) - \frac{a_2}{3}, \tag{A.10}$$

$$z_3 = 2r^{1/3}\cos((\theta + 4\pi)/3) - \frac{a_2}{3}. \tag{A.11}$$

Note that $r^{1/3} = \sqrt{-p/3}$ and $\theta = \cos^{-1}(\frac{1}{2}q/\sqrt{-p^3/27})$.

For a proof, see Mac Lane and Birkhoff (1988, pp. 437–438).

A.2 Analysis and Probability

We need several results about interchanging limits, sums, integrals, and expectations. They can be stated more elegantly using measure theory because sums and expectations are special cases of abstract Lebesgue integrals, but we want to keep the presentation as elementary as possible. The results are due primarily to Henri Lebesgue [1875–1941]. The reader is referred to Rudin (1987, Chapter 1) for proofs.

We also need to define the expectation of a random variable X that is not necessarily discrete. If $X \geq 0$, then

$$\mathrm{E}[X] := \int_0^\infty \mathrm{P}(X \geq t)\, dt \tag{A.12}$$

works, where the right side is an improper Riemann integral. If X is arbitrary, then we can write $X = X^+ - X^-$ and define $\mathrm{E}[X] := \mathrm{E}[X^+] - \mathrm{E}[X^-]$ as long as both expectations are finite. These definitions are consistent with the ones already given for discrete random variables (see Problem 1.32) and suffice for our purposes.

We begin with the *bounded convergence theorem*, needed in Example 1.5.10.

Theorem A.2.1. *Let $X_1, X_2, \ldots$ be a sequence of discrete random variables that converges a.s. to the random variable X. Assume the existence of a positive constant M such that $|X_n| \le M$ for all $n \ge 1$. Then* $\lim_{n\to\infty} \mathrm{E}[X_n] = \mathrm{E}[X]$.

The point is that we can interchange the limit and the expectation provided only that the sequence of random variables is uniformly bounded.

Next is *Fatou's lemma*, named for Pierre Fatou [1878–1929] and needed in the proofs of Theorems 3.2.2, 3.3.2, and 4.3.3.

Lemma A.2.2. *Let $X_1, X_2, \ldots$ be a sequence of nonnegative discrete random variables. Then* $\mathrm{E}[\liminf_{n\to\infty} X_n] \le \liminf_{n\to\infty} \mathrm{E}[X_n]$.

This leads to the *monotone convergence theorem*, needed in the proofs of Corollaries 7.1.6 and 7.1.8 and Theorem 8.2.4.

Theorem A.2.3. *Let $X_1, X_2, \ldots$ be a sequence of nonnegative discrete random variables such that $0 \le X_1 \le X_2 \le \cdots$, and let $X = \lim_{n\to\infty} X_n$. Then* $\lim_{n\to\infty} \mathrm{E}[X_n] = \mathrm{E}[X]$.

This theorem gives the same conclusion as Theorem A.2.1 but with a monotonicity assumption instead of a uniform boundedness assumption. It yields the following corollary, needed in the proofs of Theorems 3.2.2 and 4.2.1.

Corollary A.2.4. *Let $X_1, X_2, \ldots$ be a sequence of nonnegative discrete random variables. Then*

$$\mathrm{E}\bigg[\sum_{n=1}^\infty X_n\bigg] = \sum_{n=1}^\infty \mathrm{E}[X_n]. \tag{A.13}$$

Finally, the *dominated convergence theorem* generalizes the bounded convergence theorem. It is needed in the proofs of Theorems 2.1.3, 3.2.2, 4.3.2, 4.3.3, 4.4.2, 6.1.1, and 6.3.4.

Theorem A.2.5. *Let $X_1, X_2, \ldots$ be a sequence of discrete random variables that converges a.s. to the random variable X. Assume the existence of a random variable Y such that $|X_n| \le Y$ for all $n \ge 1$ and $\mathrm{E}[Y] < \infty$. Then* $\lim_{n\to\infty} \mathrm{E}[X_n] = \mathrm{E}[X]$.

The dominated convergence theorem yields the following corollary, needed in Problem 3.6.

Corollary A.2.6. *Let $X_1, X_2, \ldots$ be a sequence of discrete random variables such that*

$$\sum_{n=1}^\infty \mathrm{E}\big[|X_n|\big] < \infty. \tag{A.14}$$

Then

$$\mathrm{E}\bigg[\sum_{n=1}^\infty X_n\bigg] = \sum_{n=1}^\infty \mathrm{E}[X_n]. \tag{A.15}$$

We also state versions of the monotone and dominated convergence theorems for Riemann integrals, needed in Problems 1.32 and 1.58.

Theorem A.2.7. *Let $f_1, f_2, \ldots$ be a sequence of Riemann integrable functions on an interval I such that $0 \le f_1 \le f_2 \le \cdots$, and put $f := \lim_{n\to\infty} f_n$. Assume that f is Riemann integrable on I. Then $\lim_{n\to\infty} \int_I f_n(x)\,dx = \int_I f(x)\,dx$.*

Theorem A.2.8. *Let $f_1, f_2, \ldots$ be a sequence of Riemann integrable functions on an interval I that converges pointwise to the Riemann integrable function f on I. Assume the existence of a Riemann integrable function g on I such that $|f_n| \le g$ for all $n \ge 1$ and $\int_I g(x)\,dx < \infty$. Then $\lim_{n\to\infty} \int_I f_n(x)\,dx = \int_I f(x)\,dx$.*

The *Karush–Kuhn–Tucker theorem* extends the method of Lagrange multipliers to optimization problems with inequality constraints as well as equality constraints. It was first proved by William Karush [1917–1997] (1939) in a masters thesis. It was rediscovered by Harold W. Kuhn [1925–] and A. W. Tucker [1905–1995] (1951) and is often called the Kuhn–Tucker theorem. We need it in Example 10.2.3.

Theorem A.2.9. *Let $f : \mathbf{R}^n \mapsto \mathbf{R}$, $g_i : \mathbf{R}^n \mapsto \mathbf{R}$ for $i = 1, \ldots, k$, and $h_j : \mathbf{R}^n \mapsto \mathbf{R}$ for $j = 1, \ldots, l$. Consider the problem of maximizing $f(\boldsymbol{x})$, subject to the constraints*

$$g_i(\boldsymbol{x}) \ge 0, \quad i = 1, \ldots, k, \qquad h_j(\boldsymbol{x}) = 0, \quad j = 1, \ldots, l. \tag{A.16}$$

Suppose that f, g_i, and h_j are continuously differentiable at $\boldsymbol{x}^*$ for $i = 1, \ldots, k$ and $j = 1, \ldots, l$, and that $\boldsymbol{x}^*$ is a local maximizer of f satisfying the constraints. Assume that $\nabla g_i(\boldsymbol{x}^*)$ ($i \in \{1, \ldots, k\}$ for which $g_i(\boldsymbol{x}^*) = 0$) and $\nabla h_j(\boldsymbol{x}^*)$ ($j = 1, \ldots, l$) are linearly independent.

Then there exist constants (Lagrange multipliers) $\kappa_i \ge 0$ ($i = 1, \ldots, k$) and λ_j real ($j = 1, \ldots, l$) such that

$$\nabla f(\boldsymbol{x}^*) + \sum_{i=1}^{k} \kappa_i \nabla g_i(\boldsymbol{x}^*) + \sum_{j=1}^{l} \lambda_j \nabla h_j(\boldsymbol{x}^*) = \mathbf{0}, \tag{A.17}$$

(A.16) holds at $\boldsymbol{x} = \boldsymbol{x}^*$, and $\kappa_i g_i(\boldsymbol{x}^*) = 0$ for $i = 1, \ldots, k$.

For a proof, see Fletcher (2000, Theorem 9.1.1). The linear independence condition in the theorem is called a *constraint qualification*.

We need the negative binomial series in the definition of the negative binomial distribution in Section 1.3 and in Example 1.4.23. The proof is a straightforward calculus problem.

Theorem A.2.10. *For all complex z with $|z| < 1$ and every positive integer n,*

$$(1-z)^{-n} = \sum_{k=0}^{\infty} \binom{k+n-1}{n-1} z^k. \tag{A.18}$$

The relationship between infinite products and infinite series is needed in Example 8.1.6.

Theorem A.2.11. *Let* $0 < p_n < 1$ *for each* $n \geq 1$. *Then*

$$\prod_{n=1}^{\infty} (1-p_n) > 0 \quad \textit{if and only if} \quad \sum_{n=1}^{\infty} p_n < \infty. \tag{A.19}$$

Notice, for example, that neither condition holds when $p_n = 1/(n+1)$ for all $n \geq 1$. For a proof, see Rudin (1987, p. 300).

In Section 10.3 we need the following result about the median of the binomial distribution.

Theorem A.2.12. *Let* n *be a positive integer and let* $0 < p < 1$. *Then*

$$\text{median}(\text{binomial}(n,p)) \in (np - \ln 2, np + \ln 2). \tag{A.20}$$

The result is due to Edelman (c. 1979) and Hamza (1995).

The central limit theorem for samples from a finite population is needed in Section 11.3.

Theorem A.2.13. *For each* $N \geq 2$, *let* $(X_{N,1}, X_{N,2}, \ldots, X_{N,N})$ *have the discrete uniform distribution over all* $N!$ *permutations of the* N *(not necessarily distinct but not all equal) numbers* $x_{N,1}, x_{N,2}, \ldots, x_{N,N}$, *and define*

$$\mu_N := \mathrm{E}[X_{N,1}] = \frac{1}{N} \sum_{j=1}^{N} x_{N,j} \tag{A.21}$$

and

$$\sigma_N^2 := \mathrm{Var}(X_{N,1}) = \frac{1}{N} \sum_{j=1}^{N} (x_{N,j} - \mu_N)^2. \tag{A.22}$$

Assume that

$$\max_{1 \leq j \leq N} \frac{|x_{N,j} - \mu_N|}{\sqrt{N\sigma_N^2}} \to 0 \tag{A.23}$$

as $N \to \infty$. *Then, with* $S_{N,n} := X_{N,1} + \cdots + X_{N,n}$, *we have*

$$\frac{S_{N,n} - n\mu_N}{\sqrt{n\sigma_N^2 (N-n)/(N-1)}} \xrightarrow{d} N(0,1), \tag{A.24}$$

provided $n, N \to \infty$ *in such a way that* $n/N \to \alpha \in (0,1)$.

Notice that this generalizes Theorem 1.5.14. One of the first results of this type was proved by Erdős and Rényi (1959); see Billingsley (1968, pp. 208–212) for a generalization.

Bibliography

Each entry is followed by a braced list of page numbers where the entry is cited. In most cases, authors' names are given as they appeared in print; see the index for full names. Occasionally, modern spellings are used (e.g., Kolmogorov instead of Kolmogoroff).

About, Edmond (1899). *Trente et Quarante*. Edward Arnold, London. English translation by Lord Newton. Originally published in 1858. {**638**}

Addario-Berry, L. and Reed, B. A. (2008). Ballot theorems, old and new. In Győri, Ervin, Katona, Gyula O. H., and Lovász, László (Eds.), *Horizons of Combinatorics*, pp. 9–35. Springer, Berlin. {**315**}

Agard, David B. and Shackleford, Michael W. (2002). A new look at the probabilities in bingo. *College Mathematics Journal* **33** (4) 301–305. {**500**}

Akane, Kimo (2008). The man with the golden arm, Parts I and II. *Around Hawaii* (May 1, June 1). {**522**}

Albert, A. A. (1943). An inductive proof of Descartes' rule of signs. *American Mathematical Monthly* **50** (3) 178–180. {**746**}

Albigny, G. d' (1902). *Les martingales modernes: Nouveau recueil du joueur de roulette et de trente-et-quarante contenant les meilleurs systèmes. Revus, corrigés ou inédits et expérimentés avec explications nombreuses et détaillées de différentes attaques, et conseils pratiques pour assurer aux joueurs les plus grandes chances de gain*. Librairie des Mathurins, Paris. {**115, 316**}

Aldous, David and Diaconis, Persi (1986). Shuffling cards and stopping times. *American Mathematical Monthly* **93** (5) 333–348. {**157, 424, 425**}

Algoet, Paul H. and Cover, Thomas M. (1988). Asymptotic optimality and asymptotic equipartition properties of log-optimum investment. *Annals of Probability* **16** (2) 876–898. {**389, 390**}

Allais, M. (1953). Le comportement de l'homme rationnel devant le risque: Critique des postulats et axiomes de l'école américaine. *Econometrica* **21** (4) 503–546. {**198**}

Alspach, Brian (1998). Flushing boards. http://www.math.sfu.ca/~alspach/comp3.pdf. {**743**}

Alspach, Brian (2000a). Flushing boards II. http://www.math.sfu.ca/~alspach/comp4/. {**743**}

Alspach, Brian (2000b). 5-card poker hands. http://www.math.sfu.ca/~alspach/comp18/. {**66**}

Alspach, Brian (2000c). 7-card poker hands. http://www.math.sfu.ca/~alspach/comp20/. {**72, 740**}

Alspach, Brian (2001a). Two problems from RPG. http://www.math.sfu.ca/~alspach/mag67/. {**500**}

Alspach, Brian (2001b). Overcards. http://www.math.sfu.ca/~alspach/comp34/. {**743**}

DOI 10.1007/978-3-540-78783-9,

Alspach, Brian (2001c). Multiple pocket pairs. http://www.math.sfu.ca/~alspach/comp35/. {**743**}

Alspach, Brian (2005a). Distribution of aces among dealt hands. http://www.math.sfu.ca/~alspach/comp47.pdf. {**743**}

Alspach, Brian (2005b). 7-card stud low hands. http://www.math.sfu.ca/~alspach/comp49.pdf. {**743**}

Alspach, Brian (2007). Enumerating poker hands using group theory. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 121–129. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**571**}

Alvarez, A. (2002). *The Biggest Game in Town*. Chronicle Books LLC, San Francisco. Originally published in 1983. {**735–737**}

Alvarez, A. (2004). *Bets, Bluffs, and Bad Beats*. Chronicle Books LLC, San Francisco. Originally published in 2001. {**736**}

Anderson, L. R. and Fontenot, R. A. (1980). On the gain ratio as a criterion for betting in casino games. *Journal of the Royal Statistical Society, Series A* **143** (1) 33–40. {**239, 240**}

Ankeny, Nesmith C. (1981). *Poker Strategy: Winning with Game Theory*. Basic Books, Inc., New York. {**741**}

Anners, Henry F. (1845). *Hoyle's Games: Containing the Established Rules and Practice of Whist, Quadrille, Piquet, Quinze, Vingt-Un, Cassino, [. . .]*. Henry F. Anners, Philadelphia. {**732**}

Arbuthnot, John (1692). *Of the Laws of Chance, or, A Method of Calculation of the Hazards of Game, Plainly Demonstrated, and Applied to Games at Present Most in Use, Which May Be Easily Extended to the Most Intricate Cases of Chance Imaginable*. Benj. Motte, London. {**67, 522**}

Arrow, Kenneth J. (1963). Comment on Duesenberry's "The portfolio approach to the demand for money and other assets." *Review of Economics and Statistics* **45** (1, Part 2, Supplement) 24–27. {**198**}

Asbury, Herbert (1938). *Sucker's Progress: An Informal History of Gambling in America from the Colonies to Canfield*. Dodd, Mead and Company, Inc., New York. Reprinted by Patterson Smith, Montclair, NJ, 1969. {**517, 589, 590, 593, 677, 731, 732**}

Ashton, John (1968). *The History of Gambling in England*. Bert Franklin, New York. Originally published by Duckworth and Co., London, 1898. {**478**}

Assaf, Sami, Diaconis, Persi, and Soundararajan, K. (2009a). Riffle shuffles of a deck with repeated cards. arXiv:0905.4698. {**425**}

Assaf, Sami, Diaconis, Persi, and Soundararajan, K. (2009b). A rule of thumb for riffle shuffling. arXiv:0905.4698. {**425**}

Athreya, K. B. and Ney, P. E. (1972). *Branching Processes*. Springer-Verlag, New York. {**117**}

Babbage, Charles (1821). An examination of some questions connected with games of chance. *Transactions of the Royal Society of Edinburgh* **9** 153–177. Reprinted in Campbell-Kelly, Martin (Ed.), *The Works of Charles Babbage, Vol. 1. Mathematical Papers*, pp. 327–343. New York University Press, New York, 1989. {**312, 315**}

Bachelier, Louis (1912). *Calcul des probabilités, Vol. 1*. Gauthier-Villars, Imprimeur-Libraire, Paris. Reprinted by Éditions Jacques Gabay, Sceaux, 1992. {**94, 116, 117**}

Bachelier, Louis (1914). *Le jeu, la chance et le hasard*. Ernest Flammarion, Paris. Reprinted by Éditions Jacques Gabay, Sceaux, 1993. {**vi**}

Badoureau, [Albert] (1881). Étude sur le jeu de baccarat. *La Revue Scientifique de la France et de l'Étranger* **1** 239–246. {**618**}

Baldwin, Roger R., Cantey, Wilbert E., Maisel, Herbert, and McDermott, James P. (1956). The optimum strategy in blackjack. *Journal of the American Statistical Association* **51** (275) 429–439. Corrigenda **54** (288) 810, 1959. {**678, 681, 685, 687**}

Baldwin, Roger R., Cantey, Wilbert E., Maisel, Herbert, and McDermott, James P. (1957). *Playing Blackjack to Win: A New Strategy for the Game of 21.* M. Barrows and Company, New York. Reprinted by Cardoza Publishing, Las Vegas, 2008. {**681**}

Balzac, Honoré de (1831). *La peau de chagrin, roman philosophique.* Charles Gosselin et Urbain Canel, Paris. {**355**}

Barnhart, Russell T. (1978). *Casino Gambling: Why You Win, Why You Lose.* Brandywine Press, E. P. Dutton, New York. {**316, 615**}

Barnhart, Russell T. (1980). *Banker's Strategy at Baccara Chemin-de-Fer, Baccara-en-Banque, and Nevada Baccarat.* GBC Press, Las Vegas. {**614, 620, 621**}

Barnhart, Russell T. (1983a). *Gamblers of Yesteryear.* GBC Press, Las Vegas. {**316**}

Barnhart, Russell T. (1983b). Can trente-et-quarante be beaten? *Gambling Times* **7** (8, Dec.) 74–77. {**641**}

Barnhart, Russell T. (1988). The invention of roulette. In Eadington, William R. (Ed.), *Gambling Research: Proceedings of the Seventh International Conference on Gambling and Risk Taking, Vol. 1. Public Policy and Commercial Gaming Industries throughout the World*, pp. 295–330. Bureau of Business and Economic Research, University of Nevada, Reno. {**477, 479**}

Barnhart, Russell T. (1990). The banker's 'secret' strategy at baccara-en-banque. *Win Magazine* (Nov./Dec.) 54–57. {**615**}

Barnhart, Russell T. (1991). The invention of craps. Unpublished. {**520**}

Barnhart, Russell T. (1992). *Beating the Wheel.* A Lyle Stuart Book, Carol Publishing Group, New York. {**482**}

Barnhart, Russell T. (1997). The historiography of gambling history: John Scarne and Clayton Rawson, Sr. Unpublished. {**680**}

Barnhart, Russell T. (2000). My blackjack trip in 1962 to Las Vegas and Reno with Professor Edward O. Thorp and Mickey MacDougall. *Blackjack Forum* **20** (1) 9–30. {**678**}

Barstow, Frank (1979). *Beat the Casino.* Carlyle Associates, Santa Monica, CA. {**239**}

Basieux, Pierre (2001). *Roulette: Die Zähmung des Zufalls* (fifth ed.). Printul Verlag, Munich. {**482**}

Battaglia, Salvatore (1961). *Grande dizionario della lingua italiana.* Unione Tipografico-Editrice Torinese, Torino. {**613, 614**}

Baxter-Wray [Peel, Walter H.] (1891). *Round Games with Cards. A Practical Treatise on All the Most Popular Games, with Their Different Variations, and Hints for Their Practice.* Frederick A. Stokes Company, New York. {**677**}

Bayer, Dave and Diaconis, Persi (1992). Trailing the dovetail shuffle to its lair. *Annals of Applied Probability* **2** (2) 294–313. {**424, 425**}

Bayes, Thomas (1764). An essay towards solving a problem in the doctrine of chances. *Philosophical Transactions of the Royal Society of London* **53** 370–418. {**68**}

Bell, Robert M. and Cover, Thomas M. (1980). Competitive optimality of logarithmic investment. *Mathematics of Operations Research* **5** (2) 161–166. {**390**}

Bellhouse, D. R. (2000). *De Vetula*: A medieval manuscript containing probability calculations. *International Statistical Review* **68** (2) 123–136. {**65**}

Bellhouse, David (2007). The problem of Waldegrave. *Electronic Journal for History of Probability and Statistics* **3** (2). {**197**}

Benjamin, A. T. and Goldman, A. J. (2002). Analysis of the N-card version of the game le her. *Journal of Optimization Theory and Applications* **114** (3) 695–704. {**198**}

Benjamin, Arthur T. and Goldman, A. J. (1994). Localization of optimal strategies in certain games. *Naval Research Logistics* **41** (5) 669–676. {**198**}

Beresford, S. R. (1923). *The Future at Monte Carlo: A Successful Method Explained. The Only System That Can Beat the Bank.* Palmer, Sutton & Co., London. {**315**}

Beresford, S. R. (1926). *Beresford's Monte-Carlo.* J. Beresford, Publishers, Nice. {**619, 641**}

Berman, Lyle and Karlins, Marvin (2005). *I'm All In! High Stakes, Big Business and the Birth of the World Poker Tour.* Cardoza Publishing, New York. {**737**}

Bernoulli, Daniel (1738). Specimen theoriae novae de mensura sortis. *Commentarii Academiae Scientiarum Imperialis Petropolitanae* **5** 175–192. {**69, 73, 198, 389**}

Bernoulli, Daniel (1954). Exposition of a new theory on the measurement of risk. *Econometrica* **22** (1) 23–36. English translation by L. Sommer of Bernoulli (1738). {**73**}

Bernoulli, Jacob (1690). Quaestiones nonnullae de usuris, cum solutione problematis de sorte alearum. *Acta Eruditorum* (Maji) 219–223. {**66**}

Bernoulli, Jacob (1713). *Ars Conjectandi*. Thurnisius, Basilea. {**v, 65, 68, 70, 73, 117, 271, 590, 734**}

Bernoulli, Jacob (2006). *The Art of Conjecturing, together with Letter to a Friend on Sets in Court Tennis*. Johns Hopkins University Press, Baltimore. English translation by Edith Dudley Sylla. {**65, 68, 73, 117, 271, 590**}

Bernstein, S. N. (1926). Sur l'extension du théorème limite du calcul des probabilités aux sommes de quantités dépendantes. *Mathematische Annalen* **97** (1) 1–59. {**157**}

Bertezène, Alfred (1897). *Mémoire à l'Académie des sciences*. Librairie de la Voix de Paris, Paris. {**619**}

Bertrand, J. (1888). *Calcul des probabilités*. Gauthier-Villars et Fils, Paris. {**71, 618, 639, 640**}

Bethell, Victor (1898). *Ten Days at Monte Carlo at the Bank's Expense*. William Heinemann, London. Author's name listed only as V. B. {**315**}

Bethell, Victor (1901). *Monte Carlo Anecdotes and Systems of Play*. William Heinemann, London. Author's name listed only as V. B. {**316, 641**}

Bewersdorff, Jörg (2005). *Luck, Logic, and White Lies: The Mathematics of Games*. A. K. Peters, Ltd., Wellesley, MA. English translation by David Kramer of *Glück, Logik und Bluff*, 2. Auflage, Friedr. Vieweg & Sohn Verlag, Wiesbaden, 2001. {**686, 687**}

Bienaymé, I. J. (1853). Considérations à l'appui de la découverte de Laplace sur la loi de probabilité dans la méthode des moindres carrés. *Comptes Rendus de l'Académie des Sciences, Paris* **37** 309–324. {**70**}

Billard, Ludovic (1883). *Bréviaire du baccara expérimental*. Chez l'auteur, Paris. {**614, 618**}

Billedivoire (1929). *Jouer et gagner*. Éditions Argo, Paris. {**641, 642**}

Billiken (1924). *The Sealed Book of Roulette and Trente-et-Quarante, Being a Guide to the Tables at Monte Carlo, together with Simple Descriptions of Several Unique Systems. Also, Chapters Dealing with Baccarat, Chemin-de-Fer and la Boule*. John Lane, The Bodley Head, Ltd., London. {**641**}

Billings, Mark and Fredrickson, Brent (1996). *The Biased Wheel Handbook*. Saros Designs Publishing. {**482**}

Billingsley, Patrick (1968). *Convergence of Probability Measures*. John Wiley & Sons, Inc., New York. Second edition, 1999. {**750**}

Billingsley, Patrick (1995). *Probability and Measure* (third ed.). John Wiley & Sons, Inc., New York. First edition, 1979; second edition, 1986. {**157, 315, 355**}

Blackbridge, John (1880). *The Complete Poker-Player. A Practical Guide Book to the American National Game: Containing Mathematical and Experimental Analyses of the Probabilities at Draw Poker*. Dick & Fitzgerald, Publishers, New York. {**739, 740**}

Bloch, Andy (2007). No-limit hold 'em: Play before the flop. In Craig, Michael (Ed.), *The Full Tilt Poker Strategy Guide*, pp. 60–116. Grand Central Publishing, New York. {**742**}

Bohn, Henry G. (1850). *The Hand-Book of Games: Comprising New or Carefully Revised Treatises on Whist, Piquet, Écarté, Lansquenet, Boston, Quadrille, Cribbage, and Other Card Games; Faro, Rouge et Noir, Hazard, Roulette; Backgammon, Draughts; Billiards, Bagatelle, American Bowls; etc., etc.* Henry G. Bohn, London. {**519, 593**}

Bohn, Henry G. (1851). *Bohn's New Hand-Book of Games; Comprising Whist, by Deschapelles, Matthews, Hoyle, Carleton. Draughts, by Sturges & Walker. Billiards, by White & Bohn*. Henry F. Anners, Philadelphia. {**732**}

Boll, Marcel (1936). *La chance et les jeux de hasard: Loterie, boule, roulettes, baccara, 30 & 40, dés, bridge, poker, belote, écarté, piquet, manille.* Librairie Larousse, Paris. Revised edition, 1948, reprinted by Éditions Jacques Gabay, Sceaux, 1992. {**116, 481, 482, 522, 619, 639, 640**}

Boll, Marcel (1944). *Le baccara: Chemin de fer — banque.* Le Triboulet, Monaco. {**615, 619**}

Boll, Marcel (1945). *Le trente et quarante.* Le Triboulet, Monaco. {**640, 642**}

Boll, Marcel (1951). *La roulette* (third ed.). Le Triboulet, Monaco. First edition, 1944. {**479–482**}

Borel, Émile (1909). Les probabilités dénombrables et leur applications arithmétiques. *Rendiconti del Circolo Matematico di Palermo* **27** 247–271. {**70, 71, 73**}

Borel, Émile (1938). *Applications aux jeux de hasard.* Gauthier-Villars, Imprimeur-Éditeur, Paris. Written up by Jean Ville. Reprinted by Éditions Jacques Gabay, Sceaux, 1992. {**740**}

Borel, Émile (1949). Sur une martingale mineure. *Comptes Rendus de l'Académie des Sciences, Paris* **229** 1181–1183. {**117**}

Borel, Émile (1953). On games that involve chance and the skill of the players. *Econometrica* **21** (1) 101–115. English translation by Leonard J. Savage of Borel, Émile (1924). *Théorie des probabilités.* Librairie Scientifique, J. Hermann, Paris, pp. 204–224. {**197, 619**}

Borovkov, K. A. (1996). An estimate for the distribution of a stopping time for a stochastic system. *Siberian Mathematical Journal* **37** (4) 683–689. {**314**}

Borovkov, Konstantin (1997). On random walks with jumps scaled by cumulative sums of random variables. *Statistics & Probability Letters* **35** (4) 409–416. {**71, 157, 314**}

Braun, Julian (1987). To seven out or getting it right. *Gambling Times* **10** (14, Jul./Aug.) 43–54. {**522**}

Braun, Julian H. (1975). The development and analysis of winning strategies for the casino game of blackjack. Unpublished. {**682**}

Braun, Julian H. (1980). *How to Play Winning Blackjack.* Data House Publishing Co., Inc., Chicago. {**682**}

Breiman, L. (1961). Optimal gambling systems for favorable games. In Neyman, Jerzy (Ed.), *Proceedings of the Fourth Berkeley Symposium on Mathematical Statistics and Probability, Vol. 1*, pp. 65–78. University of California Press, Berkeley, CA. {**389, 390**}

Breiman, Leo (1960). Investment policies for expanding businesses optimal in a long-run sense. *Naval Research Logistics Quarterly* **7** (4) 647–651. {**390**}

Breiman, Leo (1968). *Probability.* Addison-Wesley Publishing Co., Inc., Reading, MA. {**315**}

Brisman, Andrew (2004). *Mensa Guide to Casino Gambling: Winning Ways.* Sterling Publishing Co., Inc., New York. {**239**}

Brooks, L. R. (1994). A basic strategy for "Let-It-Ride." Unpublished. {**543**}

Brown, Bancroft H. (1919). Probabilities in the game of "shooting craps." *American Mathematical Monthly* **26** (8) 351–352. {**94, 522**}

Bru, Bernard (2005). Poisson, the probability calculus, and public education. *Electronic Journal for History of Probability and Statistics* **1** (2). English translation by Glenn Shafer of Bru, Bernard (1981). Poisson, le calcul des probabilités et l'instruction publique. In Métivier, Michel, Costabel, Pierre, and Dugac, Pierre (Eds.), *Siméon Denis Poisson et la science de son temps*, pp. 51–94. École Polytechnique, Palaiseau. {**639**}

Brunson, Doyle (2002). *Super System: A Course in Power Poker* (third ed.). Cardoza Publishing, New York. Originally published as *How I Made over $ 1,000,000 Playing Poker*, B & G Publishing, Las Vegas, 1978. {**735, 741, 743**}

Brunson, Doyle (2005). *Super System 2: A Course in Power Poker.* Cardoza Publishing, New York. {**734**}

Bueschel, Richard M. (1995). *Lemons, Cherries and Bell-Fruit-Gum: Illustrated History of Automatic Payout Slot Machines*. Royal Bell Books, Denver. {**455, 456, 593**}

Bunyakovsky, V. (1859). Sur quelques inégalités concernant les intégrales ordinaires et les intégrales aux différences finies. *Mémoires de l'Académie Impériale des Sciences de St.-Pétersbourg, VII^e Série* **1** (9) 1–18. {**70**}

Cabot, Anthony N. and Hannum, Robert C. (2005). Advantage play and commercial casinos. *Mississippi Law Journal* **74** (3) 681–777. {**522**}

Canjar, R. Michael (2007a). Advanced insurance play in 21: Risk aversion and composition dependence. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 3–34. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**198, 686, 687**}

Canjar, R. Michael (2007b). Gambler's ruin revisited: The effects of skew and large jackpots. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 439–469. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**274**}

Cantelli, F. P. (1917). Sulla probabilità come limite della frequenza. *Atti Reale Accademia Nazionale Lincei* **26** 39–45. {**70, 71**}

Cardano, Gerolamo (1663). *Liber de Ludo Aleae*. Caroli Sponii, ed., Lyons. In *Opera omnia*, Vol. 1, pp. 262–276. See Ore (1953) for an English translation. {**v, viii, 64**}

Cardano, Girolamo (1539). *Practica arithmeticae generalis et mensurandi singularis*. Publisher unknown, Milan. In *Opera omnia*, Vol. 4. {**92**}

Cardano, Girolamo (1545). *Artis Magnae, sive de Regulis Algebraicis, Lib. unus*. Johann Petrieus, Nuremberg. In *Opera omnia*, Vol. 4. {**746**}

Cardano, Girolamo (1968). *The Great Art, or the Rules of Algebra*. The M.I.T. Press, Cambridge, MA. English translation by T. Richard Witmer. {**746**}

Caro, Mike (1994). Hold'em—What's the worst it gets? *Card Player* **7** (18) 9, 29. {**743**}

Caro, Mike (2007). *Caro's Most Profitable Hold 'em Advice: The Complete Missing Arsenal*. Cardoza Publishing, New York. {**742**}

Casanova, Giacomo (1894). *The Memoirs of Jacques Casanova de Seingalt*. F. A. Brockhaus, London. English translation by Arthur Machen in six volumes. {**592, 595**}

Casanova, Giacomo (1967). *History of My Life*. Harcourt, Brace & World, New York. English translation by Willard R. Trask in 12 volumes. {**311**}

Castleman, Deke (2004). *Whale Hunt in the Desert: The Secret Las Vegas of Superhost Steve Cyr*. Huntington Press Publishing, Las Vegas. {**69, 240**}

Catalan, E. (1837). Solution d'un problème de probabilité relatif au jeu de rencontre. *Journal de Mathématiques Pures et Appliquées, 1re Série* **2** 469–482. {**67, 73**}

Catlin, Donald (2003). Mensa mystery. *Casino City Times* (May 4). http://catlin.casinocitytimes.com/articles/6025.html. {**239**}

Catlin, Donald (2009). At risk or in play? *Casino City Times* (Sept. 6). http://catlin.casinocitytimes.com/article/at-risk-or-in-play?-47958. {**238**}

Catlin, Donald E. (2000). Using overall expected return per dollar risked to determine strategy decisions in gambling games. In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 367–376. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**238, 239**}

Cauchy, Augustin-Louis (1821). *Cours d'analyse de l'École royale polytechnique. Première partie. Analyse algébrique*. Debure frères, Paris. {**69**}

Chafetz, Henry (1960). *Play the Devil: A History of Gambling in the United States from 1492 to 1955*. Clarkson N. Potter, Inc., New York. {**521**}

Chambliss, Carlson R. and Roginski, Thomas C. (1990). *Fundamentals of Blackjack*. GBC Press, Las Vegas. {**686**}

Chase, John Churchill (1997). *Frenchmen, Desire, Good Children and Other Streets of New Orleans* (third ed.). Touchstone, New York. First edition, Simon & Schuster, New York, 1949. {**519, 520**}

Chaucer, Geoffrey (1980). *The Canterbury Tales*. Edward Arnold, London. Edited from the Hengwrt Manuscript by N. F. Blake. {**517**}

Chaundy, T. W. and Bullard, J. E. (1960). John Smith's problem. *Mathematical Gazette* **44** (350) 253–260. {**73**}

Chebyshev, P. L. (1867). Des valeurs moyennes. *Journal de Mathématiques Pures et Appliquées* **12** 177–184. {**70**}

Chen, Bill and Ankenman, Jerrod (2006). *The Mathematics of Poker*. ConJelCo LLC, Pittsburgh. {**741, 743, 744**}

Chen, May-Ru, Chung, Pei-Shou, Hsiau, Shoou-Ren, and Yao, Yi-Ching (2008). On nonoptimality of bold play for subfair red-and-black with a rational-valued house limit. *Journal of Applied Probability* **45** (4) 1024–1038. {**356**}

Chernoff, Herman (1952). A measure of asymptotic efficiency for tests of a hypothesis based on the sum of observations. *Annals of Mathematical Statistics* **23** (4) 493–507. {**239**}

Chou, Hsing-szu (1963). *Ch'ien Tzu Wen, The Thousand Character Classic: A Chinese Primer*. Frederick Ungar Publishing Co., New York. Edited by Francis W. Parr. {**497**}

Chow, Y. S. and Robbins, Herbert (1961). On sums of independent random variables with infinite moments and "fair" games. *Proceedings of the National Academy of Sciences, USA* **47** (3) 330–335. {**73**}

Christensen, Morten Mosegaard (2005). On the history of the growth optimal portfolio. Preprint, University of Southern Denmark. {**389**}

Claussen, Jim (1982). *Keno Handbook*. GBC Press, Las Vegas. {**500**}

Coffin, George S. (1955). *The Poker Game Complete* (second ed.). Faber and Faber Limited, London. First edition, 1950. {**731**}

Comtat, Jean (1988). *Passe, pair . . . et gagne!* Albin Michel, Paris. {**316**}

Conger, Mark and Viswanath, D. (2006a). Riffle shuffles of decks with repeated cards. *Annals of Probability* **34** (2) 804–819. {**425**}

Conger, Mark and Viswanath, D. (2006b). Shuffling cards for blackjack, bridge, and other card games. arXiv:math/0606031. {**425**}

Connelly, Robert (1974). Say red. *Pallbearers Review* **9** 702. {**425**}

Coolidge, J. L. (1909). The gambler's ruin. *Annals of Mathematics* **10** (4) 181–192. {**355**}

Coolidge, Julian Lowell (1925). *An Introduction to Mathematical Probability*. Clarendon Press, Oxford, UK. Reprinted by Dover, New York, 1962. {**355**}

Corti, Count (1934). *The Wizard of Homburg and Monte Carlo*. Thornton Butterworth Ltd., London. {**479**}

Cotton, Charles (1674). *The Compleat Gamester: or, Instructions How to Play at Billiards, Trucks, Bowls, and Chess. Together with All Manner of Usual and Most Gentile Games either on Cards or Dice. To Which Is Added, the Arts and Mysteries of Riding, Racing, Archery, and Cock-Fighting*. Printed by A. M. for R. Cutler, London. Reprinted by Cornmarket Reprints, London, 1972. {**518**}

Cowell, Joe (1844). *Thirty Years Passed among the Players in England and America: Interspersed with Anecdotes and Reminiscences of a Variety of Persons, Directly or Indirectly Connected with the Drama during the Theatrical Life of Joe Cowell, Comedian*. Harper & Brothers, New York. {**731**}

Cowles, David W. (1996). *Complete Guide to Winning Keno*. Cardoza Publishing, New York. {**498**}

Cowles, David W. (2003). *Complete Guide to Winning Keno* (third ed.). Cardoza Publishing, New York. {**238, 496, 498**}

Cramér, H. (1937). On a new limit theorem in the theory of probability. In *Colloquium on the Theory of Probability*. Hermann, Paris. {**239**}

Crevelt, Dwight E. and Crevelt, Louise G. (1988). *Slot Machine Mania*. Gollehon Books, Grand Rapids, MI. {**458**}

Csörgő, Sándor and Simons, Gordon (1996). A strong law of large numbers for trimmed sums, with applications to generalized St. Petersburg games. *Statistics & Probability Letters* **26** (1) 65–73. {**71**}

Culin, Stewart (1891). *The Gambling Games of the Chinese in America*. University of Pennsylvania Press, Philadelphia. {**498, 500**}

Culin, Stewart (1895). *Chinese Games with Dice and Dominoes*. Smithsonian Institution, Washington, DC. {**614**}

Cutler, William H. (1976). End-game poker. Unpublished. {**741**}

Dancer, Bob and Daily, Liam W. (2003). *A Winner's Guide to Full Pay Deuces Wild*. Compton Dancer Consulting Inc., Las Vegas. {**571, 572**}

Dancer, Bob and Daily, Liam W. (2004). *A Winner's Guide to Jacks or Better* (second ed.). Compton Dancer Consulting Inc., Las Vegas. {**571, 572**}

Dangel, Philip N. (1977). *Poker: Double Your Skills, Double Your Profit*. GBC Press, Las Vegas. {**740**}

David, F. N. (1962). *Games, Gods and Gambling: A History of Probability and Statistical Ideas*. Charles Griffin & Co., Ltd., London. Reprinted by Dover Publications, Inc., Mineola, NY, 1998. {**v, 64–66, 68, 72, 92, 94**}

Davidson, R. R. and Johnson, B. R. (1993). Interchanging parameters of the hypergeometric distribution. *Mathematics Magazine* **66** (5) 328–329. {**94**}

Davies, Alan Dunbar (1959). An analysis of five and seven card stud poker. Master's thesis, University of Pennsylvania. {**740**}

Davies, P. and Ross, A. S. C. (1979). Repeated zero at roulette. *Mathematical Gazette* **63** (423) 54–56. {**479**}

Davis, Clyde Brion (1956). *Something for Nothing*. J. B. Lippincott Company, Philadelphia. {**478, 591, 677**}

Dawson, Lawrence H. (1950). *Hoyle's Games Modernized* (20th ed.). Routledge & Kegan Paul, Ltd., London. {**616**}

De Moivre, A. (1712). De mensura sortis, seu, de probabilitate eventuum in ludis a casu fortuito pendentibus. *Philosophical Transactions of the Royal Society of London* **27** (329) 213–264. English translation by Bruce McClintock, *International Statistical Review* **52** (3) 237–262, 1984. {**68–70, 73, 93, 94, 271, 272**}

De Moivre, A. (1718). *The Doctrine of Chances: or, A Method of Calculating the Probability of Events in Play*. W. Pearson, London. {**v, vi, viii, 66, 67, 70, 72, 94, 236, 271, 272, 522**}

De Moivre, A. (1730). *Miscellanea Analytica de Seriebus et Quadraturis*. Tonson and Watts, London. {**71, 94**}

De Moivre, A. (1733). Approximatio ad summam terminorum binomii $\overline{a+b}^n$ in seriem expansi. Printed for private circulation under the name A. D. M. Reprinted in English in *The Doctrine of Chances*, second edition, pp. 235–243; third edition, pp. 243–254. {**71**}

De Moivre, A. (1738). *The Doctrine of Chances: or, A Method of Calculating the Probabilities of Events in Play* (second ed.). H. Woodfall, London. Reprinted by Frank Cass and Company Limited, London, 1967. {**v, 67, 69, 70, 72, 94, 271–273**}

De Moivre, A. (1756). *The Doctrine of Chances: or, A Method of Calculating the Probabilities of Events in Play* (third ed.). A. Millar, London. Reprinted by Chelsea Publishing Co., New York, 1967. {**v, 271, 272, 593, 595**}

De Morgan, Augustus (1838). *An Essay on Probabilities, and on Their Application to Life Contingencies and Insurance Offices*. Longman, Brown, Green & Longman's, London. {**639, 640, 642**}

De Morgan, Augustus (1847). *Formal Logic: or, The Calculus of Inference, Necessary and Probable*. Taylor and Walton, London. {**66**}

DeArment, Robert K. (1982). *Knights of the Green Cloth: The Saga of the Frontier Gamblers*. University of Oklahoma Press, Norman. {**69, 590, 593, 676**}

DeBartolo, Anthony (1997). Who caused the Great Chicago Fire? A possible deathbed confession. *Chicago Tribune* (Oct. 8). {**521**}

DeBartolo, Anthony (1998). Odds improve that a hot game of craps in Mrs. O'Leary's barn touched off Chicago Fire. *Chicago Tribune* (Mar. 3). {**521**}

Deiler, J. Hanno (1983). *A History of the German Churches in Louisiana (1823–1893).* Center for Louisiana Studies, University of Southwestern Louisiana, Lafayette, LA. English translation by Marie Stella Condon. Originally published in 1894. {**520**}

Deloche, Régis and Oguer, Fabienne (2007a). What game is going on beneath *baccarat*? A game-theoretic analysis of the card game *le her*. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 175–193. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**198**}

Deloche, Régis and Oguer, Fabienne (2007b). *Baccara* and perfect Bayesian equilibrium. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 195–210. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**198, 618, 619**}

Demange, Gabrielle and Ponssard, Jean-Pierre (1994). *Théorie des jeux et analyse économique*. Presses Universitaires de France, Paris. {**743**}

Devlin, Keith (2008). *The Unfinished Game: Pascal, Fermat, and the Seventeenth-Century Letter That Made the World Modern*. Basic Books, New York. {**93**}

Diaconis, Persi (2003). Mathematical developments from the analysis of riffle shuffling. In Ivanov, A. A., Liebeck, M. W., and Saxl, J. (Eds.), *Groups, Combinatorics & Geometry: Durham 2001*, pp. 73–97. World Scientific Publishing Co., Inc., River Edge, NJ. {**425**}

Diaconis, Persi, Graham, R. L., and Kantor, William M. (1983). The mathematics of perfect shuffles. *Advances in Applied Mathematics* **4** (2) 175–196. {**425**}

Dieter, U. and Ahrens, J. H. (1984). The prison rule in roulette. *Metrika* **31** (1) 227–231. {**479**}

Dimand, Robert W. and Dimand, Mary Ann (1992). The early history of the theory of strategic games from Waldegrave to Borel. In Weintraub, E. Roy (Ed.), *Toward a History of Game Theory*, pp. 15–27. Duke University Press, Durham, NC. {**197**}

Doeblin, W. (1938). Exposé de la théorie des chaînes simples constantes de Markov à un nombre fini d'états. *Revue Mathematique de l'Union Interbalkanique* **2** 77–105. {**157**}

Doob, J. L. (1936). Note on probability. *Annals of Mathematics* **37** (2) 363–367. {**315**}

Doob, J. L. (1940). Regularity properties of certain families of chance variables. *Transactions of the American Mathematical Society* **47** (3) 455–486. {**115, 117**}

Doob, J. L. (1949). Application of the theory of martingales. In *Le calcul des probabilités et ses applications*, pp. 23–27. Centre National de la Recherche Scientifique, Paris. {**115, 116**}

Doob, J. L. (1953). *Stochastic Processes*. John Wiley & Sons, Inc., New York. {**68, 115, 117**}

Dormoy, Émile (1872). Théorie mathématique des jeux de hasard. *Journal des Actuaires Français* **1** (2) 120–146, 232–257. Also **2** (5) 38–57, 1873. {**618**}

Dormoy, Émile (1873). *Théorie mathématique du jeu de baccarat*. Armand Anger, Libraire-Éditeur, Paris. {**618, 639**}

Dostoevsky, Fyodor (1967). *The Gambler*. The Heritage Press, New York. English translation by Constance Garnett. {**480**}

Dowling, Allen (1970). *The Great American Pastime*. A. S. Barnes and Company, Cranbury, NJ. {**733**}

Downton, F. (1969). A note on betting strategies in compound games. *Journal of the Royal Statistical Society, Series A* **132** (4) 543–547. {**238**}

Downton, F. (1980a). Monotonicity and the gain ratio. *Journal of the Royal Statistical Society, Series A* **143** (1) 41–42. {**240**}

Downton, F. (1980b). A note on Labouchere sequences. *Journal of the Royal Statistical Society, Series A* **143** (3) 363–366. {**313, 315**}

Downton, F. (1982). Rational roulette. *Bulletin of the Australian Mathematical Society* **26** (3) 399–420. {**315**}

Downton, F. and Holder, R. L. (1972). Banker's games and the Gaming Act 1968. *Journal of the Royal Statistical Society, Series A* **135** (3) 336–364. {**198, 239, 481, 620**}

Downton, F. and Lockwood, Carmen (1975). Computer studies of baccarat, I: Chemin-de-fer. *Journal of the Royal Statistical Society, Series A* **138** (2) 228–238. {**620**}

Downton, F. and Lockwood, Carmen (1976). Computer studies of baccarat, II: Baccarat-banque. *Journal of the Royal Statistical Society, Series A* **139** (3) 356–364. {**614, 620**}

Drago, Harry Sinclair (1969). *Notorious Ladies of the Frontier*. Dodd, Mead & Company, Inc., New York. {**676**}

Drakakis, Konstantinos (2005). Distances between the winning numbers in lottery. arXiv:math.CO/0507469. {**500**}

Dresher, Melvin (1951). Games of strategy. *Mathematics Magazine* **25** (2) 93–99. {**198**}

Dresher, Melvin (1961). *Games of Strategy: Theory and Applications*. Prentice–Hall, Inc., Englewood Cliffs, NJ. Reprinted as *The Mathematics of Games of Strategy: Theory and Applications*, Dover Publications, Inc., New York, 1981. {**197**}

Drummond, Bob (1985). 'Phantom' gambler lost ultimate game. *Dallas Times Herald* (Feb. 12) 1, 6. {**524**}

Dubins, Lester E. (1968). A simpler proof of Smith's roulette theorem. *Annals of Mathematical Statistics* **39** (2) 390–393. {**356**}

Dubins, Lester E. (1972). On roulette when the holes are of various sizes. *Israel Journal of Mathematics* **11** (2) 153–158. {**356**}

Dubins, Lester E. and Savage, Leonard J. (1965). *How to Gamble If You Must: Inequalities for Stochastic Processes*. McGraw-Hill Book Co., New York. {**239, 355, 389**}

Dubins, Lester E. and Savage, Leonard J. (1976). *Inequalities for Stochastic Processes (How to Gamble If You Must)* (corrected ed.). Dover Publications, Inc., New York. {**vi, 239, 315, 355, 356**}

Dunbar and B., Jeff (Math Boy) (1999). Risk of ruin for video poker and other skewed-up games. *Blackjack Forum* **19** (3) 21–27. {**274**}

Durrett, Richard (2004). *Probability: Theory and Examples* (third ed.). Duxbury Press, Belmont, CA. First edition, Wadsworth & Brooks/Cole, Pacific Grove, CA, 1991. Second edition, Duxbury Press, Belmont, CA, 1996. {**157**}

Edelman, David (c. 1979). Supremum of mean-median differences for the binomial and Poisson distributions: ln 2. Technical report, Department of Mathematical Statistics, Columbia University. {**750**}

Edwards, A. W. F. (1982). Pascal and the problem of points. *International Statistical Review* **50** (3) 259–266. {**69**}

Edwards, A. W. F. (1983). Pascal's problem: The "gambler's ruin." *International Statistical Review* **51** (1) 73–79. {**271**}

Edwards, A. W. F. (1987). *Pascal's Arithmetical Triangle*. Charles Griffin & Company Ltd., London. {**64, 65, 68, 94**}

Einstein, Charles (1968). *How to Win at Blackjack*. Cornerstone Library, New York. {**681**}

Emery, Steuart M. (1926). Monte Carlo gambler has 13 years of luck. *New York Times* (Mar. 28) Section 9, p. 22. {**641**}

Engel, Arthur (1993). The computer solves the three tower problem. *American Mathematical Monthly* **100** (1) 62–64. {**117**}

Enns, E. G. and Tomkins, D. D. (1993). Optimal betting allocations. *Mathematical Scientist* **18** (1) 37–42. {**390**}

Epstein, Richard A. (1967). *The Theory of Gambling and Statistical Logic*. Academic Press, New York. {**vii, 273, 681, 683**}

Epstein, Richard A. (1977). *The Theory of Gambling and Statistical Logic* (revised ed.). Academic Press, New York. {**vii, 479, 613, 681, 683**}

Epstein, Richard A. (2009). *The Theory of Gambling and Statistical Logic* (second ed.). Elsevier/Academic Press, Amsterdam. {**vii, 66, 238, 683, 687**}

Erdős, P., Feller, W., and Pollard, H. (1949). A property of power series with positive coefficients. *Bulletin of the American Mathematical Society* **55** (2) 201–204. {**157**}

Erdős, Paul and Rényi, Alfréd (1959). On the central limit theorem for samples from a finite population. *Publications of the Mathematical Institute of the Hungarian Academy of Sciences* **4** (1) 49–57. {**750**}

Estafanous, Marc and Ethier, S. N. (2009). The duration of play in games of chance with win-or-lose outcomes and general payoffs. *Mathematical Scientist* **34** (2) 99–106. {**315**}

Ethier, S. N. (1982a). On the definition of the house advantage. In Eadington, William R. (Ed.), *The Gambling Papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 13. Quantitative Analysis of Gambling: Stock Markets and Other Games*, pp. 46–67. Bureau of Business and Economic Research, University of Nevada, Reno. {**239**}

Ethier, S. N. (1982b). Testing for favorable numbers on a roulette wheel. *Journal of the American Statistical Association* **77** (379) 660–665. {**482**}

Ethier, S. N. (1987). Improving on bold play at craps. *Operations Research* **35** (6) 814–819. {**524**}

Ethier, S. N. (1988). The proportional bettor's fortune. In Eadington, William R. (Ed.), *Gambling Research: Proceedings of the Seventh International Conference on Gambling and Risk Taking. Vol. 4. Quantitative Analysis and Gambling*, pp. 375–383. Bureau of Business and Economic Research, University of Nevada, Reno. {**390**}

Ethier, S. N. (1996). A gambling system and a Markov chain. *Annals of Applied Probability* **6** (4) 1248–1259. {**157, 314**}

Ethier, S. N. (1998). An optional stopping theorem for nonadapted martingales. *Statistics & Probability Letters* **39** (3) 283–288. {**117, 315**}

Ethier, S. N. (1999). Thackeray and the Belgian progression. *Mathematical Scientist* **24** (1) 1–23. {**316**}

Ethier, S. N. (2000). Analysis of a gambling system. In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 3–18. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**314**}

Ethier, S. N. (2004). The Kelly system maximizes median fortune. *Journal of Applied Probability* **41** (4) 1230–1236. {**390**}

Ethier, S. N. (2007a). Faro: From soda to hock. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 225–235. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**589**}

Ethier, S. N. (2007b). A Bayesian analysis of the shooter's hand at craps. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 311–322. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**517, 522**}

Ethier, S. N. (2007c). Optimal play in subfair compound games. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 525–540. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**238**}

Ethier, S. N. (2008). Absorption time distribution for an asymmetric random walk. In Ethier, Stewart N., Feng, Jin, and Stockbridge, Richard H. (Eds.), *Markov Processes and Related Topics: A Festschrift for Thomas G. Kurtz*, pp. 31–40. IMS Collections **4**. Institute of Mathematical Statistics, Beachwood, OH. {**315**}

Ethier, S. N. and Hoppe, Fred M. (2010). A world record in Atlantic City and the length of the shooter's hand at craps. *Mathematical Intelligencer* **32** to appear. arXiv:0906.1545. {**523**}

Ethier, S. N. and Khoshnevisan, Davar (2002). Bounds on gambler's ruin probabilities in terms of moments. *Methodology and Computing in Applied Probability* **4** (1) 55–68. {**274, 571**}

Ethier, S. N. and Lee, Jiyeon (2009). Limit theorems for Parrondo's paradox. *Electronic Journal of Probability* **14** 1827–1862. arXiv:0902.2368. {**158**}

Ethier, S. N. and Lee, Jiyeon (2010). A Markovian slot machine and Parrondo's paradox. *Annals of Applied Probability* **20** to appear. arXiv:0906.0792. {**158, 460**}

Ethier, S. N. and Levin, David A. (2005). On the fundamental theorem of card counting with application to the game of trente et quarante. *Advances in Applied Probability* **37** (1) 90–107. {**425, 637, 638, 640**}

Ethier, S. N. and Tavaré, S. (1983). The proportional bettor's return on investment. *Journal of Applied Probability* **20** (3) 563–573. {**390**}

Euler, Leonhard (1753). Calcul de la probabilité dans le jeu de rencontre (E201). *Mémoires de l'Académie des Sciences de Berlin* **7** 255–270. {**67**}

Euler, Leonhard (1764). Sur l'avantage du banquier au jeu de pharaon (E313). *Mémoires de l'Académie de Sciences de Berlin* **20** 144–164. {**236, 593–595**}

Feitt, Patrick W. (2008). An analysis of standard and casino-style *trente-et-quarante*. Senior project, Allegheny College. {**642**}

Feller, W. (1945). Note on the law of large numbers and "fair" games. *Annals of Mathematical Statistics* **16** (3) 301–304. {**71, 73**}

Feller, William (1968). *An Introduction to Probability Theory and Its Applications, Vol. I* (third ed.). John Wiley & Sons, Inc., New York. First edition, 1950; second edition, 1957. {**66, 68, 71, 73, 94, 117, 157, 273, 315**}

Ferguson, C. and Ferguson, T. S. (2003). On the Borel and von Neumann poker models. In Petrosjan, L. A. and Mazalov, V. V. (Eds.), *Game Theory and Applications, Vol. 9*, pp. 17–32. Nova Science Publishers, New York. {**741**}

Ferguson, Chris and Ferguson, Tom (2007). The endgame in poker. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 79–106. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**741, 743**}

Ferguson, Thomas S. (2009). *Game Theory*. `http://www.math.ucla.edu/~tom/Game_Theory/Contents.html`. {**198**}

Fey, Marshall (2002). *Slot Machines: America's Favorite Gaming Device* (sixth ed.). Liberty Belle Books, Reno. {**69, 455, 456, 459, 460, 570**}

Finkelstein, Mark and Thorp, Edward O. (2007). Nontransitive dice. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 293–310. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**198**}

Finkelstein, Mark and Whitley, Robert (1981). Optimal strategies for repeated games. *Advances in Applied Probability* **13** (2) 415–428. {**117, 389, 390**}

Fisher, George Henry (1934a). *Stud Poker Blue Book*. The Stud Poker Press, Los Angeles. {**740**}

Fisher, R. A. (1918). The correlation between relatives on the supposition of Mendelian inheritance. *Transactions of the Royal Society of Edinburgh* **52** 399–433. {**69**}

Fisher, R. A. (1934b). Randomisation, and an old enigma of card play. *Mathematical Gazette* **18** (231) 294–297. {**198**}

Fleming, Ian (1953). *Casino Royale*. Jonathan Cape Ltd., London. {**481, 616, 738**}

Fleming, Ian (2002). *Casino Royale*. Penguin Group (USA) Inc. and Penguin Books Ltd., New York and London. {**616**}

Fletcher, R. (2000). *Practical Methods of Optimization* (second ed.). John Wiley & Sons, Ltd., Chichester, UK. {**749**}

Flowers, Arthur and Curtis, Anthony (2000). *The Art of Gambling: Through the Ages*. Huntington Press, Las Vegas. {**738**}

Forte, Steve (2004). *Casino Game Protection: A Comprehensive Guide*. SLF Publishing, LLC, Las Vegas. {**482**}

Fortuin, C. M., Kasteleyn, P. W., and Ginibre, J. (1971). Correlation inequalities on some partially ordered sets. *Communications in Mathematical Physics* **22** (2) 89–103. {**73, 482**}

Foster, F. G. (1953a). On the stochastic matrices associated with certain queuing processes. *Annals of Mathematical Statistics* **24** (3) 355–360. {**157**}

Foster, F. G. (1964). A computer technique for game-theoretic problems I: Chemin-de-fer analyzed. *Computer Journal* **7** (2) 124–130. {**619**}

Foster, R. F. (1905). *Practical Poker*. Brentano's, New York. {**731, 739**}

Foster, R. F. (1953b). *Foster's Complete Hoyle: An Encyclopedia of Games* (revised and enlarged ed.). J. B. Lippincott, Philadelphia. First edition, Frederick A. Stokes Company, 1897. {**479, 613, 614**}

Friedman, Bill (1996). *Casino Games* (revised and updated ed.). Golden Press, New York. First edition, 1973. {**481**}

Friedman, Joel (1982). Understanding and applying the Kelly criterion. In Eadington, William R. (Ed.), *The Gambling Papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 10. The Blackjack Papers*, pp. 128–139. Bureau of Business and Economic Research, University of Nevada, Reno. {**390**}

Frome, Elliot A. (2003). *Expert Strategy for Three Card Poker*. Compu-Flyers, Bogota, NJ. {**543**}

Frome, Elliot A. and Frome, Ira D. (1996). *Expert Strategy for Caribbean Stud Poker*. Compu-Flyers, Bogota, NJ. {**543**}

Frome, Lenny (1989). *Expert Video Poker for Las Vegas*. Compu-Flyers, Bogota, NJ. {**571**}

Fuchs, Camil and Kenett, Ron (1980). A test for detecting outlying cells in the multinomial distribution and two-way contingency tables. *Journal of the American Statistical Association* **75** (370) 395–398. {**482**}

Gale, David (1960). *The Theory of Linear Economic Models*. McGraw-Hill Book Company, Inc., New York. {**197**}

Gall, Martin [Arnous de Rivière, Jules] (1883). *La roulette et le trente-et-quarante*. Delarue, Libraire-Éditeur, Paris. {**479, 639, 641**}

Gallian, Joseph A. (1994). *Contemporary Abstract Algebra*. D. C. Heath and Company, Lexington, MA. {**73**}

Galton, Francis (1888). Co-relations and their measurement, chiefly from anthropometric data. *Proceedings of the Royal Society of London* **45** 135–145. {**70**}

Gambarelli, Gianfranco and Owen, Guillermo (2004). The coming of game theory. *Theory and Decision* **56** (1–2) 1–18. {**198**}

Gambino, Tino (2006). *The Mad Professor's Crapshooting Bible*. Pi Yee Press, Las Vegas. {**521**}

Gardner, Martin (1978). Mathematical games. *Scientific American* **238** (2) 19–32. {**73**}

Geddes, Robert N. (1980). The Mills Futurity. *Loose Change* **3** (1) 10–14, 21. {**460**}

Geddes, Robert N. and Saul, David L. (1980). The mathematics of the Mills Futurity slot machine. *Loose Change* **3** (4) 22–27. {**460**}

Gilbert, Edgar N. (1955). Theory of shuffling. Bell Telephone Laboratories technical memorandum. {**424**}

Gilliland, Dennis, Levental, Shlomo, and Xiao, Yimin (2007). A note on absorption probabilities in one-dimensional random walk via complex-valued martingales. *Statistics and Probability Letters* **77** (11) 1098–1105. {**273**}

Golomb, Solomon W., Berlekamp, Elwyn, Cover, Thomas M., Gallager, Robert G., Massey, James L., and Viterbi, Andrew J. (2002). Claude Elwood Shannon (1916–2001). *Notices of the American Mathematical Society* **49** (1) 8–16. {**116**}

Gordon, Edward (2000). An accurate analysis of video poker. In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 379–392. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**571**}

Gordon, Phil and Grotenstein, Jonathan (2004). *Poker: The Real Deal*. Simon Spotlight Entertainment, New York. {**736, 737, 742**}

Goren, Charles H. (1961). *Goren's Hoyle: Encyclopedia of Games*. Chancellor Hall, Ltd., New York. {**571**}

Graves, Charles (1963). *None But the Rich: The Life and Times of the Greek Syndicate*. Cassell & Company, Ltd., London. {**617**}

Green, J. H. (1843). *An Exposure of the Arts and Miseries of Gambling; Designed Especially as a Warning to the Youthful and Inexperienced, against the Evils of That Odious and Destructive Vice.* U. P. James, Cincinnati. {**520, 591, 731**}

Grégoire, G. (1853). *Traité du trente-quarante contenant des analyses et des faits pratiques du plus haut intérêt suivis d'une collection de plus de 40,000 coups de banque.* Comptoir des Imprimeurs-Unis, Paris. {**639**}

Griffin, Peter (1976). The rate of gain in player expectation for card games characterized by sampling without replacement and an evaluation of card counting systems. In Eadington, William R. (Ed.), *Gambling and Society: Interdisciplinary Studies on the Subject of Gambling*, pp. 429–442. Charles C. Thomas, Springfield, IL. {**425, 681, 682**}

Griffin, Peter (1991). *Extra Stuff: Gambling Ramblings.* Huntington Press, Las Vegas. {**69, 72, 94, 236, 273, 274, 356, 390, 500, 522**}

Griffin, Peter (1998). Letter to E. O. Thorp dated October 16, 1970. *Blackjack Forum* **18** (4) 19–20. {**686**}

Griffin, Peter (2000). A short note on the expected duration of the Australian game "two-up." In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 393–395. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**73**}

Griffin, Peter and Gwynn, John M., (2000). An analysis of Caribbean Stud Poker. In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 273–284. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**543, 544**}

Griffin, Peter A. (1984). Different measures of win rate for optimal proportional betting. *Management Science* **30** (12) 1540–1547. {**390**}

Griffin, Peter A. (1988). Insure a "good" hand? (Part 2). *Blackjack Forum* **8** (2) 12–13. {**686**}

Griffin, Peter A. (1999). *The Theory of Blackjack: The Compleat Card Counter's Guide to the Casino Game of 21* (sixth ed.). Huntington Press, Las Vegas. First and second editions, GBC Press, Las Vegas, 1979 and 1981. Third edition, Faculty Publishing, Davis, CA, 1986. Fourth and fifth editions, Huntington Press, Las Vegas, 1988 and 1996. {**66, 68, 71, 274, 425, 620, 621, 682–687**}

Grimmett, Geoffrey R. and Stirzaker, David R. (2001). *One Thousand Exercises in Probability.* Oxford University Press, Oxford, UK. {**66, 73, 117, 157, 315**}

Grosjean, James (2000). *Beyond Counting: Exploiting Casino Games from Blackjack to Video Poker.* RGE Publishing, Oakland, CA. {**683**}

Grosjean, James (2007a). Much ado about *baccara*. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 143–173. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**621**}

Grosjean, James (2007b). Are casinos paranoid? Can players get an edge by sharing information? In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 211–223. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**544**}

Grosjean, James (2009). *Exhibit CAA. Beyond Counting: Exploiting Casino Games from Blackjack to Video Poker.* South Side Advantage Press, Las Vegas. {**68, 69, 72, 236, 425, 482, 521, 523, 542, 543, 621, 683, 686, 687**}

Grosjean, James and Chen, Frederick (2007). Rebated losses revisited. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 507–524. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**69**}

Grotenstein, Jonathan and Reback, Storms (2005). *All In: The (Almost) Entirely True Story of the World Series of Poker.* Thomas Dunne Books, an imprint of St. Martin's Press, New York. {**734–736**}

Guerrera, Tony (2007). *Killer Poker by the Numbers: The Mathematical Edge for Winning Play*. Lyle Stuart, Kensington Publishing Corp., New York. {**741, 743**}

Guilbaud, G. Th. (1961). Faut-il jouer au plus fin? (Notes sur l'histoire de la théorie des jeux). In *La décision*, pp. 171–182. Centre National de la Recherche Scientifique, Paris. {**198**}

H., G. (1842). *Hoyle's Games, Improved and Enlarged by New and Practical Treatises, with the Mathematical Analysis of the Chances of the Most Fashionable Games of the Day, Forming an Easy and Scientific Guide to the Gaming Table, and the Most Popular Sports of the Field*. Longman, Brown, & Co., London. {**593**}

Hacking, Ian (1975). *The Emergence of Probability: A Philosophical Study of Early Ideas about Probability, Induction and Statistical Inference*. Cambridge University Press, London. {**64**}

Haigh, John (1999). *Taking Chances: Winning with Probability*. Oxford University Press, Oxford, UK. {**66**}

Hald, A. and Johansen, S. (1983). On de Moivre's recursive formulae for the duration of play. *International Statistical Review* **51** (3) 239–253. {**273**}

Hald, Anders (1990). *History of Probability and Statistics and Their Applications before 1750*. John Wiley & Sons, Inc., New York. {**64, 66, 70, 94, 198, 273, 594**}

Hald, Anders (1998). *A History of Mathematical Statistics from 1750 to 1930*. John Wiley & Sons, Inc., New York. {**64**}

Hamza, Kais (1995). The smallest uniform upper bound on the distance between the mean and the median of the binomial and Poisson distributions. *Statistics & Probability Letters* **23** (1) 21–25. {**750**}

Hannum, Robert (1998). Mathematical analysis of baccarat: Expected bank wager outcomes under "barred" bank totals. Unpublished. {**621**}

Hannum, Robert (2000). Casino card shuffles: How random are they? In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 33–55. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**425**}

Hannum, Robert C. (2007). The partager rule at roulette: Analysis and case of a million-euro win. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 325–344. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**480**}

Hannum, Robert C. and Cabot, Anthony N. (2005). *Practical Casino Math* (second ed.). Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. First edition, 2001. {**66, 237, 544**}

Hannum, Robert C. and Kale, Sudhir H. (2004). The mathematics and marketing of dead chip programmes: Finding and keeping the edge. *International Gambling Studies* **4** (1) 33–45. {**240**}

Harmer, Gregory P. and Abbott, Derek (2002). A review of Parrondo's paradox. *Fluctuation and Noise Letters* **2** (2) R71–R107. {**158**}

Hausdorff, Felix (1914). *Grundzüge der Mengenlehre*. Verlag von Veit & Comp., Leipzig. {**70**}

Havers, Michael, Grayson, Edward, and Shankland, Peter (1988). *The Royal Baccarat Scandal* (second ed.). Souvenir Press Ltd., London. {**616**}

Heath, David C., Pruitt, William E., and Sudderth, William D. (1972). Subfair red-and-black with a limit. *Proceedings of the American Mathematical Society* **35** (2) 555–560. {**356**}

Henny, Julian (1973). *Niklaus und Johann Bernoullis Forschungen auf dem Gebiet der Wahrscheinlichkeitsrechnung in ihrem Briefwechsel mit Pierre Rémond de Montmort*. Birkhäuser Verlag, Basel. {**70, 73**}

Herstein, I. N. (1964). *Topics in Algebra*. Blaisdell Publishing Company, Waltham, MA. {**745, 746**}

Herstein, I. N. and Milnor, John (1953). An axiomatic approach to measurable utility. *Econometrica* **21** (2) 291–297. {**198**}

Hildreth, James (1836). *Dragoon Campaigns to the Rocky Mountains; Being a History of the Enlistment, Organization, and First Campaigns of the Regiment of United States Dragoons; Together with Incidents of a Soldier's Life, and Sketches of Scenery and Indian Character*. Wiley & Long, New York. Author listed as "A Dragoon." Some say the author was William L. Gordon-Miller. {**731**}

Hill, W. Lawrence (1989). Hollywood hold'em. *Card Player* **2** (31, Dec. 15) 5, 34. {**743**}

Hill, W. Lawrence (1990a). All-time classic heads-up hold'em match-up. *Card Player* **3** (6, Mar 23) 26–27. {**744**}

Hill, W. Lawrence (1990b). Up against a pair of aces. *Card Player* **3** (10, May 18) 20–21. {**743**}

Hill, W. Lawrence (1991a). Minor classic . . . how should we figure jack-10 offsuit versus a pair of fives? *Card Player* **4** (10, May 17) 32. {**744**}

Hill, W. Lawrence (1991b). Hold'em matches and mismatches. *Card Player* **4** (18, Sept. 6) 30. {**741, 743, 744**}

Hill, W. Lawrence (1991c). Closing in on the closest match-up. *Card Player* **4** (26, Dec. 27) 45. {**744**}

Hill, W. Lawrence (1992). Circling the closest matchup. *Card Player* **5** (23, Nov. 13) 81. {**744**}

Hill, W. Lawrence (1993). Scissors, paper, rock. *Card Player* **6** (8, Apr. 23) 56. {**744**}

Hill, W. Lawrence (1994a). Near-missing the closest matchup. *Card Player* **7** (12, June 17) 36. {**744**}

Hill, W. Lawrence (1994b). More close matchups. *Card Player* **7** (22, Nov. 4) 56. {**744**}

Hill, W. Lawrence (1995). Making the list of close matchups. *Card Player* **8** (7, Apr. 7) 48. {**744**}

Hill, W. Lawrence (1996a). Mining out the lode of close matchups. *Card Player* **9** (4, Feb. 23) 52–53. {**744**}

Hill, W. Lawrence (1996b). Count 'em. *Card Player* **9** (16, Aug. 9) 46–47. {**740**}

Hill, W. Lawrence (1997). The median seven-card hand. *Card Player* **10** (26, Dec. 26) 26, 99. {**72**}

Hoel, Paul G., Port, Sidney C., and Stone, Charles J. (1972). *Introduction to Stochastic Processes*. Houghton Mifflin Company, Boston. {**745**}

Hoffman, Paul (1998). *The Man Who Loved Only Numbers: The Story of Paul Erdős and the Search for Mathematical Truth*. Hyperion Books, New York. {**72**}

Hoffmann, Professor [Lewis, Angelo John] (1891). *Baccarat Fair and Foul, Being an Explanation of the Game, and a Warning against Its Dangers*. George Routledge and Sons, Limited, London. Reprinted by GBC Press, Las Vegas, 1977. {**614, 618**}

Holden, Anthony (1990). *Big Deal: A Year as a Professional Poker Player*. Viking, New York. {**743**}

Holmes, A. H. (1907). Problem 192. *American Mathematical Monthly* **14** (10) 189. {**619**}

Hoppe, Fred M. (2007). Branching processes and the effect of parlaying bets on lottery odds. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 383–395. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**274**}

Howard, J. V. (1994). A geometrical method of solving certain games. *Naval Research Logistics* **41** (1) 133–136. {**198**}

Hughes, Barrie (1976). *The Educated Gambler: A Guide to Casino Games*. Stanley Paul, London. {**616**}

Humble, Lance (1976). *Blackjack Gold: A New Approach to Winning at "21."* International Gaming Incorporated, Toronto. {**682**}

Humble, Lance and Cooper, Carl (1980). *The World's Greatest Blackjack Book* (revised ed.). Doubleday, New York. {**682**}

Huygens, C. (1657). De ratiociniis in ludo aleae. In van Schooten, Frans (Ed.), *Exercitationum Mathematicarum*, pp. 517–534. Johannis Elsevirii, Leiden. {**v, viii, 68, 69, 72, 271**}

Huyn, P. N. (1788). *La théorie des jeux de hasard, ou analyse du krabs, du passe-dix, de la roulette, du trente & quarante, du pharaon, du biribi & du lotto*. Publisher unknown, Paris. {**478, 519, 594, 613, 639, 640**}

Imbs, Paul (1974). *Trésor de la langue française*. Éditions du Centre National de la Recherche Scientifique, Paris. {**115, 613**}

Ionescu Tulcea, C. (1981). *A Book on Casino Craps, Other Dice Games & Gambling Systems*. Van Nostrand Reinhold Co., New York. {**239**}

Jacoby, Oswald (1947). *Oswald Jacoby on Poker* (revised ed.). Doubleday & Company, Inc., Garden City, NY. {**735**}

Jensen, J. L. W. V. (1906). Sur les fonctions convexes et les inégalités entre les valeurs moyennes. *Acta Mathematica* **30** 175–193. {**70**}

Jensen, Stephen (2001). Optimal drawing strategy for Deuces Wild video poker. University of Utah REU report. {**571**}

Jessup, Richard (1963). *The Cincinnati Kid*. Little, Brown and Company, Boston. {**738**}

Johnson, Craig Alan (1997). Simulation of the Belgian progression and Oscar's system. Master's thesis, University of Utah. {**314, 316**}

Johnson, Norman L., Kotz, Samuel, and Balakrishnan, N. (1997). *Discrete Multivariate Distributions*. John Wiley & Sons, Inc., New York. {**73**}

Johnston, David (1992). *Temples of Chance: How America Inc. Bought Out Murder Inc. to Win Control of the Casino Business*. Doubleday, New York. {**614, 680**}

Jones, Herbert B. (1978). *Slot-Machines: An Historical and Technological Report*. Bally Manufacturing Corporation, Chicago. {**457, 459, 570**}

Jordan, C. (1867). De quelques formules de probabilité. *Comptes Rendus de l'Académie des Sciences, Paris* **65** 993–994. {**70**}

Judah, Sherry and Ziemba, William T. (1983). Three person baccarat. *Operations Research Letters* **2** (4) 187–192. {**620**}

Kallenberg, Olav (2005). *Probabilistic Symmetries and Invariance Principles*. Springer, New York. {**425**}

Karlin, Samuel (1959a). *Mathematical Methods and Theory in Games, Programming, and Economics, Vol. I. Matrix Games, Programming, and Mathematical Economics*. Addison-Wesley Publishing Company, Inc., Reading, MA. {**743**}

Karlin, Samuel (1959b). *Mathematical Methods and Theory in Games, Programming, and Economics, Vol. II. The Theory of Infinite Games*. Addison-Wesley Publishing Company, Inc., Reading, MA. {**741**}

Karush, William (1939). Minima of functions of several variables with inequalities as side conditions. Master's thesis, University of Chicago. {**749**}

Kavanagh, Thomas M. (2005). *Dice, Cards, Wheels: A Different History of French Culture*. University of Pennsylvania Press, Philadelphia. {**355, 517, 642**}

Keller, John W. (1887). *The Game of Draw Poker*. White, Stokes, & Allen, New York. {**732**}

Kelly, Bill (1995). *Gamblers of the Old West: Gambling Men and Women of the 1800s. How They Lived—How They Died*. B & F Enterprises, Las Vegas. {**591**}

Kelly, J. L., Jr. (1956). A new interpretation of information rate. *Bell System Technical Journal* **35** 917–926. {**71, 388, 389**}

Kemeny, John G. and Snell, J. Laurie (1957). Game-theoretic solution of baccarat. *American Mathematical Monthly* **64** (7) 465–469. {**198, 619**}

Kemeny, John G., Snell, J. Laurie, and Knapp, Anthony W. (1966). *Denumerable Markov Chains*. D. Van Nostrand Company, Inc., Princeton, NJ. Second edition, Springer-Verlag, New York, 1976. {**157**}

Kendall, M. G. (1956). Studies in the history of probability and statistics: II. The beginnings of a probability calculus. *Biometrika* **43** (1–2) 1–14. {**517**}

Kendall, M. G. and Murchland, J. D. (1964). Statistical aspects of the legality of gambling. *Journal of the Royal Statistical Society, Series A* **127** (3) 359–391. {**198, 619, 620**}

Khinchin, A. (1929). Sur la loi des grands nombres. *Comptes Rendus de l'Académie des Sciences, Paris* **189** 477–479. {**70**}

Kilby, Jim and Fox, Jim (1998). *Casino Operations Management.* John Wiley & Sons, Inc., New York. {**460, 544**}

Kilby, Jim, Fox, Jim, and Lucas, Anthony F. (2005). *Casino Operations Management* (second ed.). John Wiley & Sons, Inc., Hoboken, NJ. {**237, 312, 459**}

Klotz, Jerome H. (2000). A winning strategy for roulette. In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 397–411. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**389, 482**}

Knopfmacher, Arnold and Prodinger, Helmut (2001). A simple card guessing game revisited. *Electronic Journal of Combinatorics* **8** (2). {**425**}

Ko, Stanley (1997). *Mastering the Game of Let It Ride* (tenth ed.). Gambology, Las Vegas. First edition, 1995. {**543, 544**}

Ko, Stanley (1998). *Mastering the Game of Caribbean Stud Poker* (seventh ed.). Gambology, Las Vegas. First edition, 1995. {**237, 543, 544**}

Ko, Stanley (2001). *Mastering the Game of Three Card Poker* (third ed.). Gambology, Las Vegas. First edition, 1999. {**543, 544**}

Kolata, Gina (1995). In shuffling cards, 7 is winning number. *New York Times* (Jan. 9) Section C, p. 1. {**425**}

Kolmogorov, A. N. (1930). Sur la loi forte des grands nombres. *Comptes Rendus de l'Académie des Sciences, Paris* **191** 910–912. {**71**}

Kolmogorov, A. N. (1933). *Grundbegriffe der Wahrscheinlichkeitsrechnung.* Springer-Verlag, Berlin. {**66, 94**}

Kolmogorov, A. N. (1936). Zur Theorie der Markoffschen Ketten. *Mathematische Annalen* **112** (1) 155–160. {**157**}

Kolmogorov, A. N. (1937). Markov chains with a denumerable number of possible states. *Bulletin Moskov. Gosudarstvennogo Universiteta Matematika i Mekhanika* **1** (3) 1–16. In Russian. {**157**}

Kozek, Andrzej S. (1995). A rule of thumb (not only) for gamblers. *Stochastic Processes and Their Applications* **55** (1) 169–181. {**239, 273**}

Kozek, Andrzej S. (2002). Solution of a roulette-type ruin problem. A correction to: "A rule of thumb (not only) for gamblers." *Stochastic Processes and Their Applications* **100** (1–2) 301–311. {**273**}

Kozelka, Robert M. (1956). Approximate upper percentage points for extreme values in multinomial sampling. *Annals of Mathematical Statistics* **27** (2) 507–512. {**482**}

Kranes, David (1989). *Keno Runner: A Romance.* University of Utah Press, Salt Lake City. {**499**}

Kuhn, H. W. (1950). A simplified two-person poker. In Kuhn, H. W. and Tucker, A. W. (Eds.), *Contributions to the Theory of Games*, pp. 97–103. Princeton University Press, Princeton, NJ. {**741, 743**}

Kuhn, H. W. and Tucker, A. W. (1951). Nonlinear programming. In Neyman, Jerzy (Ed.), *Proceedings of the Second Berkeley Symposium on Mathematical Statistics and Probability*, pp. 481–492. University of California Press, Berkeley, CA. {**749**}

Kuhn, Harold (1968). James Waldegrave: Excerpt from a letter. In Baumol, William J. and Goldfeld, Stephen M. (Eds.), *Precursors in Mathematical Economics: An Anthology*, pp. 3–9. The London School of Economics and Political Science, London. {**197, 198**}

Kuhn, Harold W. (2003). *Lectures on the Theory of Games.* Princeton University Press, Princeton, NJ. {**197, 743**}

Lacroix, S. F. (1822). *Traité élémentaire du calcul des probabilités* (second ed.). Bachelier, Paris. First edition, 1816; third edition, 1833. {**311**}

Lafaye, P. and Krauss, E. (1927). *Nouvel exposé de la théorie mathématique du jeu de baccara.* Papéteries Nouvelles Imp., Paris. {**619**}

Lafrogne, Amiral (1927). *Calcul de l'avantage du banquier au jeu de baccara.* Gauthier-Villars et Cie, Paris. {**619**}

Lagrange, Joseph-Louis (1777). Recherches sur les suites récurrentes dont les termes varient de plusieurs manières différentes, ou sur l'intégration des équations linéaires aux différences finies et partielles; et sur l'usage de ces équations dans la théorie des hasards. *Nouveaux Mémoires de l'Académie Royale des Sciences et Belles-Lettres de Berlin, 1775* 183–272. {**273**}

Lambert, George (1812). *The Game of Hazard Investigated; or, the Difference between the Caster's and Setter's Expectations Correctly Ascertained and Exemplified in a Clear and Concise Manner: Together with Other Calculations on Events Arising Out of the Game.* George Lambert, Newmarket. Published also by Davis and Dickson, London, 1815. Reprinted in Bohn (1850). {**519**}

Laplace, Pierre-Simon (1774). Mémoire sur la probabilité des causes par les évènemens. *Mémoires de l'Académie Royale des Sciences Présentés par Divers Savans* **6** 621–656. English translation by Stephen M. Stigler, *Statistical Science* **1** (3) 359–378, 1986. {**68**}

Laplace, Pierre-Simon (1820). *Théorie analytique des probabilités* (third ed.). Courcier, Paris. First and second editions, 1812 and 1814. {**67, 71, 73**}

Latané, Henry Allen (1959). Criteria for choice among risky ventures. *Journal of Political Economy* **67** (2) 144–155. {**389**}

Laun [Delauney, Julien Felix] (c. 1891). *Traité théorique et pratique du baccarat.* Delarue, Libraire-Éditeur, Paris. {**618**}

Laurent, H. (1893). *Théorie des jeux de hasard.* Gauthier-Villars et Fils, Imprimeurs-Éditeurs, Paris. {**498**}

Lawler, Gregory F. (2006). *Introduction to Stochastic Processes* (second ed.). Chapman & Hall/CRC, Boca Raton, FL. {**157**}

Lawler, Gregory F. and Coyle, Lester N. (1999). *Lectures on Contemporary Probability.* American Mathematical Society, Providence, RI. {**424, 425**}

Le Myre, Georges (1935). *Le baccara.* Hermann & Cie, Éditeurs, Paris. {**619**}

Leib, John E. (2000). Limitations on Kelly, or the ubiquitous "$n \to \infty$." In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 233–258. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**390**}

Leigh, Norman (1976). *Thirteen against the Bank.* William Morrow and Company, Inc., New York. {**315**}

Lemmel, Maurice (1964). *Gambling: Nevada Style.* Doubleday & Co., Inc., Garden City, NY. {**237, 481, 593–595**}

Lévy, Paul (1937). *Théorie de l'addition des variables aléatoires.* Gauthier-Villars, Éditeur, Paris. {**73, 115, 117**}

Lewis, Oscar (1953). *Sagebrush Casinos: The Story of Legal Gambling in Nevada.* Doubleday & Company, Inc., Garden City, NY. {**677**}

Li, Shuo-Yen Robert (1980). A martingale approach to the study of occurrence of sequence patterns in repeated experiments. *Annals of Probability* **8** (6) 1171–1176. {**117**}

Liggett, Thomas M. (1985). *Interacting Particle Systems.* Springer-Verlag, New York. {**482**}

Lindeberg, J. W. (1922). Eine neue Herleitung des Exponentialgesetzes in der Wahrscheinlichkeitsrechnung. *Mathematische Zeitschrift* **15** 211–225. {**71**}

Livingston, A. D. (1968). 'Hold me': A wild new poker game ... and how to tame it. *Life* (Aug. 16) 40–42. {**734**}

Livingston, A. D. (1971). *Poker Strategy and Winning Play.* Melvin Powers, Wilshire Book Company, North Hollywood, CA. {**734, 735**}

Llorente, Loreto (2007). A profitable strategy in the *pelota* betting market. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 399–415. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**94**}

Lorden, Gary A. (1980). Gambling with statistics. *[Caltech] Engineering & Science* **44** (2, Dec.) 6–9. {**390**}

Lyapunov, A. M. (1900). Sur une proposition de la théorie des probabilités. *Bulletin de l'Académie Impériale des Sciences de St.-Pétersbourg, Série 5* **13** (4) 359–386. {**71**}

M., D. (1739). *Calcul du jeu appellé par les françois le trente-et-quarante, et que l'on nomme à florence le trente-et-un. Cet ouvrage fait connoître toutes les manieres dont peuvent etre formez 31, 32, 33, 34, 35, 36, 37, 38, 39, & 40 par les XL. cartes du jeu d'hombre, et etablit la proportion qui est entre chacun de ces dix nombres.* Chez Bernard Paperini, Florence. {**638, 642**}

M., P. A. (1950). Review of *Le calcul des probabilités et ses applications. Journal of the Royal Statistical Society, Series A* **113** (4) 583–584. {**116**}

Mac Lane, Saunders and Birkhoff, Garrett (1988). *Algebra* (third ed.). Chelsea Publishing Co., New York. {**747**}

MacDougall, Mickey (1944). *MacDougall on Dice and Cards: Modern Rules, Odds, Hints and Warnings for Craps, Poker, Gin Rummy and Blackjack.* Coward-McCann, Inc., New York. {**677–679**}

MacGillavry, Kitty (1978). Le jeu de dés dans le fabliau de *St Pierre et le jongleur. Marche Romane* **28** 175–179. {**311**}

Machina, Mark (1982). "Expected utility" analysis without the independence axiom. *Econometrica* **50** (2) 277–323. {**198**}

Mahl, Huey (1977). Roulette dinner. *Casino & Sports* **2** 30. {**482**}

Maistrov, L. E. (1974). *Probability Theory: A Historical Sketch.* Academic Press, New York. English translation by Samuel Kotz. {**v, 64**}

Maitra, Ashok P. and Sudderth, William D. (1996). *Discrete Gambling and Stochastic Games.* Springer-Verlag, New York. {**355, 356**}

Malmuth, Mason (1992). A few simulations. *Card Player* **5** (3) 13. {**741**}

Mann, Brad (1995). How many times should you shuffle a deck of cards? In Snell, J. Laurie (Ed.), *Topics in Contemporary Probability and Its Applications*, pp. 261–289. CRC Press, Boca Raton, FL. {**424**}

Manson, A. R., Barr, A. J., and Goodnight, J. H. (1975). Optimum zero-memory strategy and exact probabilities for 4-deck blackjack. *American Statistician* **29** (2) 84–88. Correction **29** (4) 175. {**684**}

Mansuy, Roger (2009). The origins of the word "martingale." *Electronic Journal for History of Probability and Statistics* **5** (1) 1–10. English translation by Ronald Sverdlove of Mansuy, Roger (2005). Histoire de martingales. *Mathématiques et Sciences Humaines* **169** (1) 105–113. {**312**}

Markov, A. A. (1906). Extension of the law of large numbers to dependent events. *Bulletin de la Société Mathématique de Kazan, Série 2* **15** 135–156. {**157**}

Markov, Andrei A. (1912). *Wahrscheinlichkeitsrechnung.* B. G. Teubner, Leipzig. First published in Russian, 1900. Second edition, 1908. German translation of second edition by Heinrich Liebmann. {**273**}

Marsh, D. C. B. (1967). Solution of Problem E 1865. *American Mathematical Monthly* **74** (9) 1136–1137. {**71**}

Marshall, Marten (2006). *The Poker Code: The Correct Draw for Every Video Poker Hand of Deuces Wild.* Marshall House, Inc. {**571**}

Martin-Löf, Anders (1985). A limit theorem which clarifies the "Petersburg paradox." *Journal of Applied Probability* **22** (3) 634–643. {**71**}

Maskelyne, John Nevil (1894). *Sharps and Flats: A Complete Revelation of the Secrets of Cheating at Games of Chance and Skill.* Longmans, Green, and Co., New York. {**591, 592**}

Maslov, Sergei and Zhang, Yi-Cheng (1998). Optimal investment strategy for risky assets. *International Journal of Theoretical and Applied Finance* **1** (3) 377–387. {**390**}

Maurer, David W. (1943). The argot of the faro bank. *American Speech* **18** (1) 3–11. {**591**}

Maurer, David W. (1950). The argot of the dice gambler. *Annals of the American Academy of Political and Social Science* **269** (May) 114–133. {**70, 239**}

Maxim, Hiram S. (1904). *Monte Carlo Facts and Fallacies*. Grant Richards, London. {**315, 316**}

May, John (1998). *Baccarat for the Clueless: A Beginner's Guide to Playing and Winning*. A Lyle Stuart Book, Carol Publishing Group, Secaucus, NJ. {**621**}

May, John (2004). Trente et quarante. http://ourworld.compuserve.com/homepages/greenbaize21/trenteet.htm. {**641**}

McClure, Wayne (1983). *Keno Winning Ways* (second ed.). GBC Press, Las Vegas. First edition, 1979. {**496, 497, 499, 500**}

McManus, James (2009). *Cowboys Full: The Story of Poker*. Farrar, Straus and Giroux, New York. {**731, 734, 735, 739**}

Mead, Daniel R. (1983). *Handbook of Slot Machine Reel Strips*. Mead Publishing Corporation, Long Beach, CA. {**459, 460**}

Mead, David N. (2005). *Reel History: A Photographic History of Slot Machines*. Mead Publishing Company, Yucca Valley, CA. {**459**}

Mechigian, John (1972). *Encyclopedia of Keno: A Guide to Successful Gambling with Keno*. Funtime Enterprises, Inc., Fresno, CA. {**498, 500**}

Mertens, Jean-François, Samuel-Cahn, Ester, and Zamir, Shmuel (1978). Necessary and sufficient conditions for recurrence and transience of Markov chains, in terms of inequalities. *Journal of Applied Probability* **15** (4) 848–851. {**157**}

Mezrich, Ben (2002). *Bringing Down the House: The Inside Story of Six MIT Students Who Took Vegas for Millions*. Free Press, New York. {**683**}

M'hall, Abdul Jalib (1996). The true count theorem. rec.gambling.blackjack. {**425**}

Milton, George Fort (1930). *The Age of Hate*. Coward-McCann, Inc., New York. {**590**}

Milyavskaya, Polina (2005). Composition dependent strategy at blackjack: Hit or stand on hard sixteen. Unpublished. {**687**}

Minkowski, H. (1910). *Geometrie der Zahlen*. B. G. Teubner, Leipzig. {**197**}

Molière [Poquelin, Jean-Baptiste] (1913). *L'Avare (The Miser)*. G. P. Putnam's Sons, New York. English translation by Curtis Hidden Page. {**638**}

Montmort, Pierre Rémond de (1708). *Essay d'analyse sur les jeux de hazard*. Chez Jacque Quillau, Paris. Published anonymously. {**v, vii, 65–67, 69, 72, 94, 236, 274, 519, 590, 740**}

Montmort, Pierre Rémond de (1713). *Essay d'analyse sur les jeux de hazard* (second ed.). Chez Jacque Quillau, Paris. Published anonymously. Reprinted by Chelsea Publishing Co., New York, 1980. {**v, 66, 68–70, 72, 73, 93, 94, 197, 198, 237, 272, 519, 522, 590, 593–595, 613**}

Morehead, Albert H. (1967). *The Complete Guide to Winning Poker*. A Fireside Book, published by Simon & Schuster, Inc., New York. {**734, 743**}

Morgan, J. P., Chaganty, N. R., Dahiya, R. C., and Doviak, M. J. (1991). Let's make a deal: The player's dilemma. *American Statistician* **45** (4) 284–287. {**72**}

Munford, A. G. and Lewis, S. M. (1981). A note on gambler's ruin against an infinitely rich adversary. *International Journal of Mathematical Education in Science and Technology* **12** (2) 165–168. {**274**}

Musante, Michael J. (1985). The evolution of pai gow, baccarat and blackjack. In Eadington, William R. (Ed.), *The Gambling Studies: Proceedings of the Sixth National Conference on Gambling and Risk Taking, Vol. 4. Investments, Wagers, Games and Gambling*, pp. 1–29. Bureau of Business and Economic Research, University of Nevada, Reno. {**614**}

Nelson, Warren, Adams, Ken, King, R. T., and Nelson, Gail K. (1994). *Always Bet on the Butcher: Warren Nelson and Casino Gaming, 1930s–1980s*. University of Nevada Oral History Program, Reno. {**679**}

Noir, Jacques (1968). *Casino Holiday*. Oxford Street Press, Berkeley, CA. {**682, 687**}

Novikov, A. A. (1996). Martingales, a Tauberian theorem, and strategies for games of chance. *Theory of Probability and Its Applications* **41** (4) 716–729. {**314**}

Oettinger, L. (1867). Ueber einige Probleme der Wahrscheinlichkeitsrechnung, ins Besondere über das Rouge et Noire und den Vortheil der Bank bei diesem Spiele. Ein Beitrag zur Wahrscheinlichkeitsrechnung. *Journal für die reine und angewandte Mathematik* **67** 327–359. {**640**}

O'Hara, John (1988). *A Mug's Game: A History of Gaming and Betting in Australia.* New South Wales University Press, Kensington, NSW, Australia. {**73**}

Ore, Oystein (1953). *Cardano, the Gambling Scholar. With a Translation from the Latin of Cardano's* Book on Games of Chance *by Sydney Henry Gould.* Princeton University Press, Princeton, NJ. Reprinted by Dover Publications, Inc., New York, 1965. {**64, 65, 679, 756**}

Oses, Noelia (2008). Markov chain applications in the slot machine industry. *OR Insight* **21** (1) 9–21. {**460**}

Pacioli, Luca (1494). *Summa de arithmetica, geometria et proportionate.* Paganini, Venice. {**92**}

Packel, Edward W. (2006). *The Mathematics of Games and Gambling* (second ed.). Mathematical Association of America, Washington, DC. First edition, 1981. {**66, 500**}

Parlett, David (1991). *A History of Card Games.* Oxford University Press, Oxford, UK. {**613, 614, 638, 676, 731, 734**}

Pascal, Blaise (1665). *Traité du triangle arithmétique, avec quelques autres petits traités sur la même matière.* Desprez, Paris. {**65, 92**}

Pascual, Michael J. and Wilslef, Dennis (1996). *How to Find and Wager on Biased Roulette Wheels.* Self-published. {**482**}

Paymar, Dan (1994). *Video Poker—Precision Play* (eighth ed.). Enhanceware, Las Vegas. {**571**}

Paymar, Dan (1998). *Video Poker—Optimum Play.* ConJelCo LLC, Pittsburgh. {**571**}

Paymar, Dan (2004). *Video Poker—Optimum Play* (second ed.). ConJelCo LLC, Pittsburgh. {**570, 571**}

Pearson, Karl (1894). Science and Monte Carlo. *Fortnightly Review* **55** 183–193. {**481**}

Pearson, Karl (1897). The scientific aspect of Monte Carlo roulette. In Pearson, Karl (Ed.), *The Chances of Death and Other Studies in Evolution*, Vol. 1, pp. 42–62. Edward Arnold, London. {**481**}

Pearson, Karl (1900). On the criterion that a given system of deviations from the probable in the case of a correlated system of variables is such that it can be reasonably supposed to have arisen from random sampling. *Philosophical Magazine, 5th series* **50** 157–175. Correction in *6th series* **1** 670–671, 1901. {**481**}

Pendergrass, Marcus and Siegrist, Kyle (2001). Generalizations of bold play in red and black. *Stochastic Processes and Their Applications* **92** (1) 163–180. {**356**}

Penney, W. (1969). Problem 95: Penney-ante. *Journal of Recreational Mathematics* **2** (4) 241. {**117**}

Percy, George (1988). *Poker: America's Game.* Self-published. {**571, 743**}

Perlman, Michael D. and Wichura, Michael J. (1975). A note on substitution in conditional distribution. *Annals of Statistics* **3** (5) 1175–1179. {**94**}

Persius, Charles [Dunne, Charles] (1823). *Rouge et Noir. The Academicians of 1823; or the Greeks of the Palais Royal, and the Clubs of St. James's.* Lawler and Quick and Stephen Couchman, London. {**312**}

Petriv, Mike (1996). *Hold'em's Odd(s) Book.* Objective Observer, Toronto. {**741, 743**}

Player, A. T. (1925). *Roulette and Trente-et-Quarante as Played at Monte-Carlo. Some 140 Systems, Progressions, Marches and Attacks* (second ed.). A. R. Thackrah & Cie, Menton. {**313, 314, 316, 641**}

Poe, Edgar Allan (1842–1843). The mystery of Marie Rogêt. *Snowden's Ladies' Companion* (Nov., Dec., and Feb.). {**67**}

Poe, Edgar Allan (1984). *Poetry and Tales.* The Library of America, New York. {**67**}

Poisson, S.-D. (1837). *Recherches sur la probabilité des jugements en matière criminelle et en matière civile, précédées des règles générales du calcul des probabilités.* Bachelier, Paris. Reprinted by Éditions Jacques Gabay, Paris, 2003. {**68, 71, 92**}

Poisson, [Siméon-Denis] (1825). Mémoire sur l'avantage du banquier au jeu de trente et quarante. *Annales de Mathématiques Pures et Appliquées* **16** (6) 173–208. {**236, 237, 639, 640, 642**}

Poisson, [Siméon-Denis] (1835). Recherches sur la probabilité des jugements, principalement en matière criminelle. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* **1** 473–494. {**70**}

Polovtsoff, General Pierre (1937). *Monte Carlo Casino.* Stanley Paul & Co., Ltd., London. {**641**}

Pólya, Georg (1920). Über den zentralen Grenzwertsatz der Wahrscheinlichkeitsrechnung und das Momentenproblem. *Mathematische Zeitschrift* **8** 171–181. {**71**}

Pólya, Georg (1921). Über eine Aufgabe der Wahrscheinlichkeitsrechnung betreffend die Irrfahrt im Straßennetz. *Mathematische Annalen* **84** (1–2) 149–160. {**157**}

Ponzer, Fred (1977). Ponzer dice system. *Gambling Times* **1** (1, Feb.) 24–25. {**316, 524**}

Poundstone, William (1992). *Prisoner's Dilemma.* Doubleday, New York. {**197**}

Poundstone, William (2005). *Fortune's Formula: The Untold Story of the Scientific Betting System that Beat the Casinos and Wall Street.* Hill and Wang, a division of Farrar, Straus and Giroux, New York. {**388, 389, 678**}

Pratt, John W. (1964). Risk aversion in the small and in the large. *Econometrica* **32** (1–2) 122–136. {**198**}

Preston, Amarillo Slim and Dinkin, Greg (2003). *Amarillo Slim in a World Full of Fat People: The Memoirs of the Greatest Gambler Who Ever Lived.* HarperEntertainment, an imprint of HarperCollins Publishers Inc., New York. {**736**}

Proctor, Richard A. (1887). *Chance and Luck: A Discussion of the Laws of Luck, Coincidences, Wagers, Lotteries, and the Fallacies of Gambling; with Notes on Poker and Martingales* (second ed.). Longmans, Green, and Co., London. {**312**}

Pushkin, Alexander (1983). *Complete Prose Fiction.* Stanford University Press, Stanford, CA. English translation by Paul Debreczeny. {**592**}

Puza, Borek D., Pitt, David G. W., and O'Neill, Terence J. (2005). The Monty Hall three doors problem. *Teaching Statistics* **27** (1) 11–15. {**72**}

Quinn, John Philip (1892). *Fools of Fortune: or Gambling and Gamblers, Comprehending a History of the Vice in Ancient and Modern Times, and in Both Hemispheres; an Exposition of Its Alarming Prevalence and Destructive Effects; with an Unreserved and Exhaustive Disclosure of Such Frauds, Tricks and Devices as Are Practiced by "Professional" Gamblers, "Confidence Men" and "Bunko Steerers."* The Anti-Gambling Association, Chicago. {**479, 520, 591**}

Quinn, John Philip (1912). *Gambling and Gambling Devices: Being a Complete Systematic Educational Exposition Designed to Instruct the Youth of the World to Avoid All Forms of Gambling.* John Philip Quinn, Canton, OH. {**497**}

Raleigh [Strutt, John] (1877). On Mr. Venn's explanation of a gambling paradox. *Mind* **2** (7) 409–410. {**116**}

Renaudet, B. (1922). *Le baccara, règles complètes. Baccara à deux tableaux. Baccara chemin de fer. Le trente et quarante. Le lansquenet. Le vingt-et-un. La banque.* Librairie S. Bornemann, Paris. {**619**}

Renzoni, Tommy and Knapp, Don (1973). *Renzoni on Baccarat and the Secrets of Professional Gambling.* Lyle Stuart, Inc., Secaucus, NJ. {**614**}

Revere, Lawrence (1973). *Playing Blackjack as a Business.* Lyle Stuart, Inc., Secaucus, NJ. First published by Paul Mann Publishing Co., Las Vegas, 1969. {**681, 683**}

Richardson, P. W. (1929). *Systems and Chances.* G. Bell & Sons, Ltd., London. {**316, 479**}

Riddle, Major A. (1963). *The Weekend Gambler's Handbook.* Random House, New York. {**595**}

Rivlin, Gary (2004). The chrome-shiny, lights-flashing, wheel-spinning, touch-screened, Drew-Carey-wisecracking, video-playing, 'sound events'-packed, pulse-quickening bandit: How the slot machine was remade, and how it's remaking America. *New York Times Magazine* (May 9) 42–47, 74. {**457, 459**}

Robison, John (2009). The odds of winning Megabucks. *Casino City Times* (Aug. 8). http://robison.casinocitytimes.com/article/the-odds-of-winning-megabucks-47597. {**458**}

Rosenhouse, Jason (2009). *The Monty Hall Problem: The Remarkable Story of Math's Most Contentious Brain Teaser*. Oxford University Press, Oxford, UK. {**72**}

Rosenthal, Jeffrey S. (1995). On duality of probabilities for card dealing. *Proceedings of the American Mathematical Society* **123** (2) 559–561. {**425**}

Ross, Andrew M., Benjamin, Arthur T., and Munson, Michael (2007). Estimating winning probabilities in backgammon races. In Ethier, Stewart N. and Eadington, William R. (Eds.), *Optimal Play: Mathematical Studies of Games and Gambling*, pp. 269–291. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**158**}

Ross, Sheldon (2006). *A First Course in Probability* (seventh ed.). Pearson Prentice Hall, Upper Saddle River, NJ. First edition, 1976. {**94, 425, 523**}

Ross, Sheldon M. (1974). Dynamic programming and gambling models. *Advances in Applied Probability* **6** (3) 593–606. {**356**}

Ross, Sheldon M. (2003). *Probability Models* (eighth ed.). Academic Press, San Diego. First edition, 1972. {**94, 117**}

Rouge et Noir [Heckethorn, Charles William] (1898). *The Gambling World: Anecdotic Memories and Stories of Personal Experience in the Temples of Hazard and Speculation with Some Mysteries and Iniquities of Stock Exchange Affairs*. Hutchinson & Co., London. Reissued by Singing Tree Press, Detroit, 1968. {**313**}

Rouse, William (1814). *The Doctrine of Chances, or the Theory of Gaming, Made Easy to Every Person Acquainted with Common Arithmetic, so as to Enable Them to Calculate the Probabilities of Events in Lotteries, Cards, Horse Racing, Dice, &c. with Tables on Chance, Never before Published, Which from Mere Inspection Will Solve a Great Variety of Questions*. Lackington, Allen & Co., London. {**519**}

Roxbury, L. E. (1959). *Your Chances at Roulette: or, You Can Win—but Don't Bet on It* (second ed.). High-Iron Publishers, Warwick, VA. {**316**}

Rudin, Walter (1987). *Real and Complex Analysis* (third ed.). McGraw-Hill Book Co., New York. {**747, 750**}

Russell, Jere (1983). *Compleat Poker: The Gambler's Edge*. Bonne Chance Enterprises, Panorama City, CA. {**571**}

Sagan, Hans (1981). Markov chains in Monte Carlo. *Mathematics Magazine* **54** (1) 3–10. {**479, 482**}

Samuels, S. M. (1975). The classical ruin problem with equal initial fortunes. *Mathematics Magazine* **48** (5) 286–288. {**274**}

Samuelson, Paul A. (1971). The "fallacy" of maximizing the geometric mean in long sequences of investing or gambling. *Proceedings of the National Academy of Sciences, USA* **68** (10) 2493–2496. {**389**}

Samuelson, Paul A. (1977). St. Petersburg paradoxes: Defanged, dissected, and historically described. *Journal of Economic Literature* **15** (1) 24–55. {**71**}

Samuelson, Paul A. (1979). Why we should not make mean log of wealth big though years to act are long. *Journal of Banking and Finance* **3** (4) 305–307. {**389**}

Sasuly, Richard (1982). *Bookies and Bettors: Two Hundred Years of Gambling*. Holt, Rinehart and Winston, New York. {**590**}

Sauveur, Joseph (1679). Supputation des avantages du banquier dans le jeu de la bassette. *Journal des Sçavans* (Feb. 13) 44–52. {**236, 590**}

Savage, Leonard J. (1957). The casino that takes a percentage and what you can do about it. Technical report P-1132, The Rand Corporation. {**356**}

Scarne, John (1949). *Scarne on Cards*. Crown Publishers, New York. {**66, 677, 679**}

Scarne, John (1961). *Scarne's Complete Guide to Gambling*. Simon and Schuster, New York. {**68, 71, 72, 236, 239, 481, 500, 592, 619, 620, 677, 679, 685**}

Scarne, John (1966). *The Odds Against Me: An Autobiography*. Simon and Schuster, New York. {**679, 680**}

Scarne, John (1974). *Scarne's New Complete Guide to Gambling* (fully revised, expanded, updated ed.). Simon and Schuster, New York. {**72, 239, 481, 639, 680**}

Scarne, John (1978). *Scarne's Guide to Casino Gambling*. Simon and Schuster, New York. {**680**}

Scarne, John (1980). *Scarne on Dice* (eighth revised ed.). Crown Publishers, Inc., New York. {**520, 521**}

Scarne, John and Rawson, Clayton (1945). *Scarne on Dice*. The Military Service Publishing Co., Harrisburg, PA. {**524**}

Schaffer, Allan (2005). Jess Marcum, mathematical genius and blackjack legend and the early days of card counting. *Blackjack Forum* **24** (3). {**680**}

Schenck, Robert C. (1880). *Draw. Rules for Playing Poker*. Privately printed, Brooklyn, NY. {**732**}

Schlesinger, Don (1986). Attacking the shoe. *Blackjack Forum* **6** (3) 5–11. {**682**}

Schlesinger, Don (1999a). Before you play, know the SCORE! Part I. *Blackjack Forum* **19** (2) 7–21. {**239**}

Schlesinger, Don (1999b). SCORE! Part II. *Blackjack Forum* **19** (2) 22–34. {**239**}

Schlesinger, Don (2005). *Blackjack Attack: Playing the Pros' Way* (third ed.). RGE Publishing, Ltd., Las Vegas. First edition, 1997; second edition, 2000. {**239, 682–684, 686, 687**}

Schneider, Ivo (1988). The market place and games of chance in the fifteenth and sixteenth centuries. In Hay, Cynthia (Ed.), *Mathematics from Manuscript to Print, 1300–1600*, pp. 220–235. Clarendon Press, Oxford, UK. {**92**}

Schneir, Leonard (1993). *Gambling Collectibles: A Sure Winner*. Schiffer Publishing Ltd., Atglen, PA. {**732**}

Schwartz, David G. (2006). *Roll the Bones: The History of Gambling*. Gotham Books, New York. {**316**}

Schwarz, H. A. (1885). Über ein die Flächen kleinsten Flächeninhalts betreffendes Problem der Variationsrechnung. *Acta Societatis Scientiarum Fennicae* **15** 315–362. {**69**}

Schweinsberg, Jason (2005). Improving on bold play when the gambler is restricted. *Journal of Applied Probability* **42** (2) 321–333. {**356**}

Scoblete, Frank (1991). *Beat the Craps Out of the Casinos: How to Play Craps and Win!* Bonus Books, Inc., Chicago. New expanded edition, 2005. {**521, 524**}

Scoblete, Frank (1993). *The Captain's Craps Revolution*. Paone Press, Lynbrook, NY. {**239, 521**}

Scoblete, Frank (2000). *Forever Craps: The Five-Step Advantage-Play Method*. Bonus Books, Inc., Chicago. {**521**}

Scoblete, Frank (2003). *The Craps Underground: The Inside Story of How Dice Controllers Are Winning Millions from the Casinos*. Bonus Books, Inc., Chicago. {**521**}

Scoblete, Frank (2007). *The Virgin Kiss and Other Adventures*. Research Services Unlimited, Daphne, AL. {**523**}

Scoblete, Frank and Dominator [LoRiggio, Dominic] (2005). *Golden Touch Dice Control Revolution!* Research Services Unlimited, Daphne, AL. {**521**}

Scrutator (1924). *The Odds at Monte Carlo*. John Murray, London. {**639**}

Selvin, Steve (1975a). A problem in probability. *American Statistician* **29** (1) 67. {**72**}

Selvin, Steve (1975b). On the Monty Hall problem. *American Statistician* **29** (3) 134. {**72**}

Seneta, E. (1998). I. J. Bienaymé [1796–1878]: Criticality, inequality, and internationalization. *International Statistical Review* **66** (3) 291–301. {**70**}

Shackleford, Michael (2002). The slot payout comparison. *Anthony Curtis' Las Vegas Advisor* **19** (5) 8–9. {**459**}

Shackleford, Michael (2005a). *Gambling 102*. Huntington Press, Las Vegas. {**237, 238, 523, 683**}

Shackleford, Michael W. (2005b). Frequently asked questions about craps. http://wizardofodds.com/askthewizard/craps-faq.html. {**237**}

Shackleford, Michael W. (2009). Craps. http://wizardofodds.com/craps/. {**523, 542**}

Shafer, Glenn and Vovk, Vladimir (2001). *Probability and Finance: It's Only a Game!* John Wiley & Sons, Inc., New York. {**311**}

Sham [Shampaign, Charles E.] (1930). *Handbook on Percentages: Containing Rules for the Playing of the Games with Descriptions, Technicalities, Probabilities, Percentages, Instructions, Examples, etc. American Method of Playing with Numerous Tables and Tabulations to Which Is Appended an Elaborate Treatise on the Doctrine of Chances* (revised ed.). Joe Treybal Sporting Goods Co., St. Louis. Reprinted by Gambler's Book Club, Las Vegas, 1976. {**237, 524**}

Shannon, C. E. (1948). A mathematical theory of communication. *Bell System Technical Journal* **27** 379–423, 623–656. {**116, 389**}

Sharpshooter [Pawlicki, Christopher] (2002). *Get the Edge at Craps: How to Control the Dice!* Bonus Books, Chicago. {**521**}

Shepp, Larry (2006). Bold play and the optimal policy for Vardi's casino. In Hsiung, Agnes Chao, Ying, Zhiliang, and Zhang, Cun-Hui (Eds.), *Random Walk, Sequential Analysis and Related Topics: A Festschrift in Honor of Yuan-Shih Chow*, pp. 150–156. World Scientific Publishing Co., Hackensack, NJ. {**356**}

Siegrist, Kyle (2008). How to gamble if you must. *Loci* **1** (July). {**355, 356**}

Sifakis, Carl (1990). *Encyclopedia of Gambling.* Facts on File, New York. {**479, 614**}

Sigler, L. E. (2002). *Fibonacci's Liber Abaci: A Translation into Modern English of Leonardo Pisano's* Book of Calculation. Springer-Verlag, New York. {**312**}

Silberer, Victor (1910). *The Games of Roulette and Trente et Quarante as Played at Monte Carlo. Being a Reprint of the Technical Chapters from the Work "Vom grünen Tisch in Monte Carlo."* Harrison & Sons, London. {**479, 481, 639, 642**}

Sileo, Patrick (1992). The evaluation of blackjack games using a combined expectation and risk measure. In Eadington, William R. and Cornelius, Judy A. (Eds.), *Gambling and Commercial Gaming: Essays in Business, Economics, Philosophy and Science*, pp. 551–563. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**239**}

Simpson, J. A. and Weiner, E. S. C. (1989). *Oxford English Dictionary* (second ed.). Clarendon Press, Oxford, UK. {**236, 311, 498, 517, 613**}

Simpson, Thomas (1740). *The Nature and Laws of Chance. The Whole after a New, General, and Conspicuous Manner, and Illustrated with a Great Variety of Examples.* Edward Cave, London. {**70, 73**}

Singh, Parmanand (1985). The so-called Fibonacci numbers in ancient and medieval India. *Historia Mathematica* **12** (3) 229–244. {**313**}

Singsen, Michael Pierce (1988). Where will the buck stop on California Penal Code Section 330?: Solving the stud-horse poker conundrum. *COMM/ENT, Hastings Communications and Entertainment Law Journal* **11** (1) 95–147. {**733**}

Sklansky, David (1976). *Hold 'em Poker.* GBC Press, Las Vegas. {**741**}

Sklansky, David (1978). *Sklansky on Poker Theory.* GBC Press, Las Vegas. {**741**}

Sklansky, David (1982). Card counting and baccarat. *Gambling Times* **5** (11, Mar.) 84–86. {**620, 621**}

Sklansky, David (1994). *The Theory of Poker* (third ed.). Two Plus Two Publishing, Las Vegas. First edition, 1987. {**741**}

Sklansky, David (1996). *Hold 'em Poker.* Two Plus Two Publishing, Henderson, NV. {**742**}

Sklansky, David (1997). *Fighting Fuzzy Thinking in Poker, Gaming, and Life.* Two Plus Two Publishing, Henderson, NV. {**743**}

Sklansky, David (2001). *Getting the Best of It* (second ed.). Two Plus Two Publishing, Henderson, NV. First edition, 1982. {**72, 687**}

Sklansky, David and Malmuth, Mason (1999). *Hold 'em Poker for Advanced Players* (third ed.). Two Plus Two Publishing, Henderson, NV. First edition, 1988. {**741, 742**}

Sklansky, David and Miller, Ed (2006). *No Limit Hold 'em: Theory and Practice.* Two Plus Two Publishing, Henderson, NV. {**741, 742, 744**}

Slutsky, E. (1925). Über stochastische Asymptoten und Grenzwerte. *Metron* **5** (3) 3–89. {**73**}

Smith, Armand V., Jr. (1968). Some probability problems in the game of "craps." *American Statistician* **22** (3) 29–30. {**94, 522**}

Smith, Gerald John (1967). Optimal strategy at roulette. *Zeitschrift für Wahrscheinlichkeitstheorie und verwandte Gebiete* **8** 91–100. {**356**}

Snell, J. Laurie (1997). A conversation with Joe Doob. *Statistical Science* **12** (4) 301–311. {**68, 115**}

Snell, J. Laurie and Vanderbei, Robert (1995). Three bewitching paradoxes. In Snell, J. Laurie (Ed.), *Topics in Contemporary Probability and Its Applications*, pp. 355–370. CRC Press, Boca Raton, FL. {**72**}

Snyder, Arnold (1982). Algebraic approximation of optimum blackjack strategy (revised). In Eadington, William R. (Ed.), *The Gambling Papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 10. The Blackjack Papers*, pp. 34–58. Bureau of Business and Economic Research, University of Nevada, Reno. {**686**}

Snyder, Arnold (1983). *Blackbelt in Blackjack: Playing 21 as a Martial Art.* RGE Publishing, Berkeley, CA. {**683**}

Snyder, Arnold (1992). The John Scarne riddle. *Card Player* **5** (5) 44–46. {**680**}

Snyder, Arnold (1997). *Blackjack Wisdom.* RGE Publishing, Oakland, CA. {**680**}

Snyder, Arnold (2005). *Blackbelt in Blackjack: Playing 21 as a Martial Art* (third ed.). Cardoza Publishing, New York. {**683**}

Snyder, Arnold (2006). *The Big Book of Blackjack.* Cardoza Publishing, New York. {**676, 683**}

Sobel, Milton and Frankowski, Krzysztof (1994). A duality theorem for solving multiple-player multivariate hypergeometric problems. *Statistics & Probability Letters* **20** (2) 155–162. {**425**}

Sodano, John and Yaspan, Arthur (1978). A neglected probability formula. *Two-Year College Mathematics Journal* **9** (3) 145–147. {**72**}

Spanier, David (1980). *The Pocket Guide to Gambling.* Simon and Schuster, New York. {**481**}

Spanier, David (1990). *Total Poker* (revised ed.). Andre Deutsch Limited, London. First published by Martin Secker & Warburg Limited, London, 1977. {**738**}

Spanier, David (1994). *Inside the Gambler's Mind.* University of Nevada Press, Reno. {**679**}

Steinmetz, Andrew (1870). *The Gaming Table: Its Votaries and Victims, in All Times and Countries, Especially in England and in France, Vol. 2.* Tinsley Brothers, London. Reprinted by Patterson Smith Publishing Corp., Montclair, NJ, 1969. {**72, 521**}

Stelzer, Michael A. (2006). *Mathematical Strategies to Winning Casino Poker.* BookSurge, LLC, North Charleston, SC. {**543**}

Stern, Frederick (1975). Conditional expectation of the duration in the classical ruin problem. *Mathematics Magazine* **48** (4) 200–203. {**272**}

Stewart, Peter (1986). Letter to the editor. *Gambling Times* (Oct.) 6. {**522**}

Stigler, Stephen M. (1983). Who discovered Bayes's theorem? *American Statistician* **37** (4) 290–296. {**68**}

Stigler, Stephen M. (1986). *The History of Statistics: The Measurement of Uncertainty before 1900.* The Belknap Press of Harvard University Press, Cambridge, MA. {**64, 69, 481**}

Stirling, J. (1730). *Methodus Differentialis: sive Tractatus de Summatione et Interpolatione Serierum Infinitarum.* G. Strahan, London. {**71**}

Stirzaker, David (1994). Tower problems and martingales. *Mathematical Scientist* **19** (1) 52–59. {**117**}

Stratton, David (2004a). Turning the tables on slots: Table games not yet ready for extinction. *Gaming Today* **29** (25, June 15–21) 3, 6. {**425**}

Stratton, David (2004b). Turning the tables: New games draw players to the "pits." *Gaming Today* **29** (26, June 22–28) 1, 4, 7. {**543**}

Struyck, Nicolaas (1716). *Calculation of the Chances in Play, by Means of Arithmetic and Algebra, Together with a Treatise on Lotteries and Interest.* Publisher unknown, Amsterdam. {**271**}

Stuart, Lyle (2007). *Lyle Stuart on Baccarat* (third ed.). Lyle Stuart, New York. First edition, 1984; second edition, 1997. {**614**}

Stupak, Bob (1984). The worst of it could be the best of it. *Gambling Times* **7** (11, Mar.) 82. {**356, 500**}

Szabo, Aloïs (1962). *How to Win* (fourth ed.). Wehman Bros., Inc., New York. {**316**}

Székely, Gábor J. (2003). Problem corner. *Chance* **16** (4) 52–53. {**425**}

Takács, Lajos (1967). On the method of inclusion and exclusion. *Journal of the American Statistical Association* **62** (317) 102–113. {**70**}

Takács, Lajos (1969). On the classical ruin problems. *Journal of the American Statistical Association* **64** (327) 889–906. {**273**}

Takács, Lajos (1994). The problem of points. *Mathematical Scientist* **19** (2) 119–139. {**93**}

Takács, Lajos (1997). On the ballot theorems. In Balakrishnan, N. (Ed.), *Advances in Combinatorial Methods and Applications to Probability and Statistics*, pp. 97–114. Birkhäuser, Boston. {**315**}

Takahasi, Koiti and Futatsuya, Masao (1984). On a problem of a probability arising from poker. *Journal of the Japan Statistical Society* **14** (1) 11–18. {**71**}

Tamburin, Henry J. (1983). Baccarat card counting, another opinion. *Experts Blackjack Newsletter* **1** (11) 12, 15. {**621**}

Tamburin, Henry J. and Rahm, Dick (1983). *Winning Baccarat Strategies: The First Effective Card Counting Strategies for the Casino Game of Baccarat.* Research Services Unlimited, Greenboro, NC. {**621**}

Tartaglia, Nicolo Fontana (1556). *Trattato generale di numeri e misure.* Curtio Troiano, Venice. {**92**}

Thackeray, William Makepeace (1989a). *Vanity Fair: A Novel without a Hero.* Garland Publishing, Inc., New York. Edited by Peter L. Shillingsburg. {**241, 429, 483**}

Thackeray, William Makepeace (1989b). *The History of Henry Esmond.* Garland Publishing, Inc., New York. Edited by Edgar F. Harden. {**199**}

Thackeray, William Makepeace (1991a). *Flore et Zéphyr; The Yellowplush Correspondence; The Tremendous Adventures of Major Gahagan.* Garland Publishing, Inc., New York. Edited by Peter L. Shillingsburg. {**159**}

Thackeray, William Makepeace (1991b). *The History of Pendennis.* Garland Publishing, Inc., New York. Edited by Peter L. Shillingsburg. {**v, 3, 119**}

Thackeray, William Makepeace (1996). *The Newcomes: Memoirs of a Most Respectable Family.* The University of Michigan Press, Ann Arbor. Edited by Peter L. Shillingsburg. {**75, 95, 357**}

Thackeray, William Makepeace (1999a). *Catherine: A Story. By Ikey Solomons, Esq. Junior.* The University of Michigan Press, Ann Arbor. Edited by Sheldon F. Goldfarb. {**391**}

Thackeray, William Makepeace (1999b). *The Luck of Barry Lyndon; a Romance of the Last Century. By Fitz-Boodle.* The University of Michigan Press, Ann Arbor. Edited by Edgar F. Harden. {**317, 573, 597, 689**}

Thackeray, William Makepeace (2005). *The Snobs of England and Punch's Prize Novelists.* The University of Michigan Press, Ann Arbor. Edited by Edgar F. Harden. {**745**}

Thackrey, Ted, Jr. (1968). *Gambling Secrets of Nick the Greek.* Rand McNally & Company, Chicago. {**595**}

Thorold, Algar Labouchere (1913). *The Life of Henry Labouchere.* G. P. Putnam's Sons, The Knickerbocker Press, New York. {**313**}

Thorp, E. O. (1960). Fortune's formula: The game of blackjack. *Notices of the American Mathematical Society* **7** (7) 935–936. {**678**}

Thorp, E. O. (1966b). Elementary Problem E 1865. *American Mathematical Monthly* **73** (3) 309. {**71**}

Thorp, Edward (1961). A favorable strategy for twenty-one. *Proceedings of the National Academy of Sciences, USA* **47** (1) 110–112. {**678**}

Thorp, Edward O. (1962a). A prof beats the gamblers. *Atlantic Monthly* **209** (6, June) 41–46. {**678, 679**}

Thorp, Edward O. (1962b). *Beat the Dealer: A Winning Strategy for the Game of Twenty-One*. Random House, New York. {**425, 643, 678–681, 683, 685, 686**}

Thorp, Edward O. (1964). Repeated independent trials and a class of dice problems. *American Mathematical Monthly* **71** (7) 778–781. {**68, 72**}

Thorp, Edward O. (1966a). *Beat the Dealer: A Winning Strategy for the Game of Twenty-One* (revised and simplified ed.). Random House, New York. {**681, 683**}

Thorp, Edward O. (1966c). *Elementary Probability*. John Wiley & Sons, Inc., New York. {**66, 71**}

Thorp, Edward O. (1969). Optimal gambling systems for favorable games. *International Statistical Review* **37** (3) 273–293. {**356, 389**}

Thorp, Edward O. (1973). Nonrandom shuffling with applications to the game of faro. *Journal of the American Statistical Association* **68** (344) 842–847. {**237, 594**}

Thorp, Edward O. (1975). Portfolio choice and the Kelly criterion. In Ziemba, W. T. and Vickson, R. G. (Eds.), *Stochastic Optimization Models in Finance*, pp. 599–619. Academic Press, New York. {**389**}

Thorp, Edward O. (1976). Probabilities and strategies for the game of faro. In Eadington, William R. (Ed.), *Gambling and Society: Interdisciplinary Studies on the Subject of Gambling*, pp. 443–466. Charles C. Thomas, Springfield, IL. {**594, 595**}

Thorp, Edward O. (1984). *The Mathematics of Gambling*. Lyle Stuart, Secaucus, NJ. {**620**}

Thorp, Edward O. (1993). The Kelly system: Fact and fallacy. *Blackjack Forum* **13** (2) 18–23. {**390**}

Thorp, Edward O. (2000a). Does basic strategy have the same expectation for each round? Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 115–132. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**71, 687**}

Thorp, Edward O. (2000b). The Kelly criterion in blackjack, sports betting, and the stock market. In Vancura, Olaf, Cornelius, Judy A., and Eadington, William R. (Eds.), *Finding the Edge: Mathematical Analysis of Casino Games*, pp. 163–213. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. Corrected version in Zenios, S. A. and Ziemba, W. T. (Eds.), *Handbook of Asset and Liability Management, Vol. 1. Theory and Methodology*, pp. 385–428. North-Holland, Elsevier B.V., Amsterdam, 2006. {**389, 390**}

Thorp, Edward O. (2005). The first wearable computer. *Noesis: The Journal of the Mega Society* **176** 12–19. {**678**}

Thorp, Edward O. and Walden, William E. (1966). A favorable side bet in Nevada baccarat. *Journal of the American Statistical Association* **61** (314) 313–328. {**389, 620, 621**}

Thorp, Edward O. and Walden, William E. (1973). The fundamental theorem of card counting with applications to trente-et-quarante and baccarat. *International Journal of Game Theory* **2** (1) 109–119. {**425, 640–642**}

Tierney, John (1991). Behind Monty Hall's doors: Puzzle, debate and answer? *New York Times* (July 21) Section 1, pp. 1, 20. {**72**}

Tinker, Edward Larocque (1933). *The Palingenesis of Craps*. The Press of the Woolly Whale, New York. {**519, 520**}

Todhunter, I. (1865). *A History of the Mathematical Theory of Probability: From the Time of Pascal to That of Laplace*. Macmillan, Cambridge, UK. Reprinted by Chelsea Publishing Co., New York, 1949, 1965. {**viii, 64, 65, 69, 70, 198, 271–273, 593, 594, 638**}

Tolstoy, Leo (1889). *War and Peace*. Thomas Y. Crowell & Co., New York. English translation by Nathan Haskell Dole. {**592**}

Toti Rigatelli, Laura (1985). Il "problema delle parti" in manoscritti del XIV e XV secolo. In Folkerts, Menso and Lindgren, Uta (Eds.), *Mathemata: Festschrift für Helmuth Gericke*, pp. 229–236. Franz Steiner Verlag, Stuttgart. {**92**}

Trumps (c. 1875). *The American Hoyle; or a Gentleman's Hand-Book of Games; Containing All the Games Played in the United States, with Rules, Descriptions, and Technicalities, Adapted to the American Methods of Playing* (ninth ed.). Dick & Fitzgerald, Publishers, New York. {**639, 732, 739**}

Uspensky, J. V. (1937). *Introduction to Mathematical Probability.* McGraw–Hill Book Company, Inc., New York. {**66, 70, 273**}

Uston, Ken and Rapoport, Roger (1977). *The Big Player: How a Team of Blackjack Players Made a Million Dollars.* Holt, Rinehart and Winston, New York. {**683**}

Van-Tenac, [Charles] (1847). *Album des jeux de hasard et de combinaisons en usage dans les salons et dans les cercles. Règles, lois, conventions et maximes. Recueillies et codifiées d'après les meilleures autorités de l'ancienne et de la nouvelle école. Avec un abrégé et des applications de la théorie des probabilités.* Gustave Havard, Éditeur, Paris. {**237, 519, 618**}

Vancura, Olaf (1996). *Smart Casino Gambling: How to Win More and Lose Less.* Index Publishing Group, Inc., San Diego. {**620**}

Vancura, Olaf and Fuchs, Ken (1998). *Knock-Out Blackjack: The Easiest Card-Counting System Ever Devised.* Huntington Press, Las Vegas. {**683**}

Vanniasegaram, Sithparran (2006). Le her with s suits and d denominations. *Journal of Applied Probability* **43** (1) 1–15. {**198**}

Ville, Jean (1938). Sur la théorie générale des jeux où intervient l'habileté des joueurs. In Borel, Émile (Ed.), *Applications aux jeux de hasard*, pp. 105–113. Gauthier-Villars, Imprimeur-Éditeur, Paris. {**197**}

Ville, Jean (1939). *Étude critique de la notion de collectif.* Gauthier-Villars, Imprimeur-Éditeur, Paris. {**115, 116**}

von Mises, Richard (1928). *Wahrscheinlichkeitsrechnung, Statistic und Wahrheit.* Verlag von Julius Springer, Wien. {**116**}

von Neumann, John (1928). Zur Theorie der Gesellschaftsspiele. *Mathematische Annalen* **100** (1) 295–320. {**197**}

von Neumann, John and Morgenstern, Oskar (1944). *Theory of Games and Economic Behavior.* Princeton University Press, Princeton, NJ. Second edition, 1947; third edition, 1953. {**197, 198, 740**}

vos Savant, Marilyn (1990a). Ask Marilyn. *Parade Magazine* (Sept. 9) 15. {**72**}

vos Savant, Marilyn (1990b). Ask Marilyn. *Parade Magazine* (Dec. 2) 25. {**72**}

vos Savant, Marilyn (1991). Ask Marilyn. *Parade Magazine* (Feb. 17) 12. {**72**}

Wald, A. (1945). Sequential tests of statistical hypotheses. *Annals of Mathematical Statistics* **16** (2) 117–186. {**117**}

Wallace, Frank R. (1968). *Poker: A Guaranteed Income for Life by Using the Advanced Concepts of Poker.* I & O Publishing Company, Wilmington, DE. {**740, 741**}

Weaver, Warren (1919). Problem 2787. *American Mathematical Monthly* **26** (8) 366. {**522**}

Weaver, Warren (1963). *Lady Luck: The Theory of Probability.* Anchor Books, Doubleday & Co., Inc., Garden City, NY. Reprinted by Dover Publications, Inc., New York, 1982. {**522**}

Weber, Glenn and Scruggs, W. Todd (1992). A mathematical and computer analysis of video poker. In Eadington, William R. and Cornelius, Judy A. (Eds.), *Gambling and Commercial Gaming: Essays in Business, Economics, Philosophy and Science*, pp. 625–633. Institute for the Study of Gambling and Commercial Gaming, University of Nevada, Reno. {**570, 571**}

Wechsberg, Joseph (1953). Blackjack Pete. *Colliers* **132** (4, July 28) 34–37. {**680**}

Werthamer, N. Richard (2009). *Risk and Reward: The Science of Casino Blackjack.* Springer, New York. {**683, 687**}

Whitworth, William Allen (1901). *Choice and Chance with 1000 Exercises* (fifth ed.). Deighton Bell and Co., Cambridge, UK. First edition, 1867. {**389, 390**}

Wilkins, J. Ernest, Jr. (1972). The bold strategy in presence of house limit. *Proceedings of the American Mathematical Society* **32** (2) 567–570. {**356**}

Williams, C. O. (1912). A card reading. *Magician Monthly* **8** 67. {**425**}

Williams, David (1991). *Probability with Martingales*. Cambridge University Press, Cambridge, UK. {**117**}

Williams, J. D. (1954). *The Compleat Strategyst: Being a Primer on the Theory of Games of Strategy*. McGraw-Hill Book Co., Inc., New York. {**198, 743**}

Williams, John Burr (1936). Speculation and the carryover. *Quarterly Journal of Economics* **50** (3) 436–455. {**389**}

Wilson, Allan N. (1962). Advanced Problem 5036. *American Mathematical Monthly* **69** (6) 570–571. {**314**}

Wilson, Allan N. (1965). *The Casino Gambler's Guide*. Harper & Row, New York. Enlarged edition, 1970. {**236, 314, 482, 619, 621, 677, 681, 685**}

Wilson, Des (2008). *Ghosts at the Table: Riverboat Gamblers, Texas Rounders, Internet Gamers, and the Living Legends Who Made Poker What It Is Today*. Da Capo Press, New York. {**69, 731**}

Wilson, E. B. (1905). Problem 155. *American Mathematical Monthly* **12** (3) 76. {**522**}

Winterblossom, Henry T. (1875). *The Game of Draw-Poker, Mathematically Illustrated; Being a Complete Treatise on the Game, Giving the Prospective Value of Each Hand before and after the Draw, and the True Method of Discarding and Drawing, with a Thorough Analysis and Insight of the Game as Played at the Present Day by Gentlemen*. Wm. H. Murphy, Printer and Publisher, New York. {**732, 740**}

Wong, Chi Song (1977). A note on the central limit theorem. *American Mathematical Monthly* **84** (6) 472. {**73**}

Wong, Stanford (1982). What proportional betting does to your win rate. In Eadington, William R. (Ed.), *The Gambling Papers: Proceedings of the Fifth National Conference on Gambling and Risk Taking, Vol. 10. The Blackjack Papers*, pp. 59–66. Bureau of Business and Economic Research, University of Nevada, Reno. Also appeared in *Blackjack World* **3** 162–168, 1981. {**390**}

Wong, Stanford (1988). *Professional Video Poker*. Pi Yee Press, New York. Revised edition, 2000. {**571**}

Wong, Stanford (1994). *Professional Blackjack*. Pi Yee Press, Las Vegas. First published in 1975. {**683**}

Wong, Stanford (2005). *Wong on Dice*. Pi Yee Press, Las Vegas. {**71, 237, 521, 524**}

Yao, King (2005). *Weighing the Odds in Hold'em Poker*. Pi Yee Press, Las Vegas. {**741**}

Yardley, Herbert O. (1957). *The Education of a Poker Player: Including Where and How One Learns to Win*. Simon and Schuster, Inc., New York. {**741**}

Zender, Bill (2006). *Advantage Play for the Casino Executive*. Self-published. {**482, 522**}

Zender, Bill (2008). *Casino-ology: The Art of Managing Casino Games*. Huntington Press, Las Vegas. {**522, 683**}

Zerr, G. B. M. (1903). Solution of Problem 129. *American Mathematical Monthly* **10** (3) 81. {**522**}

Zhang, Lingyun and Lai, C. D. (2004). Variance of a randomly stopped sum. *Mathematical Scientist* **29** (1) 42–44. {**522**}

Index

Page numbers of primary entries are shown in **bold**. Names of people are indexed if they are explicitly mentioned prior to the bibliography.

S.N. Ethier, *The Doctrine of Chances*, Probability and its Applications,
DOI 10.1007/978-3-540-78783-9,

C

D

E

F

H

I

L

M

N

O

P

S

T

U

V

Y

Z