

**Yale Readings in Insurance**  
**LIFE INSURANCE**

Edited by  
Lester W. Zartman, Ph.D.

William S. Hein & Co., Inc.  
Buffalo, New York  
2003

Library of Congress Cataloging-in-Publication Data

Life insurance / edited by Lester W. Zartman.

p. cm. -- (Yale readings in insurance)

Originally published: New Haven, Conn. : Yale University Press, 1909.

Includes index.

ISBN 1-57588-780-0 (cloth : alk. paper)

1. Insurance, Life. 2. Insurance, Industrial. I. Zartman, Lester W. (Lester William), 1878-1909. II. Series.

HG8771.L44 2003

368.32--dc21

2003047759

This acid-free reprint was digitally archived under the strict quality control guidelines established by William S. Hein & Co., Inc.'s "Preservation Program" This program was established to preserve the integrity of legal classics for future generations of legal researchers.

This paper meets the requirements of  
ANSI/NISO Z39.48-1992 (Permanence of Paper).



Printed in the United States of America.

YALE READINGS IN INSURANCE

# LIFE INSURANCE

EDITED BY

LESTER W. ZARTMAN, PH.D.

ASSISTANT PROFESSOR OF POLITICAL ECONOMY, YALE UNIVERSITY



NEW HAVEN, CONNECTICUT  
YALE UNIVERSITY PRESS

LONDON  
HENRY FROWDE  
OXFORD UNIVERSITY PRESS

1909

*Copyright, 1909, by*  
YALE UNIVERSITY PRESS

---

*Entered at Stationers' Hall, London*

*Printed in the United States*

## PREFACE

THE "Yale Lectures on Life Insurance" appeared five years ago. Although a considerable edition was printed, the unexpectedly large demand soon exhausted it, and as the plates were destroyed, for two years the lectures have been out of print.

It seems desirable that either a new edition of the lectures should be printed, or that something new should be published in their place. The latter alternative has been chosen, and instead of simply reprinting the old lectures, the plan has been adopted of selecting special readings, partly from the "Yale Lectures," partly from other sources. This plan was preferred for two reasons. In the first place, many changes have taken place in the insurance business since the old lectures were given, and much new and valuable material has appeared. In the second place, it has been thought that by not confining the readings to the old lectures a more comprehensive treatment could be secured. In this way it has been hoped to broaden the scope of the new readings, and thus to increase their usefulness. Only four of the lectures included in the old volume are reprinted, and three of these have been partly rewritten. Some of the matter now published has never appeared before, and much of the remainder has been revised.

In selecting these readings, the aim has been to avoid those authors who treat the subject in technical language,

as well as to avoid those who make the subject more simple than it really is, and thus conceal its real problems. The broad selection of material would not have been possible without the coöperation of others. It is a pleasure to acknowledge the fine spirit of publishers in permitting reprints from copyrighted books, and the willingness of authors to revise articles where changed conditions made revision desirable.

LESTER W. ZARTMAN.

NEW HAVEN,  
August, 1909.

# CONTENTS

CHAPTER I	
ELIMINATION OF RISK . . . . .	1
CHAPTER II	
FUNCTION OF LIFE INSURANCE . . . . .	14
CHAPTER III	
HISTORY OF LIFE INSURANCE; PERIOD OF EARLY BEGINNINGS	36
CHAPTER IV	
ORIGIN OF LIFE INSURANCE THEORY . . . . .	46
CHAPTER V	
HISTORY OF LIFE INSURANCE IN GREAT BRITAIN . . . . .	57
CHAPTER VI	
HISTORY OF LIFE INSURANCE IN THE UNITED STATES . . . . .	77
CHAPTER VII	
THE THEORY OF RISK . . . . .	97
CHAPTER VIII	
MORTALITY TABLES . . . . .	107
CHAPTER IX	
ASSESSMENT LIFE INSURANCE . . . . .	122
CHAPTER X	
FRATERNAL LIFE INSURANCE . . . . .	132
CHAPTER XI	
NET PREMIUMS . . . . .	155
CHAPTER XII	
PROVISION FOR EXPENSES . . . . .	175

	CHAPTER XIII	
RESERVE . . . . .		183
	CHAPTER XIV	
NET VALUATION . . . . .		192
	CHAPTER XV	
POLICY CONTRACTS . . . . .		207
	CHAPTER XVI	
POLICY CONDITIONS . . . . .		234
	CHAPTER XVII	
SURRENDERS AND LOAN PRIVILEGES . . . . .		246
	CHAPTER XVIII	
EXPENSES FOR AGENTS . . . . .		254
	CHAPTER XIX	
DISTRIBUTION OF SURPLUS . . . . .		260
	CHAPTER XX	
DEFERRED DIVIDEND POLICIES . . . . .		273
	CHAPTER XXI	
ECONOMIC ASPECT OF LENGTHENING HUMAN LIFE . . . . .		287
	CHAPTER XXII	
CONTROL OF LIFE INSURANCE COMPANIES . . . . .		299
	CHAPTER XXIII	
MISTAKES IN STATE REGULATION OF THE INSURANCE BUSINESS . . . . .		312
	CHAPTER XXIV	
FEDERAL SUPERVISION OF INSURANCE . . . . .		334
	CHAPTER XXV	
NECESSITY FOR REFORM OF LIFE INSURANCE TAXATION . . . . .		363
	CHAPTER XXVI	
INDUSTRIAL INSURANCE . . . . .		382
INDEX . . . . .		399



## INDEX

### A

- Actuaries table of mortality, formation of, 110-111.
- Age, insurable, limits of, 217; reasons for limiting, 221.
- Agents, necessity of, 256-259; experience of English companies without agents, 254-256; expenses of, 254-259; agency system in industrial insurance, 387-388.
- Alabama, regulation by law of policy conditions in, 317-318.
- Alcohol, effect on longevity, 26.
- American experience table of mortality, formation of, 111-112, given in detail, 157.
- American Life Insurance Company of Philadelphia, wrecking of, 301.
- Amicable Society, origin of, 67; plans of, 68-69, 127.
- Ancient Order of United Workmen, organization of, 94; plans of, 125-126; growth of, 128-129.
- Annuities, effect on origin of life insurance, 44.
- Application, details required in, 212-213; as part of policy, 222.
- Armstrong laws, provisions of in regard to policy-holders' voting, 308.
- Assessment life insurance companies, origin of, 93; general description of plans, 122-131; reasons for origin, 122-123; methods of, 216; organized for purely business purposes, 145; decline of, 130-131.
- Assessments, plan of in fraternal societies, 141-144.
- Assets, taxation of, 369-370.

- Australian Mutual Provident Society, method of voting by policy-holders adopted by, 311.

### B

- Baines, quoted in regard to increasing longevity, 288.
- Barnes, William, quoted in regard to deferred dividend plans, 275.
- Beneficiary, lack of investment knowledge possessed by, 235; methods of providing for, 236.
- Bills of mortality, origin of, 49; use of, 50.
- Blood-spitting, mortality among those with a history of, 115.
- Bubble Act of 1720 and its effect on English life insurance, 72.
- Business, amount of new, regulated by Armstrong law, 319.

### C

- Carlisle mortality table, formation of, 109.
- Champion *v.* Ames, case cited in relation to federal supervision of insurance, 355.
- Chance, meaning of, 98; effect of an economic activity, 99.
- Civil War, effect on growth of life insurance, 87.
- Colonies, insurance in American, 77-80.
- Comity, meaning of state, 330; results of on state supervision of insurance, 330-331.
- Commissioners of insurance, state, political character of, 322-323.
- Companies, various kinds of, 299; methods of controlling mixed,

- 303-304; theory of government in mutual companies, 304-305.
- Connecticut Mutual Life Insurance Company, organization of, 86-87.
- Cost of insurance, definition of, 181; calculated, 160; given for various ages, 161; as a basis for distributing expenses, 262-263; effect of increasing cost on fraternal associations, 144-146.
- Cost of living in relation to life insurance, 20.
- Crusades, effect of on insurance, 42.

## D

- Dawson, M. M., selection from on assessment insurance, 122-131; author of modified preliminary term system of reserves, 203; author of select and ultimate system of valuation, 204.
- Deferred dividends, arguments in favor of, 280-286.
- De Moivre, contribution of, 74.
- De Witt, contribution of, 47.
- Diphtheria, amount of which is preventable, 291.
- Disease, prevention of, 291-292.
- District of Columbia, reasons for poor insurance laws, 331-332.
- Dividends, early methods of declaring, 89-90; various plans of distributing, 220; system of deferred dividends explained, 273-286; arguments in favor of, 276-286; over-emphasis of subject of, 241-242.
- Dryden, John F., selection from on industrial insurance, 382-397.
- Dueling, policy clauses regarding, 225.

## E

- "Educational Leaflets," issued by Mutual Life of New York, selection from, 192-206.
- Elections, expense of annual elections, 309.
- Emery, H. C., quoted in foot-note, 12.

- Endowment policies, definition of, 215.
- Episcopal Corporation, origin and plans of, 81-82.
- Equitable Assurance Society of London, origin of, 128; effect on American life insurance development, 88-89.
- Expenses, loading for, 175-182; various kinds of, 176-177; plans of providing for, 175-176; plans of providing for expenses of new business, 177-178; of providing for agents, 254-259; of first year of insurance, 199, 264-266; laws regulating expenses for new business, 318-319; methods of providing for investment expenses, 180, 261; general expenses, 180-181, 190-201, 262-264; of settlement, 179-180; of renewals, 179; expense element in fraternal, 147-148.

## F

- Failures of life insurance companies, causes of, 90-92; effect on growth of assessment companies, 126.
- Farr, quoted in regard to vital statistics, 290.
- Federal supervision of insurance, general considerations, 334-362; arguments in favor of, 331; absence of, 359; necessity of, 360-362; probabilities of securing, 336-354; decisions of Supreme Court affecting, 354-355; relation of "lottery cases" to, 355-358.
- Fees, system of levying by states, 366.
- Finkelburg, quoted in relation to longevity, 288.
- Fire insurance, first company in America, 79.
- Fisher, Irving, selection from on methods of eliminating risk, 1-13; on the problem of lengthening human life, 287-298.
- Fouse, L. G., selection from on policy contracts, 207-233.

Francis, John, selection from on early beginnings of life insurance, 36-45; on the origin of insurance theory, 46-56.

Fraternal life insurance, general consideration of, 132-154; origin of, 132-134; growth of, 95-96; technical organization of, 136-141; methods of, 216; contracts issued by fraternal societies, 139-140; strength of, 135-136, 152; causes of failure, 143-144; failures of, 153.

Friendly societies of England, rules of ancient, 38-39; prevalence of, 134-135.

Function of life insurance, 14-35.

## G

Girard Life Insurance and Trust Company, early plans of, 84.

Gorgas, Col., results of sanitary measures in Havana, 289.

Graduation, meaning of as applied to mortality tables, 120; methods employed, 120-121.

Graunt, John, contribution of to insurance theory, 51.

"Graveyard insurance," evil results of, 7.

Greene, Jacob H., selection from on surrenders and loans, 246-253.

"Guarantees" as a method of eliminating risk, 2.

Guilds, as insurance institutions, 37; elements of life insurance in guild system, 134-135.

## H

Hadley, Pres., quoted, 2, 12, 21, 388.

Halley, contribution to theory of life insurance, 54-55.

Healthy English mortality table, 110.

Hedging, practice of, explained, 12.

History of life insurance, early beginnings, 36-45; origin of theory, 46-56; in Great Britain, 57-76; in the United States, 77-96.

Holcombe, John M., selection from on function of life insurance, 14-35; on agency expenses, 254-259.

Homans, Sheppard, author of ton-tine dividend plan, 275; author American mortality table, 111.

Home Life Insurance Company of New York, control by stock, 303.

## I

Incontestability, extent of clause, 220; treatment of by various companies, 226-228.

Industrial insurance, general consideration of, 382-397; origin of, 135-136, 383-384; purpose of, 382; practice of, 385-387; methods of, 216; extent of, 384-385; benefits accruing from, 388-94.

Insurable interest, deferred, 208.

Insurance, moral effects of, 7; as a means of eliminating risk, 4.

Insurance company of North America, life plans of, 82.

Insurance departments, inefficiency of, 321-322.

Intemperance, effect of, 220; care exercised in selecting against, 226.

Interest, use of in insurance calculations, 155-156; effect of different rates of on reserve, 193.

Investments, social effect of, 30; regulation of, 313; evil effects of state restrictions on, 315-316.

## K

Kingsley, Darwin P., selection from on federal supervision of insurance, 334-362.

## L

Lankester, Ray, quoted in regard to lengthening human life, 289.

Lapse, clauses respecting, 220.

Legal regulation of annual elections, 307-310; of policies,

232-233; of fraternal societies, 148; necessity of for fraternal societies, 149-150.  
 Life, valuation of human life, 18-20.  
 Limited payment policies, definition of, 215.  
 Litigation, absence of in life insurance, 214.  
 Loading, various methods of, 175-176; inadequacy of for first year's expenses, 199; methods of adding to net premiums, 268.  
 Loans, policy, general considerations regarding, 246-253; value of in keeping policies in force, 238-245; arguments against allowing, 252-253.  
 Longevity, amount of increase that has taken place, 288-289; amount of possible increase, 287-298; reasons for not attempting to increase, 287-288; ways of increasing, 294-295; result on premium rates, 293.  
 Lunger, John B., selection from on policy conditions, 234-245.

## M

Management of companies, 299-311.  
 Marine insurance, effect on life insurance, 41; in the United States, 77.  
 Married woman's right in policy, 28.  
 Massachusetts Hospital Life Insurance Company, organization of, 83.  
 Medical examination, necessity for, 118; methods of dispensing with, 119-120.  
 Metchnikoff, quoted as to longevity, 289.  
 Metropolitan Life Insurance Company, proposed plans of as to health campaign, 296.  
 Michigan Mutual Life Insurance Company, control by stock, 303.  
 Military service, treatment of by various companies, 219.  
 Mismanagement, exposure of in 1905, 92-93.

Misrepresentation, Alabama law concerning, 317-318.  
 Mutual Benefit, organized, 86.  
 Mutual life insurance, origin of, 84; growth of, 87-88.  
 Mutual Life Insurance Company of New York, organization of, 86; fight for control of, 304-305; selections from "Educational Leaflets," 192-206.  
 Moir, Henry, selection from on mortality tables, 107-121.  
 Mortality, results on of various influences, 112-113; investigation into, by Actuarial Society of America, 114-116; among poor and rich, 289; relative male and female, 111-113.  
 Mortality tables, general consideration of, 107-121; sources of material for, 107; manner of using, 158-160; American experience table an ultimate table, 205; American experience table given, 157-158; Fraternal Congress table, 151.

## N

National Fraternal Congress, work of, 150-151.  
 New England Mutual Life Insurance Company, organization of, 84.  
 New York Life Insurance and Trust Company, organization of, 84.  
 Nichols, Walter S., selection from on fraternal insurance, 132-154.  
 Non-participating insurance, definition of, 215.  
 Northampton mortality table, origin of, 108.

## O

Occupation, treatment of by various companies, 219; restrictions on, 223.  
 Ordinary life policies, definition of, 215.  
 Origin of insurance theory, 46-54; of insurance, 62.

## P

Paul v. Virginia, case cited in relation to Federal supervision, 352; and "lottery cases," 356-358.

Pauper burials, decrease in as result of industrial insurance, 392.

Pelican Life Insurance Company, establishment of office in United States, 83.

Pennsylvania Company for the Insurance on Lives, organization of, 83.

Pensions, old age, 21-22.

Petty, Sir William, contribution of to theory of insurance, 54.

Philadelphia Contributionship for the Insurance of Houses from Loss by Fire, organization of, 79-80.

Phillips, George W., author of ton-tine dividend scheme, 275.

Physical examinations, effect on men, 27.

Plagues, prevalence of in England, 45; causes of, 48-50; in the United States, 82.

Policies, contracts in general, 207-233; definition of 210; methods of constructing new, 234-235; examples of early, 78-79; 207-208; privileges of, 219-220; variety of, 215-216; motives in framing, 211; methods of providing for settlement of, 235-236; coupon, 235; conditions of, 234-245; interference of state in making, 209; state regulation of policy contracts, 317-318; arguments in favor of legal regulation of, 232-233; objections to legal regulation, 232; effect of investigation of 1905 on, 229-233; contracts in industrial insurance, 386.

Poverty and life insurance, 27.

Preliminary term method of valuation, explanation of, 178-179; use of by new companies, 199-201; arguments in favor of use, 202; objections to use, 203; modified form of, explained, 203-204.

Premium notes, effect on early

growth of insurance, 90; function of, 239.

Premiums, early rates, 89; detailed calculation of, 155-174; net single premiums for whole life, method of calculating, 163-167; single premiums for various ages, 163; computation of to provide for expenses, 268; method of calculating annual premiums, 169-173; given for various ages, 174; collection of by industrial companies, 385-386; amount of in industrial insurance, 383; taxation of, 371-375.

Presbyterian Corporation, plans of, 80-81.

Probability, nature of, 99.

Prudential Insurance Company of London, origin of, 136, 384.

Prudential Insurance Company of New Jersey, origin of, 136; control of, 301-302; losses due to tuberculosis, 297.

Publicity, annual reports provided for, 313; as a remedy for mismanagement, 321; reasons for failure of, 323-324.

## R

Ransom insurance, as an origin of life insurance, 42-43.

Reports, value of annual, 325.

Reserve, method of calculation, 183-191; amount needed at various ages, 191; preliminary term method of calculation, 178-179; lack of in fraternal, 140-148; popular ignorance concerning, 89, 124, 364; taxation of, 379; contingency reserve, 198.

Responsibility, necessity of securing, 325-327.

Retaliatory laws, 353.

Return-premium plan, introduction of, 239-240.

Risk, definition of, 105; theory of, 97-106; elimination of, 1-13; reduction of by employers' liability companies, 296; by fire insurance companies, 295;

- treatment of substandard risks, 240-241.  
 Roberston law regulating investments in Texas, 316.  
 Romans, life insurance among, 36.

## S

- Salaries, legal regulation of, 318; Missouri law concerning, 353.  
 Sanitation, results of better, 290.  
 Selection, meaning of, 116; adverse, 117-118; effect of surrenders on, 117.  
 Smith, Adam, quoted, 15.  
 Smith, Gustavus, W., selection from on net premiums, 155-172; on reserve, 183-191.  
 Society for Assurance for Widows and Orphans, plans of, 63.  
 Speculation as a method of eliminating risk, 8.  
 State regulation, general considerations, 312-333; origin of, 327; various lines of, 313; character of since 1906, 314; chaotic conditions in, 352-353; reasons for failure of, 328-330; conclusions concerning, 320.  
 Stock companies, control of, 299-302.  
 Suicide, extent of clauses against, 219; necessity of policy clause against, 224.  
 Surplus, definition of, 197-198; distribution of, 260-272; state regulation of amount of, 319-320.  
 Surrenders, general considerations, 246-253; methods of allowing, 242-243; arguments in favor of granting, 244; effect of withdrawals, 247; arguments against, 248-252; proper charge for, 252; importance of writing in values, 237-238.

## T

- Taxation, general considerations concerning, 363-381; amount of, 363; arguments against, 365-366; in favor of, 364;

necessity for reform of, 363-381; relation to general property tax, 368-370; of assets, 369-370; discriminations resulting from taxes on premiums, 371; burden of on policyholders, 372; suggested reforms, 375-381.

- Theory, origin of insurance, 46-56.  
 Tontine dividends, plans and results of, 273-276; arguments in favor of, 280-286; various classes of, 277-280.  
 Travel, restrictions on 226.  
 Trustees, "dummy," 325-326.  
 Tuberculosis, amount preventable, 291; losses on account of, 297.  
 Typhoid, amount preventable, 291.

## U

- Usury laws, effect on origin of life insurance, 58.

## V

- Valuation, of liabilities, definition of, 192; general consideration of, 192-206; legal standard of, 193-194; method of calculating, 194-198; necessity of valuation laws, 314-315; results of net, f. n., 302; select and ultimate, 204-206; preliminary term system of, 199-201; modified preliminary term system, 203-204.  
 Valuation of human life, 18-20.  
 Valuation of property, 14-16.  
 Variation, average, 103.  
 Voting, by proxies, 304-305; expenses of policy-holders voting, 306; methods of voting, 307-310; substitute for proxy voting, 310.

## W

- Walford, Cornelius, selection from on history of insurance in Great Britain, 57-76.  
 War risks, treatment of, 223-224.

- Wells, Daniel H., selection from on distribution of surplus, 260-272.
- Whiting, William D., selection from on provision for expenses, 175-182.
- Willett, Allan H., selection from on the nature of risk, 97-106.
- Women, conditions of acceptance as insurance risks, 219; as risks compared with men, 221-222.
- Workingmen's insurance, possibilities of fraternal societies, 151.