atively simple and fits the observed data quite well. However, it becomes extremely complex when combined with a third degree equation designed to reflect seasonal variations in number of claims created.

The reviewer made his way through a check of the algebra and calculus involved, and can only express doubts as to the practical value of this formula in the everyday business of revising rates. It could be expected that both company executives and insurance department authorities would insist upon observed data to substantiate the formula, to such degree that that formula itself would not be needed. It must be acknowledged that the comparison between calculated values and observed values for Policy Year 1956 is impressive.

With respect to Mr. Harwayne's summary, we can agree that the traditional method of developing earned premiums and earned exposures are suitable for approximating the occurrence of losses as well, subject to seasonal variations. In his summary, he also notes that, measured from time of occurrence, the average paid claim cost increases with time, and leaves it to the reader to speculate on what the result might be if a company made every effort to clear out its claims quickly. The inference seems to be that claims grow large because they are allowed to age; it is more likely in most instances that they age because they are of a serious nature and, therefore, destined to be large from the moment of occurrence. There is also an inference that the companies could reduce their losses by disposing of them more quickly; on the contrary, it is not only possible, but quite probable, that the haste to dispose of claims rather than resist them has been a major factor in the steady growth of average claim size, and thereby a disservice to both companies and the public in the long run.

It is this reviewer's conclusion that Mr. Harwayne's development of formulas to measure the various forces behind loss payments makes an excellent addition to the *Proceedings* of the Casualty Actuarial Society. For practical application, they require and should initiate more rigorous tests by substantial volumes of data.

NOTES ON SOME ACTUARIAL PROBLEMS OF PROPERTY INSURANCE

LAURENCE H. LONGLEY-COOK

VOLUME XLVI, PAGE 66

DISCUSSION BY F. W. DOREMUS

A careful review of Mr. Longley-Cook's paper must impress the reader with the extent of his research, the depth and clarity of his reasoning and the challenge of his conclusions.

He explores many facets with a precision that again draws to the attention of the Society those contributions that can be made by it to reducing the overall complexity of fire insurance rate making.

One cannot avoid the impression that the rapid changes in the property insurance field, and the dearth of underwriting profit during the past few years, need continued and combined research facilities, with the best minds, to chart a future course and evaluate past results.

There is a challenge to the actuarial side to match the practical underwriting side in the developments that lie ahead.

In my review, I am limiting my comments to those phases which, in my experience as an underwriter, call for an extension of views.

2. GENERAL PROBLEM

The author mentions "a fairly close parallel between schedule rating in fire insurance and the numerical system of rating used in life insurance underwriting."

It would seem to me that this parallel would be lost in the base used with the two kinds of insurance. Life insurance is based upon the mortality rate, which is fixed in the certainty of death and converted to a mortality table that has seen little change over the decades to reflect the extended longevity of our modern times.

Unlike life insurance, fire insurance is not based upon a certainty, but rather upon a probability of the loss occurrence related to factors of building construction, occupancy, protection and exposure, none of which are susceptible to precise actuarial treatment under our present methods of compiling and reporting statistical data.

The law of large numbers cannot operate in the fire insurance field as it does under the mortality table of life insurance because no homogeneous groupings can compare with the age groups and life expectancy of the millions of persons covered by life insurance.

To attempt a comparable actuarial development would, in my opinion, require creating and maintaining statistics along these general lines:

1. Number of risks in each of the 115 classes divided according to construction and protection and separated as to building value and contents value.
2. Number of those risks, so divided, which are covered for fire insurance.
3. The percentage of insurance to value on those risks covered for fire insurance.
4. The number and extent of fire insurance losses applying to each class divided as to building loss, contents loss, and separated as to those covered by insurance and those not covered.
5. The cause of the fire insurance loss and the amount of loss attributable to each cause.
6. List of factors contributing to the spread of the fire in connection with large losses applying to any class.

If such statistics were available for a sufficient period of time to develop actuarial studies of pure loss cost, it is possible that the re-

sultant display would merely confirm today's judgment of the experienced underwriter and the competent rater as to the relativity in fire insurance rates now developed by the varied schedule treatments.

Certainly, such actuarial precision would not deter the Companies from deviating as to the base and selecting the best risks of a class for special rate concessions or broadened forms of fire insurance coverage.

Further, the rapid developments of the past ten years, particularly in the field of "package" policies now embracing commercial, manufacturing and the dwelling classes, plus ever increasing number of deviations and independent filings using current fire rates as a base, have cast a shadow upon the future validity of current fire insurance rating practices.

Added to this trend are some Companies' separate filings of broadened protection for specific groupings, such as motels, summer camps, public buildings, churches, hospitals, hotels, large housing projects, involving one or more of the following features—"Replacement Cost Coverage" for contents, Guaranteed amount of insurance as a substitute for the traditional use of the coinsurance principle, and, a form of "loss of use" insurance to apply as tuition fees, rental value or business interruption insurance depending upon the class of risk covered.

The package policy and the independent or deviating filing for specific classes involve not only the fire insurance rate but the rating of the windstorm peril under the Extended Coverage Endorsement, the burglary and comprehensive public liability rating of the Casualty insurance field, and the inland marine rating of transit coverage.

The increased sale of package policies and those under deviating or independent filings could reach the point where the rate levels for the several coverages lose validity unless the particular components are accurately separated and inserted into the statistical experience, both as to premiums and losses.

If this is not done and the package policy is treated as a class or kind of insurance, then the premiums and losses thereof, usually representing risks of a better grade, will not appear in the classified experience and the remainder, representing the less desirable groupings, will require progressively higher rates.

An example of this phenomenon has already developed in connection with the writing of specific windstorm insurance. As the premium volume of the Extended Coverage Endorsement expanded, the volume of specific windstorm coverage decreased until the loss experience on the limited remainder would require a rate level higher than that charged for the Extended Coverage Endorsement.

Accordingly, the specific windstorm rate levels recommended in the Eastern territory were set at the same figure used for the Extended Coverage Endorsement and required a minimum of 80% insurance to value under the use of a Coinsurance Clause.

It is not beyond the realm of possibility that if, for example, the

Homeowners Package Policy is treated as a class or kind of insurance and its premiums and losses for each peril are thus lost to the statistical base used for dwelling rate making, then there must be progressively increased rates upon the remainder.

3. DWELLING—Building-Contents Differential

The study cited by the author which indicated that contents rates were approximately 1.4 times the building rates merely confirms the old precept that dwelling contents under protection develops higher loss cost than the building containing the property and the "old time" raters usually indicated a 50% increase in dwelling building rate for contents coverage.

We agree with Mr. Longley-Cook that low insurance to value on contents influences the loss experience. Further, that the identical rate for building and content of dwellings outside of recognized protection was predicated upon the probability that a fire would result in a total loss. It may be that this judgment could be modified in certain areas now served by modern rural fire protection using tank trucks and spray nozzles for fighting fires.

4. DWELLING RATING PLANS

The simplicity of the plan outlined by the author wherein he divides the Protection Factor into four classes and the construction into two grades would seem workable if dwelling property could be appropriately defined and limited to one family owner-occupied dwellings of modern construction.

Such risks present no problem to the underwriter and the loss experience thereon would be better than average because of greater insurance to value induced by the insurance requirements of the mortgagees and the fact that most new dwellings are constructed under building codes designed to minimize the hazard of fire from heating and electrical installations.

However, the use of this simple plan would adversely affect the rate level for these modern owner-occupied dwellings when its statistical base included the older dwellings in the so-called blighted areas of large cities, the dwellings currently covered for an amount of insurance well below today's replacement cost less depreciation, and those risks now defined as dwellings in many rating jurisdictions which include, in some cases, four apartments or four families in a single building unit and related occupancies such as Doctor and Dentist offices, beauty parlors, barber shops, etc.

The dwelling classification in any State, from a statistical standpoint, represents the largest grouping of separate units but the rate level determined by loss experience necessarily places a penalty upon the better risks and grants more favorable treatment to the less desirable ones. This creates a competitive situation, particularly when a Company deviates from existing rates but limits its acceptances to

those risks of the better grade. Unless some realistic sub-division of the dwelling loss experience is devised, there will continue to be this disparity among the rates charged for the units contributing to the base.

Currently, studies are underway to relate the various applications of protection grades to the dwelling class and to evaluate some of the present territorial treatments of chimney constructions, shingle roofs and lightning rods.

5. *ACTUARIAL ASPECTS OF SCHEDULE RATING*

Mr. Longley-Cook suggests a plan for a more accurate method of schedule rating which includes substituting a single nationwide rating bureau for the present method where one or more States are handled by a single autonomous rating bureau. There are 38 such rating bureaus serving the United States, including District of Columbia, Alaska and Hawaii.

He suggests standardizing the rate making schedules and this project had previous consideration by the Insurance Executives Association and involved extensive study and testing of two approaches to the problem prior to the dissolution of that organization.

While uniformity in schedule application may be desirable, there could be a fruitful area for actuarial exploration into the feasibility of substituting so-called "class rates" for certain smaller and less complicated mercantile risks now rated under schedules. Presently, these require the relatively expensive process of physical inspection, then the manual application of charges and credits to a schedule rating procedure, including printing and distribution of specific rate cards. A study of this project would necessarily include

(a) A decision as to where the "line would be drawn" between the risk eligible for schedule rating and the one to which "class rates" could be applied. Factors of size, floor area, height, insurable values and occupancy would influence the judgment of those charged with the decision.

(b) The number of such risks within each statistical class and the approximation of premium volume to gauge the effect upon loss experience for the class. This could involve refinement to the statistical base to create two sections for each class, i.e., one for schedule rated risks and the other for class rated risks.

A review of the other four steps in the plan proposed by the author for a more accurate method leaves something for the practical rate man to ponder. For instance, the simplification of schedules by omitting minor debits and credits would raise problems in connection with the rating of a complex manufacturing risk of fire-resistive construction and protected by automatic sprinklers because of the variety of standards to be met in evaluating the fire safety of a risk as reflected in the final rate. Many times, a minor charge for a deficiency in a

large value risk has a significant reflection in the final premium cost and the physical correction of the defect to remove the minor charge develops greater fire safety and a reduced possibility of loss.

The three remaining steps are non-controversial if a nationwide bureau operated with standardized rate making schedules.

6. TERM RULE AND INSTALLMENT PLANS

The comments on term rule in this section with respect to the recommended change from the old factor of 75% for each additional year in excess of one to 85% or 2.7 for three years draw attention to the fact that this change in factor with its extension of eligibility leads to an increase in anticipated premium volume from the classes presently eligible and a decrease in premium volume for those classes not previously eligible.

With respect to the author's discussion of the impact of installment plans on the statistical results, it should be noted that the Deferred Premium Payment Plan, tested in California and now recommended for countrywide use, contemplates equal annual installments, thus removing some of the variables existing in the other plans. If each installment is treated as "annual" for reserve purposes, the resulting earned premiums will be 50% of one-third of 2.7 times the annual rate for the first year and an equal percentage for the second and third.

Comparing the previous 3-year treatment of installments at full rate the first year and 78% for each of the succeeding years, there would be a decrease of ten percent the first year, a minor benefit the second year, and about 15% increase for the third and fourth years.

To explore the present movement of loss experience in relation to the prospective results based on the countrywide use of the Deferred Premium Payment Plan would be a formidable task but the actuary could be challenged by this study particularly when related to the impact of the new term rule now operating in most states.

8. RATE REVISION TECHNIQUES

The practical rate man in the fire insurance field leans heavily upon the principles established by his predecessors. He evaluates data with a "slide rule" of experienced judgment and until recently, i.e., within the past ten years, did not have a recommended pattern for rate level evaluation and revision that could be applied at the State level or in Regional territories. The pattern was consolidated by Inter-Regional Insurance Conference in the principles recommended in 1955 and quoted by Mr. Longley-Cook.

This recommendation of Inter-Regional Insurance Conference brought into focus, for the first time, a plan for fire insurance rate level treatment that could be reviewed by the trained actuary for testing as to theory and practice. It also came at a time when loss experience was worsening; the rapid developments of coverage exten-

sion were reaching a pinnacle, and at a time when deviating or independent rate filings were being made in an attempt to syphon off the better grade risks in several profitable classes. The plan also felt the impact of the term rule change and a revision in the installment premium payment plan.

In general, the challenge of the Inter-Regional Insurance Conference recommendation to the trained actuary is not, in my opinion, the validity of its separate sections but rather a study of the base from which it stems. For instance, the classified statistics might well be re-studied for application to today's conditions and a challenge given to those specific classes which do not produce a sufficient countrywide premium volume to establish credibility and are thus subject to wide fluctuations in yearly loss ratio when a single large loss distorts the statistical picture.

Likewise, a study of state by state experience would show the wide variation between classified figures in Wyoming and New York, or Vermont and California due to total fire insurance premium volume in those states being unrelated except in the realm of over-all results.

The recommended plan of Inter-Regional Insurance Conference is not static but continues under study in the light of suggested changes to improve its application during the four years of testing and this includes the study of the validity of the earned and incurred loss experience as suggested by the author in a section of his paper.

9. CREDIBILITY

This subject has always been an intriguing one for the practical rater and if a mathematical formula could be devised that would measure the beginning and end of credibility, he would be forever grateful.

Arbitrary standards within a single state or the inclusion of experience in contiguous areas using essentially the same rate base have not proved completely satisfactory. Neither have the countrywide results for certain classes developing a relatively small volume been considered relevant in an appraisal of rate movement.

Much could be done by the Society in the field of exploring facets of credibility in fire rate making and in the very interesting field of rating the Extended Coverage Endorsement with its loss frequencies dependent upon the formation of tornadoes and the movement of hurricanes.

CONCLUSION

In concluding these comments on Mr. Longley-Cook's paper, I would make the observation that the half century of building the structure of fire insurance rate making is not unlike the housing of a growing family where the original home is increased in size by constructing additional stories in height or spreading horizontally by new wings to accommodate the ever increasing brood.

In the process of evolution, accuracy may have been sacrificed in some areas and complexity created in the rating treatments, particularly in those risks where our expanding economy sparked by advances in science and technology have caused re-evaluation of previous hazards and the fire safety measures related thereto.

The actuary and this Society can be of real help by continuing the studies of the several facets of the problem on a specific basis, selecting possibly one or more of the areas treated so ably by Mr. Longley-Cook in the paper under review.

OCEAN MARINE RATE MAKING

D. DOUGLAS ROBERTSON

VOLUME XLVI, PAGE 81

DISCUSSION BY F. J. HUNT, JR.

Ocean Marine Insurance has been included in our reading list and examinations for a number of years now. However, a check of the *Proceedings* indicates that we have never before had a paper on the subject. Mr. Robertson's paper, therefore, fills a long-standing gap and should be most helpful in rounding out our coverage of the property insurance field.

Ocean Marine Insurance has not been completely ignored by the actuarial profession. Early volumes of the Journal of the Institute of Actuaries contain varied articles and reports on the subject. In Volume I of the Assurance Magazine (which later became the Journal of the Institute of Actuaries) there are an even dozen marine articles including such actuarial subjects as a study of collision statistics developing the relative probabilities of collision resulting in total loss for sailing vessels and steamers. By 1900 such articles had virtually disappeared from the Journal and an index to previous volumes published about that time notes that entries under the heading "Marine Insurance" had been omitted. This was probably partly due to an increasing preoccupation of the Institute with the life field; however, we may well conjecture that a contributing factor was a certain lack of enthusiasm on the part of the marine underwriters. With a history dating back to ancient times and policies comparable to the modern form having been written prior to 1400 A.D., the marine business had well established policy forms, underwriting procedures and rating methods. The underwriters could hardly have been expected to pay much heed to the proposals and opinions of the comparatively recent upstarts from the newer fields of insurance.

Mr. Robertson's paper is quite general in nature—a natural result of covering such a large field in a few pages. Also, rating procedures in ocean marine are fairly indefinite and rather difficult to pinpoint.

Probably in no other field does the underwriter's judgment weigh so heavily; as a matter of fact, in most instances the underwriter is the rate maker. William D. Winter in his "Marine Insurance" mentions some of the reasons for this situation:

> "Marine underwriting is not scientific in the sense that life underwriting is.
>
> "The marine underwriter is dealing with risks that are affected not only by the ordinary stable situations encountered every day but also by the rapidly changing conditions encountered on the seas. No chart or table can be devised that will show to a nicety how many days will be clear and how many stormy or that will measure the severity and direction of storms. He is dealing with problems over which the veil of the future is drawn, but he must rely on past experience and his judgment of changing conditions in order to arrive at conclusions of what will probably happen in the future. Furthermore, owing to the unusual physical hazards to which marine risks are subjected, the experience upon which the underwriter depends must extend over a considerable period of time, 10 years perhaps being the shortest period from which to draw conclusions."

A further complicating factor in ocean marine is that its worldwide nature in a very practical way precludes the use of exact formulas or procedures. This has been publicized most recently in the hearings before the United States Senate Antitrust and Monopoly Subcommittee by the testimony of Mr. Miles F. York on behalf of the American Institute of Marine Underwriters:

> "World competition and the unique characteristics of marine insurance require flexibility in individually considered premium rates. The American market could not compete in the world market if regulation robbed it of the necessary flexibility."

Even though there are no actuarial formulas in the computation or derivation of ocean marine rates, a more careful reading of Mr. Robertson's paper does reveal several areas where there are procedures or problems similar to those which we encounter in other fields. While there are no industrywide ocean marine classified experience figures, each company does keep its own figures and the success of that company may well hinge on the detail available in its statistics. "Biography of a Business", a history of the Insurance Company of North America, contains a chapter describing how the unprofitable result of their ocean marine account in the 1890's was eventually corrected on the basis of information made available through the introduction of a more complete and meaningful statistical plan.

The open cargo account can be readily compared to experience rating in the casualty field and the hull account to automobile fleet rating. While the ocean marine underwriter is more subject to the pressures of competition in arriving at the account or fleet rates, he

still must consider such factors as allowance for catastrophe losses and credibility in determining how far experience should be reflected in revised rates.

The estimating of increasing costs on deferred hull repairs indicates that loss reserving can occupy a position comparable to the rest of the industry. Improvements in communication and transportation have greatly reduced the traditional delays in reporting losses, but there is still a sufficient lag, particularly on export cargo, to make important the accurate estimating of the incurred but not reported reserves.

The quotation from Winter mentioned before should have a familiar ring to the fire side of the business. The extreme difficulty of forecasting weather patterns and the need for a prolonged period of experience parallel very closely the problem in developing adequate extended coverage rates—particularly in those states subject to devastating hurricanes at irregular intervals.

With Mr. Robertson's paper finally getting ocean marine insurance into our *Proceedings* and serving as a reminder that our Society is interested in all fields of property insurance, we can hope that there will be forthcoming more detailed studies in those areas of ocean marine where actuarial techniques and experience can be of assistance.

A REVIEW OF THE EXPERIENCE OF MASSACHUSETTS WORKMEN'S COMPENSATION EXPERIENCE RATED RISKS

WALDO A. STEVENS

VOLUME XLVI, PAGE 87

DISCUSSION BY M. G. McDONALD

Mr. Stevens has followed the suggestion contained in a recent address of President Pruitt wherein it was implied that the actuary should get out of the "niche" and assist the underwriter. This paper presents comprehensive data which should provide a better market for debit rated risks in general. Of course, there are other considerations employed by the underwriter in viewing applications from debit rated risks besides loss ratio and modification. Many times an underwriter with a solid safety engineering unit behind him can convert the risk from the debit to the credit side of the ledger. In other instances competent field forces find misclassification which when brought to the attention of the supervising bureau results in a shift. In addition, the experience of other lines is viewed as possible support.

Mr. Stevens makes several comments on the Massachusetts exception in the application of the off-balance factor to experience rated risks exclusively and further suggests that the exception be eliminated. However, he offers no better solution than exists outside of Massachusetts. Approximately ninety percent of premium developed

in Massachusetts in the most recent years comes from experience rated risks. The insertion of the off-balance into the manual rates, without further adjustment, merely increases the size of the off-balance factor. The current 1.03 factor applied to rated risks in Massachusetts would in all probability approach the 1.087 in Connecticut manual rates (Mr. Marshall, P.C.A.S., XLI). It is difficult to explain to trade associations and the public that such a change is desirable, necessary or in the public interest.

Back in 1938, (Vol. XXV, Part I) Mr. Thomas O. Carlson, Current Notes Editor, reported that in New Jersey, "The expected loss factor used for determining expected losses in the experience rating of risks has been increased several points above the standard permissible loss ratio. This is equivalent in effect to the introduction of a differential between experience rated risks and non-experience rated risks, and the resulting deficiency in rate level is made up by a factor included in the manual rates."

Apparently from Mr. Marshall's description of the National Council procedure, the inclusion of the correction for off-balance in the manual rate is standard practice and little or no offset is made in the expected loss factors. As Mr. Marshall points out, this method results in the reflection of almost 100% of the off-balance correction in the modified rate of the very low credibility risks while the opposite is true for the 100% credible risks, necessitating the doubling of the indicated off-balance factor.

Such an increase in Manual Rate Level in Massachusetts would be received by small risks, 80% of the total, with horror and the rate hearing would take on the aspects of the Massachusetts Auto hearings. It seems to the reviewer that Mr. Stevens has the ability and the source data to investigate the possibility of making the experience rating plan balance within itself or to materially reduce the off-balance factor so that correction, therefore, in Manual Rates would be more reasonable. A paper of this nature would make interesting reading.

REVIEWS OF PUBLICATIONS

ALLEN L. MAYERSON, BOOK REVIEW EDITOR

Paul H. Jacobson, *American Marriage and Divorce,* Rinehart & Co. Inc., New York, 1959, pp. 188

Dr. Jacobson has compiled the first collection of reliable statistics on the occurrence, duration and dissolution of marriages. His more than 100 tables, mostly based on population data compiled by federal, state and local authorities, include information valuable not only to demographers and sociologists, but also some that may be useful to the actuary. In particular, chapter 6, entitled "Chances of Marriage and Remarriage", includes tables, by age and sex, of marriage rates for single persons and remarriage rates for the widowed and divorced. In each case tables are given for 1940 and for 1948, and the substantial changes, both in the probability that a widowed or divorced woman will remarry and the age at which she will do so, should make any actuary think twice before using pre-war remarriage tables for any purpose where precision is important. The commentary accompanying the tables, though not very extensive, contains interesting comparisons of U. S. data with figures for other countries.

John E. Pierce, *Development of Comprehensive Insurance for the Household,* S. S. Huebner Foundation for Insurance Education, Philadelphia, Pa., 1958, pp. 435

This excellent book traces the evolution of fire and casualty insurance for individuals from contracts insuring a particular type of property against a specific peril to multiple peril and comprehensive contracts which contain, in one document, complete coverage on the dwelling and personal property as well as consequential loss and liability insurance. A complete history is given of the development of the Personal Property Floater, and eighty pages are devoted to the gradual evolution of both the liability and physical damage coverages of the automobile policy. Mr. Pierce sees the new Homeowners' policies as a logical outgrowth of more than fifty years of experimentation and gradual integration and broadening of policy coverage, a thesis he develops extremely well. In addition to being a source of many historical details not available elsewhere, this book is a must for any thoughtful insurance man who is concerned with how policies evolved into their present forms, or who has the responsibility for the development of new contracts.

O. D. Dickerson, *Health Insurance,* Richard D. Irwin, Inc., Homewood, Ill., 1959, pp. 500

This book contains a well-organized and interesting study of health insurance. The impact of ill health on society and the need for health

insurance are well treated, and the detailed consideration of hospital insurance, surgical and medical coverage, major medical insurance and loss of time policies is always adequate and sometimes excellent. The "problems and issues" section at the end of each chapter which explores current and controversial questions, is especially noteworthy, and the comparison of Blue Cross and private insurers is excellent. The chapters on rate-making and related actuarial questions are rather weak; also, while there are numerous quotations from insuring agreements and other policy provisions, illustrative premium rates are conspicuously absent. The book is the most up-to-date reference available in its field, and should be useful as a source of statistics on health insurance, as well as for educational purposes.

Robert Riegel and Jerome S. Miller, *Insurance Principles and Practices*, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1959, 4th ed., pp. 876

This old standby, revised and brought up to date, is probably the most complete book covering all lines of insurance. It devotes 115 pages to the nature of insurance, types of companies and the structure of the insurance business. Life insurance encompasses more than 200 pages, while health insurance and social security take up another 50. Fire insurance received a detailed, 200 page treatment, while fifty pages are devoted to marine insurance and 200 to casualty and surety coverages. Each line is discussed separately, the chapter subdivisions are clearly identified, and within each line of business each major policy form is analyzed in detail, including exclusions, conditions and illustrative premium rates. The chapters on fire insurance rate-making and reserves are quite complete, and rate-making in other types of insurance, while treated in somewhat less detail, is given far more emphasis than in most other insurance texts. The pages are closely packed and contain a wealth of detail. The book amply lives up to its claim to be a "one-volume library" and is probably the best general reference book available.

Frank J. Angell, *Insurance, Principles and Practices*, Ronald Press, New York, 1959, pp. 894

This book, one of the more complete and readable introductory insurance textbooks available, consists of six parts. Part I contains two chapters devoted to risk and the fundamental principles of insurance, while Part II comprises three chapters covering fundamental legal principles, common policy provisions and a brief discussion of rules, rates, underwriting reinsurance and other basic aspects of insurance. Part III devotes 125 pages to fire and marine insurance, while Part IV is a 300 page discussion of casualty and surety lines. Part V contains 110 pages devoted to life insurance and pension plans, while Part VI covers the History and regulation of insurance, types

of insurers, rate-making, underwriting, and other miscellaneous topics. The book is intended as an introductory text for college students, though it contains far more material than can be covered in the usual college course. The discussion of various types of policy forms is quite detailed, which makes the book a handy reference for agents and home office employees of insurance companies. The style and quality of writing are quite good.

H. Wayne Snider, ed., *Readings in Property and Casualty Insurance*, Richard D. Irwin, Inc., Homewood, Ill., 1959, pp. 543

This unique book is a compilation of 54 articles on various aspects of insurance, reprinted from various journals and magazines. Among the publications represented are the CLU and CPCU journals, the Weekly Underwriter, Best's Insurance News, the Insurance Law Journal, the Journal of Insurance, and even one article from the Proceedings of the Casualty Actuarial Society. The authors of the 54 articles include actuaries, lawyers, company officials, teachers, and corporate insurance managers. The range of the articles is quite wide; they are grouped in nine sections whose headings indicate a rather complete textbook in property insurance. Section 1 is entitled "Risk and Insurance", Section 2 "Insurance Carriers", Section 3, "Insurance Company Operations and Problems", and so on, including Section 6, "Rating and Rate Making", which includes three members of this Society among the eight authors writing on this topic.

The various sections, however, are merely convenient headings under which from two to twelve articles can be grouped for ready reference. No section makes any attempt to furnish complete coverage. For example, Section 2, "Insurance Carriers", contains chapters on Self-Insurance, Lloyds, Reciprocal Insurance, and a chapter by Alfred M. Best entitled "Rating the Financial Structure of Insurance Companies". There is no discussion of stock and mutual companies; the editor states that the operations of these carriers are readily understood by the student of insurance. Similarly, the section on rate-making contains a delighful article by Messrs. Dudley Pruitt and Laurence Longley-Cook on the Law of Large Numbers, three articles on fire insurance rate-making, one on liability rates, one on Auto Merit Rating, one entitled "Multiple Line Underwriting: Rating Methods" and two more general discussions, but nothing on workmen's compensation insurance.

The articles are, on the whole, quite well chosen, and include many provocative titles, some of which are bound to be of interest to anyone concerned with insurance. While the diversity of authorship and the large gaps in coverage make this volume of questionable utility as a textbook, its diversity and its selection of intelligent, readable articles, many of which would otherwise be accessible only with difficulty, make it useful both to the advanced student of insurance and to the actuary, agent or other insurance man.

OBITUARY

WILLIAM JAMES CONSTABLE
1891—1959

William James Constable, a Fellow of the Society since 1934, died in Manchester, New Hampshire, on April 19, 1959 after a lingering illness.

Mr. Constable was a Vice President of the Casualty Actuarial Society from 1938 through 1940, and had served as a member of the Council for the periods 1935-1945 and 1950-1952. He was a member of the Committee on Admissions from 1937 through 1951. His contributions to the Society included a paper on the making of Massachusetts Compulsory Automobile Bodily Injury Liability Insurance Rates.

Mr. Constable was born in Yonkers, New York, on March 24, 1891. After completing his high school education in Yonkers, he attended New York University.

He began his insurance career with the Commercial Union Insurance Company. He became associated with the National Council on Workmen's Compensation Insurance in 1920, which in 1922 was succeeded by the present National Council on Compensation Insurance. Mr. Constable continued with the latter organization until 1926 at which time he was an Assistant Secretary. In July of 1926 he became Secretary of the Massachusetts Automobile Rating and Accident Prevention Bureau in Boston. He became associated with the Lumbermen's Mutual Casualty Company in March of 1930 as a Resident Secretary in Boston. For many years he was the Executive representative of the Company on committees of various rating boards and bureaus. He became Manager of its New York office in 1941. In 1946 he was made Manager of the New England Department of the Company. He was made President of the Excess Insurance Company of America in July of 1948 and retired from active business in the early part of 1951. During his period of service with the Kemper Organization he was a Director of the Federal Mutual Liability Insurance Company and the National Retailers Mutual Insurance Company.

Known always as "Connie" to his friends and business associates he will long be remembered for his warm and friendly personality and for his unfailing good humor and wit. For many years he was the Toastmaster at the Spring and Fall dinners of the Society and his contributions during those sessions added much to the enjoyment of the Fellows, Associates and their guests.

He was active in the Masonic fraternity and was Worshipful Master of Victory Lodge of Watertown, Mass. in 1936. He was an ardent golfer and a well-known member of the Scarsdale Golf Club, and on its tricky fairways and greens was always a capable and strong competitor. He had a deep and abiding affection for choral music and for many years was a member of a male chorus in Yonkers. He was a member of the Park Hill Reformed

Church in Yonkers. His interests extended to charities and for a number of years he was very active in Salvation Army fund raising drives within the insurance industry.

His wife, Helen Wambach Constable, passed away in February of 1958. He is survived by a daughter, Miss Jane Helen Constable, and a son, William McMillan Constable.

OBITUARY

CHARLES WILLIAM JACKSON

1864—1959

Charles W. Jackson, a Fellow of the Society since 1916, died on September 21, 1959, (10 days before his 95th birthday) at Glenview, Illinois.

Mr. Jackson was born in Westmill, England on October 1, 1864. He received his education in the Engilsh schools and graduated from St. John's College, Cambridge, in 1886. Following his graduation, he embarked on a noteworthy career as a teacher for a period of fourteen years in several well-known private schools. This period included residence at Bruges, Belgium, to teach at a private English college.

He moved to Canada in 1900 and resumed his teaching career at Montreal. He also worked part time in the office of the London & Lancaster Life Insurance Company where he studied for the examinations of the Actuarial Society of America. He became an Associate of that Society in 1904 and a Fellow in 1909. He contributed to their Transactions several papers; outstanding among these was a paper entitled "Permanent Disability Benefits", the first paper on the subject of permanent and total disability to appear in this country.

Thereafter, Mr. Jackson worked for the consulting actuarial firm of Miles M. Dawson. From 1908 to 1912 he was Actuary of the Greensboro Life Insurance Company. In 1912 he came to New York as Actuary of the Postal Life Insurance Company; the major part of his actuarial career was spent in that position, from which he retired in 1934.

His vitality and zest for life was so great, however, that this retirement was far from marking the end of his actuarial career. He continued to contribute of his wisdom and experience to the Postal Life by serving as a member of its Board. In addition, he became associated with the consulting actuarial firm of Woodward and Fondiller and remained with that firm until his final retirement in 1944.

Mr. Jackson was one of those rare individuals whose outward appearance reflect their inner worth. He balanced technical competence with sound business acumen in a manner which was always an inspiration and a challenge to his associates.

He is survived by his wife, Mrs. Mary C. Jackson, and a daughter, Mrs. Ruth Wisely.

OBITUARY

ROSSWEL A. McIVER

1896—1959

Rosswel A. McIver, known affectionately by his many friends as "Mac", died suddenly while at his desk in the Washington National Insurance Company Home Office, Evanston, Illinois, on April 1, 1959. His death was due to a heart attack. He would have been 63 years of age on May 12.

Born in Alpena, Michigan, he graduated from the University of Michigan in 1920. During World War I he served in the United States Army and was stationed in Archangel, Russia, above the Arctic Circle.

After serving as Assistant Actuary with the National Council on Workmen's Compensation in New York City, and as Assistant Actuary for the American National Insurance Company of Galveston, Texas, he joined the Washington National Insurance Company in 1924 and served as Actuary since that time. His keen analytical mind, practical judgment, and deep understanding of human relations enabled him to contribute heavily to the success of his company. His kindness, thoughtfulness and generosity endeared him to everyone and will be long remembered.

Mr. McIver was an Associate of the Casualty Actuarial Society, a Fellow of the Life Office Management Association and a member of the Chicago Actuarial Club.

Mr. McIver was an avid and omnivorous reader and participated in the Great Books courses. He was as interested in the physical world as in the realms of literature. Fascinated by far places, he attended many series of travelogues. He and his wife were planning a vacation trip to Bermuda at the time of his death.

He is survived by his wife, Alice, two sons, John R. and Thomas, a daughter, Mrs. A. C. Tebbetts, a brother, Kenneth, and a granddaughter, Bonnie Lind Tebbetts.