

two years bears unwelcome results. Here is what Dr. Marsh says on the subject:

On comparing the results of a calculation—based on this table—with the company's early experience (thirty years), it is found that in proportion to the lives at risk the number of suicides has been less now than formerly during the first two years' exposure, but that for the third, fourth and fifth years of exposure the number has more than doubled its earlier proportion. In the absence of any apparent cause for this increase during these years, the suggestion is raised as to whether it may not have some connection with the recent change in the form or requirements of the policy. Since 1885 the only requirement or restriction, with reference to suicide, is that the insured agrees not to die by his own act within two years. Almost immediately after this provision became effective the number of suicides after the expiration of the second year began to increase.

Dr. Marsh goes on to remark that the presumption that the insured, who died by their own hands, deliberately intended when the insurance was taken to avail themselves of the removal of the limitation of the first two years, is incredible. Perhaps so in most cases, but under the stress of business reverses, or in the face of absolute financial ruin, a keen realization of the fact that self-destruction, after the expiration of the limitation, means a sure provision for dependent ones, is a powerful incentive to suicide. With the well-known conservatism of the Mutual Life, it is to be presumed that its experience with suicide is quite as favorable as that of the other companies, and as most of them issue policies with similar incontestable provisions as to suicide, the above facts are very significant, and suggest that possibly "liberality" in policy conditions has reached the danger point as to suicide.

IS LIFE INSURANCE BASED UPON SCIENTIFIC DATA?

A contributor to a valued contemporary expresses wonder at people persisting in writing and talking about the "law" of mortality. He says: "No man has ever been able to lay down the lines of action of that law, nor furnish analytical expression of its manifestations which can be verified by observation." He refers sarcastically to those who speak of the "Science of Life Insurance," who are so ignorant as to regard "the business as resting upon unvarying and invariable facts." As these remarks have been widely quoted and are used in disparagement of life assurance business, which these criticisms are being used to show that it is based, not on scientific data and laws, but only upon alleged but unproved facts.

The word "law" is certainly used commonly in an unscientific manner, and its true meaning is generally misunderstood. Law is spoken of as an original, causative power, which idea is quite erroneous, as it means nothing more than the ordinary sequence of phenomena. "Law" indeed may be said to express a "fact," which is an effect rather than the cause of such fact. By a natural law water becomes ice at a fixed temperature, but the freezing is not caused by any "law;" by the natural law in this case we mean it is the natural fact that water turns solid at 32 degrees. We speak of the "law of gravitation" for instance, which is nothing more than a phrase to express what facts have been and constantly are observed in regard to the move-

ments and relations of bodies of matter under certain conditions. Those movements, or those co-relations, are not caused by the "law" of gravitation, but by forces whose effects are generalized, and in popular language spoken of, under that term. So of the law of demand and supply. It is a matter of common experience that the relations between the supply of any article and the demand there exists for it affect more or less the price of such article. Although it is convenient to attribute prices to the influence of the "law" of demand and supply, there is in reality no law operating as a cause of such prices. What is meant by the phrase "law of demand and supply" is simply this, it is an ascertained fact that demand and supply are so related that, as demand expands while the supply is stationary, or deficient, prices are increased. This fact is the law, or rule, or order, created by such conditions. A natural, scientific law expresses the fact that certain causes produce certain effects, that certain conditions evolve certain others, as by the law of growth in human beings the child becomes an adult, or by the law of germinal development the wheat seed produces the ear of corn. In speaking of the operation of any law, it is never implied that the effects attributed to it, its ordinary phenomena, are invariably presented, for the effects of every natural law are subject to interferences by other and sometimes by the same law operating in another but related sphere. Up to half a century ago the perturbations of the planet Uranus were not explainable by the facts, or any law then known to astronomers. Adams, an English, and Levevriar, a French scientist, by a process of inductive mathematical reasoning, conducted independently, concluded that there must be a planet of a certain magnitude at a certain point in space. A telescope searched the spot they indicated, with the result of discovering the existence of the hitherto unknown planet Neptune. Thus phenomena, which up to that event were irreconcilable with law, were found to be produced by the action of the very law from which they seemed to be variations. The law of hydrostatics touching the force of water pressure is not made void because of what is known as the "hydrostatic paradox," which presents a remarkable variation from the ordinary phases of that law. The law of acoustics, by which sounds are proven to be more and more audible according to the number of vibrations created by sound waves, has a variant, in the fact that sounds that must exist are inaudible when those vibrations are increased beyond a certain limit. The tables compiled by different scientists which are used in hygrometric studies and work vary in data, owing to facts varying by the different circumstances attendant upon the observations they record, or are deduced from. One of the fixed laws of finance is that bullion is attracted where the rate of interest is raised. But in 1866, when the rate in England went up to 10 per cent. gold kept on flowing to France, where the rate was only 4 per cent.; the law being varied by other forces. So with tidal laws. The tides are constantly checked, and increased in height by strong winds, just as the rates of mortality are lowered and raised by temporary circumstances.