

some different output, namely a best estimate of extra risk for life insurance pricing purposes.

- (H) We, in Australia, have advocated that the life insurance industry, in its underwriting practices, should follow (rather than lead) medical knowledge and practice. In our view the ideal wider jurisdictional model is that where genetic tests and information are well controlled (but in an equitable way in relation to other tests, disability and disease), and where the defined levels of proof to justify underwriting practice are practical, rather than over-demanding. A good test of levels of underwriting proof is to perform a comparison of those required by the medical profession for medical treatments. If a particular genetic test is made available for diagnostic and prognostic use, it should not be too difficult to produce rough, but practical, estimates of future additional risk for the range of values of the parametric results of the new test.

These estimates can be updated as experience, statistics, research and knowledge develop, with more sophisticated models as and when feasible.

This, after all, follows the traditional insurance business approach to new risks, but with added sophistication.

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Mr R. G. Thomas, F.I.A.: I have no connection with the insurance industry. In the HGC consultation in 2001 I made a submission which was critical of the industry and of our profession. In it I explained that the profession's contributions to this subject over the years have been largely malign, and some contributions have made me feel ashamed to be an actuary.

The subtitle of the paper refers to social policy issues, but the paper avoids discussing many social policy issues which I would regard as important. This is particularly striking in Sections 5.2 and 5.5, where we find commercial arguments for the industry carefully set out, but there are no corresponding sections for the arguments of anyone else.

One key social policy issue is the concern that the use of tests in insurance is likely to have an adverse effect on clinical medical practice, that is people will be deterred from taking tests and from discussing them with doctors because of worry about the insurance implications. That is a profoundly important public health issue, but is not discussed in the paper. In 2001 the HGC found evidence that this was already happening. Another social policy issue is whether the moratorium is adequate or whether, as the HGC suggested, it needs to be statutory to make insurers take it seriously. It should be statutory, as self-regulation in the insurance industry has an awful track record.

Turning to the suggested way forward set out in Section 5.6. The first sentence of that section starts "One practical way forward for insurers ...". The authors then note that attempts to justify genetic tests by statistical significance are likely to be very difficult, so they suggest that we fall back on a vague notion of 'vulnerability'. That seems very woolly to me; it seems as if it is intended to be able to mean whatever the insurance industry wants it to mean. That completely fails the test of openness and transparency, which is referred to elsewhere in the paper. I hope that the HGC and other authorities will have nothing to do with it, or at least set very tight limits on its interpretation.

Picking up on some other points in the paper: ¶3.5(f) talks about a premium increase of 1%, and then says that is quite high. Quite high in relation to what? When I looked at market premiums for a simple term assurance, which is the closest thing that we have to a commodity product, I found that for a given life the best half a dozen rates seem to vary by up to 40%. The market appears very imperfect and very uncompetitive. In that context, modelling which shows an increase of 1% or even 10% seems neither here nor there.

I am retired now, and spend time thinking about investment decisions. As an investor I am not concerned with what I want to happen, I am just trying to figure out what will happen, and position myself appropriately. Looking at this subject from that perspective, I see an overwhelming public revulsion towards genetic testing in insurance, not just in the U.K., but in many other countries. That revulsion is not freestanding nor idiosyncratic, it is part of a global tide of greater emphasis on individual human rights. Set against that, I see one industry and one small profession which appear to be always and everywhere hostile towards human rights, and which wish to swim against the tide, which is a losing strategy. The tide is against the profession, and the long-term future on this subject is one of slow retreat. There may appear to be short-term gains in particular jurisdictions, as you thought there were with the establishment of GAIC, as it sounded from earlier contributions that there might be in Australia at the moment; but the long-term trend is quite clear. That is why I have been very comfortable taking a contrarian position within this profession on this subject. Not only is it the right thing to do, it is also very likely to be vindicated by trends which are more powerful than this profession — and indeed, over the past few years it has already been vindicated by those trends.

Miss F. J. Morrison, F.I.A.: This paper is concerned with social policy issues, and my comments view these matters from the customer's perspective, about: 'dancing on pin heads'; 'cliffs' in insurance; and the customer's perspective of being forced to take a genetic test.

The first thing that struck me about this paper was the level of detail looked at in terms of genetic tests, which is the 'dancing on a pin head'. The paper questions why there should be such a focus on genetic testing when rating, arising from existing underwriting by reference, for example, to family history, is not affected. In a world where we read daily of medical advances, and in which transparency is increasingly important, traditional rating and underwriting are opaque and no longer sustainable.

So, my first challenge to the actuarial profession is the extent to which we should be working with underwriters, to gather reliable information and to ensure that their current rating systems are fair and reasonable and can become understandable and transparent to customers. For example, according to medical websites, the increased chance (at a certain age) of developing breast cancer with a family history of one's only sibling having had the disease is 50%, or 60% higher than someone without that family history. Does it look odd to find a suggestion that a 100% loading is required for long-term sickness cover? Couple that with being a non-smoker, apparently very fit, with a good heart, etc., and the customer concludes that she may be bringing different risks to the pool than the average, but she is not convinced that she is bringing higher risks to the pool than the average. So, what is a rating doing, looking at the individual as a whole, or cherry picking additional risks without giving credit for the lower risks?

Pursuing this in more detail, where are the statistics that show how much of the premium relates to the morbidity of breast cancer cases (as opposed to all the other causes at that age)? So far as I can tell, the answer is that the statistics do not exist. So let us go back to the loading. A fair outcome certainly does not seem to be a 100% loading. With proper morbidity statistics, the underwriter might be able to argue that a small loading is required, rather than acceptance at normal rates. (Normal rates eventually applied in the example that I have mentioned.) Why is it such a big issue not to pay a loading? Surely not the cost of a modest increase in premium. No, but it brings me to my second theme, that of 'cliffs' within the current world.

The perception is of meeting a cliff; if the customer has been loaded in relation to one insurance policy, then he or she would never again be underwritten at normal rates. That is very

governments to encourage mutuality through the privatisation of provision. As things stand, it may be hard to get excited about insurance discrimination, except as an attempt by the better-off to protect their privileges, if it merely involves a few people on the margins of affluence being priced out, which will probably be balanced by others being priced in. If we had a situation, as in the United States of America, where large numbers of people were potentially excluded from basic levels of health care and other welfare provision, with no public alternative, then discrimination would be an extremely serious issue, although probably one that would then call the reliance on private mutual provision into question.

Mr P. L. Duffett, F.I.A.: Under the current moratorium concerns and fears are recognised, but not addressed, as the industry focus is to carry on business successfully within the constraints. The profession serves both the industry and the public by becoming engaged in those concerns and fears. The danger is that erosion of confidence leads to erosion of the industry, limiting both the range of products offered and their availability.

The approach set out in Section 6.6, of examining the issues surrounding the possible range of products which could be offered, together with their availability, on the basis that any genetic information which is, or could be made available, is also available to the insurer, is sound. It deals with the widest and most up-to-date scenario, and therefore any restriction or modification which arises when considering the issues will be for a known reason rather than the carrying over of a previous restriction for which the reason may be unclear or outdated.

The application of social policy issues often involves consideration of quantum, and this, in turn, often influences where the balance is struck between mutuality and solidarity (including subsidy through tax, etc.). Clearly, the approach of Section 6.6 allows the greatest flexibility in meeting social policy objectives.

Policyholders do not believe that insurers have always made all the obligations, rights and risks enjoyed and borne by each party clear to them. In the past there has been at least some unhappiness over surrender values, anger over pension contracts and, more recently, resentment over how bonuses can be cut. The profession can help to illuminate these subjects so that the industry can move away from a position of mistrust by policyholders in the motives and actions of insurers and a belief by insurers that policyholders conceal the truth. New products could require policyholders to maintain a defined regime to become entitled to additional benefits in much the same way as requiring the insured life not to smoke. These products operate best in an environment of understanding and trust.

Mr R. G. Thomas, F.I.A.: There are a number of further points I wish to make, as follows:

Adverse Selection and Propitious Selection

The discussion of adverse selection in Section 2.4 takes an insurance industry perspective, not a social policy perspective. Like most actuaries, the authors implicitly assume that adverse selection is an unambiguously negative phenomenon, but this is an insurance company's commercial perspective. From a social policy perspective, adverse selection is a positive phenomenon in many markets, at least in its first order effects; it means that the right people, people with higher expected losses, tend to buy more insurance. Adverse selection becomes potentially a negative phenomenon only in its second order effects, that is if it reaches a degree which makes private insurance unviable.

The extent to which adverse selection may be seen as positive from a social policy viewpoint probably depends on the insurance market in question. For example, some people might regard a degree of adverse selection in life or health insurance as positive; but the same people might regard adverse selection in motor insurance as negative.

The paper also omits to mention *propitious selection* (Hemenway, 1992). This refers to the notion that purchase of insurance may sometimes be a complement, rather than a substitute, for other risk-avoiding measures. For example, people may self select to buy critical illness insurance or medical insurance because they are health-conscious, conscientious 'worriers'

(propitious selection), rather than because they have private knowledge of future illness (adverse selection). Hemenway (1992) discusses evidence for propitious selection.

In many markets, adverse selection may be a stronger influence than propitious selection. From a social policy viewpoint this is fortunate. If propitious selection were to dominate, this would mean that the wrong people (those least likely to suffer loss) were buying more insurance.

The very vocabulary used by actuaries when discussing this topic betrays a particular perspective or bias: 'adverse' selection in fact means *adverse to the insurer*. 'Self-selection' would be a better, more neutral terminology.

Freedom of Contract

Paragraph 5.5.3 (a) implies a commercial norm that 'private trading legal entities' are not obliged to transact any particular contract with any individual customer; but life insurers are wholesalers, and the suggested norm does not apply to wholesalers in many other financial markets. For example, market makers on the London Stock Exchange are obliged, during market hours, to transact in at least 'normal market size' with any customer. Where the customer wishes to deal immediately in larger size, the market maker will often offer a less favourable price, reflecting at least in part the possibility of asymmetric information. In contrast, in life insurance markets pricing schedules generally appear to be linear with respect to the sum assured; less favourable prices for transactions of larger size are not observed. This is surprising in the light of claims that asymmetric information is a material issue.

Attacks on Disadvantaged Groups

I said in the discussion that some of the profession's contributions to this subject had made me ashamed to be an actuary. To give one example, in July 1999 the Faculty and Institute of Actuaries issued a press release attacking people affected by genetic conditions for taking advantage of insurance companies. In promulgating these remarks, the Faculty and Institute of Actuaries offered no evidence that people with knowledge of their genetic condition were in fact acting in the manner alleged; or that it would be financially material to insurance companies if they did. The attack on people affected by genetic conditions appeared entirely gratuitous. This is the type of activity which makes me ashamed to be an actuary.

Also in July 1999, the profession issued a position statement commending the approach of the ABI at that time, and commending the GAIC process. I was critical of that statement at the time. I wrote to the Working Party and I wrote to the then President of the Institute. In 2000 the statement was nevertheless reissued, and I again wrote to the Working Party. However in 2001, after the HGC reported, the statement disappeared from the profession's website.

The GAIC Process

Paragraph 5.3.4 states that insurers and some of us as actuaries may have misjudged the GAIC process. I did not misjudge it. I wrote on many occasions to the Working Party voicing my criticisms of GAIC, and suggested that the profession should voice them.

Public Understanding

Paragraph 6.8.1 suggests that there is a lack of public understanding of genetics and insurance. As with any technical subject, it is true that some of the public is uninformed; but actuaries and insurers make a mistake in assuming that all their critics are uninformed, and that their views can be changed by so-called 'education'. The problem for the insurance industry is not that it is misunderstood by its critics, but rather that some of its critics understand it only too well.

I agree with ¶7.4 that an increasingly questioning public will demand evidence for other, non-genetic, underwriting practices; and also with the implication of ¶5.5.4, that in many cases such evidence may be hard to produce. This suggests that many underwriting practices may need to change.

Antipathy towards Human Rights Legislation

I also referred to the contrast between actuarial profession's antipathy towards human rights legislation and the wider social and legislative trend to promote such legislation, and the problems which this is likely to cause for the profession. This is discussed in greater detail in Thomas & Sharp (1998).

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