

# RSS NEWS

## For peace of mind

Insurance is a con ... I first formed this opinion over 30 years ago when the medical department that had just pronounced that I was going to become a father sent me a counselling pack. Among this stack of largely irrelevant information was a leaflet from a well known insurance company which explained that I could insure against twins.

For every £1 I invested I would receive the sum of £40 on twins being born and surviving

### Editorial

for some nominal period. It was suggested that I might consider a small investment of £10, which in the event would provide the £400 which was felt was needed to cover the additional costs of providing two of everything. At about the same time I came upon some statistics which showed that the probability of having twins was about 1 in 80.

Now to a young man who had only recently attended his first course on elementary decision theory this did not sound like a very good deal. What I was being asked to do was to place a bet at odds of about 40 to 1 against on an event that had a probability of only 1 in 80. So the expectation of my return on an investment of £10 would have been a mere £5.

But, as my textbook explained, this did not necessarily mean that I should not invest. The rationale of insuring was that I could afford £10 whereas I couldn't afford £400. In other words the value, or utility, I placed on the £400 in the event of twins was more than eighty times that of £10. Nevertheless, I could not bring myself to believe that £400 was worth eighty times as much as £10. In fact I preferred to believe that the utility of money decreased with the amount (I'd be much more than half as happy to receive a windfall of £1m than I would be with one of £2m).

So the theory of rational decision making prevailed and I kept the £10 in my pocket ... and we didn't have twins.

I had decided at an early age that, being a rational person, I would not insure against anything unless either I was compelled to or I could not afford the possible consequences of not insuring. Since then I have stuck to my policy in some respects but not, alas, in others. Let me first relate my successes.

When I am invited to take out an 'extended warranty', I adamantly refuse. In fact I now get quite aggressive with the sales representatives when they ask if I realise what it would cost if my purchase were to break down after the manufacturer's one year warranty has expired. I have two objections; (a) the cost, and (b) the principle.

To have to pay at the time of purchase an excess of about 25 per cent on the price, for free repair during a period of one to five years in the future, equates to an implied probability of between 50 and 100 per cent of a major breakdown occurring during that period, the exact figure depending on the discount rate used and the cost of the repair assumed.

This must surely be unrealistically high. A specific ultra-extreme example is with my pay-as-you-go mobile phone which I recently purchased from Comet for £30. Among the leaflets in the packaging was one inviting me to insure the phone against breakdown, loss or theft for a premium of £50 a year, – 'a mere 14 pence per day for complete peace of mind'.

But back to extended warranties and my point of principle. When I buy a dishwasher I

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### NEXT ISSUE

Copy deadline for the next issue is Monday 26 July

Advertisers should contact the advertising manager (details page 2) for submission deadlines

### RSS 2004 CONFERENCE CONNECTING PRACTICE WITH RESEARCH

Main registration for both the conference and pre-conference short courses closes on 1 August. After that date an additional charge will be payable on all fees.

Full details about the conference, which takes place at the University of Manchester on 6-10 September, can be found at [www.mbs.ac.uk/rss2004](http://www.mbs.ac.uk/rss2004)

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Printed by  
The Russell Press  
Bulwell Lane, Basford  
Nottingham, NG6 0BT

RSS NEWS is the news  
magazine of The Royal  
Statistical Society, 12 Errol  
Street, London EC1Y 8LX  
Tel: 020 7638 8998  
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Email: rss@rss.org.uk  
Website: www.rss.org.uk

It is issued free of charge to  
fellows and members of the  
Society monthly (except in  
July and August).

ISSN 1351-0657  
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pay a lot of money and in return I expect to possess a dishwasher which will wash dishes. If I am stupid enough to put a pair of trousers in it complete with a belt and a pocket full of coins, then I will have no reason to grumble at the consequences. But if I am only going to use it to wash dishes, glasses, pans and cutlery, then I believe I have the right to expect it to operate satisfactorily, not just for one year, nor just for five, but for some considerable time thereafter.

If it breaks down between its second and fifth birthdays, then in all probability it will not be because I have done something that I shouldn't have done. It will more likely be because some component was outside its tolerance range in some respect or because this range had not been correctly specified in design.

In other words, when I am invited to purchase an extended warranty, professedly for 'peace of mind', I am really being asked to pay an additional sum to compensate the suppliers for a lack of quality control in the design or production processes. This thought gives my mind no peace at all; hence my hostility.

On a similar theme, when one rents an apartment in the more common holiday destinations, notably Spain, it is common practice now for safe deposit boxes to be provided for valuables, the keys for which may be rented for a sum equivalent to about £5 per week. The management prominently display a notice stating that they will not be responsible for any loss of personal possessions unless they are placed in the safe, and tour representatives always 'strongly recommend' that you make use of them.

But what exactly are you paying this premium for? You have no doubt already paid a not inconsiderable sum to insure your personal possessions during your travels, and now you are expected to pay something on top of this to compensate for a lack of security on the part of the apartment managers. I have never used one yet.

Now to my failures. I regret to having to admit that I have not applied my policy on extended warranty to more standard insurance policies. My house is my main source of wealth and I simply could not afford to rebuild it if it were to burn down and so I insure. I have no need to insure the contents, of my house, however. Yet I do so. I do so even though I cannot accept the logic in premiums being proportional to the full replacement value of everything. This would only make sense if the value of claims were proportional to this total value. Correct me if I'm wrong but I very much doubt that this is the case.

Likewise, when I rent a car abroad I take out CDW (collision damage waiver). In fact it's very difficult to rent a car abroad now *without* paying for CDW. And in the USA they now firmly insist that you take out 'top-up' insurance in addition.

Thus the real price one pays for car hire often turns out to be somewhere between two and three times the advertised price.

When CDW was more optional, I recall always accepting it but with certain misgivings. Perhaps it was because I did not have the relevant statistics to hand to perform an exercise in rational decision making. Or perhaps it was that I knew that, due to the Fourth Variation of Sod's Law, I should have an accident on the first occasion that I opted out. Also it was always explained that any damage to the vehicle, however caused, would be my responsibility and I had heard horror stories of unscrupulous agents going round the car parks at popular sites inflicting dents on their own cars where CDW hadn't been accepted.

Whatever the logic of accepting CDW the truth remains that its cost (generally between £7 and £10 per day for a small car) is equivalent to paying the full replacement value of the car every two years or so. Furthermore, most cars one rents come complete with dents in the bodywork. This shows that the income from CDW is seldom used to repair modest accidental damage. CDW is a con.

If I had my life to live again I should put all my house contents insurance and CDW premiums in a special investment account and draw on it when I suffer a loss. I might go further and join with some friends and neighbours and agree that we will cover one another's losses, but then I should be moving towards forming an insurance company and I will be back where I started.

But I cannot turn the clock back. I shall continue to insure my house contents and my rented cars and I shall continue to lose money.

I will finish with mention of two other mathematical aspects of insurance. Firstly, there is the tendency of insurance companies to evaluate the relative risks of different groups and adjust premiums accordingly. This is a noble aim and one to which statisticians can make a useful contribution.

But the fundamental principle of insurance is that the risk is thinly spread over all the insured. If we succeed in specifying individual risks too precisely, are we not in danger of destroying the whole basis of insurance?

Finally there is the problem that when the bill is to be paid for by an insurance company with huge resources there is no incentive to keep the costs down. Indeed we are all well familiar with the first question asked by the car body repair shop before giving a quotation, 'Is it an insurance job?' This is related to what I call 'the oyster phenomenon' about which I shall write separately one day. It results in premiums being even higher than they need be.

In short, insurance is often not a good investment. And in many instances, as I said at the start, it is a con. ■