



Breaking news

by Wendy Kingdom

It is my observation that drinking glasses of the same type do not break at the same rate. Put another way, my kitchen cupboard contains an odd assortment of glasses that were once part of larger sets. The single items remaining are the ones that are of particular interest. One might think that if one were to purchase a set of four glasses and three of them were broken after 9 months, then the fourth glass would be broken within one year. Yet there are odd glasses in the cupboard that have outlived their counterparts many times over.

This observation was particularly acute recently when I bought a set of four drinking glasses from the supermarket. Three of these glasses were broken in a very short time, which I put down to the poor quality of the glass. However, the fourth glass wasn't going to give up so easily and kept going for months until I decided to make it the focal point of this article, then it broke (Fig. 1).

The quality of the glass cannot provide an explanation for the rate at which the glasses were broken. The glasses that I mentioned in the paragraph above cost only £5 (about €7.3) for a set of four. I bought another set of four glasses of a different design but for the same cost from the same supermarket, and these glasses appear to be indestructible. Well, I have no doubt that I can break them if I choose to but I mean that none of these glasses have broken during everyday use over a period of about 6 months. Therefore, the cost of the glasses cannot be a significant factor in the breakability rate.

Of course, the quality of the glass is not necessarily related to the cost. Apparently, one way to evaluate the quality of glass is to look at it end-on (Fig. 2) and see how green it looks: the darker the green, the poorer the quality of the glass. So, unless one were to use a colorimeter of some description (presumably at great expense) a colour chart would be needed and the glasses graded on a categorical scale. However, the colour test falls down when the glasses are of different shapes. Can you reasonably compare a straight-sided tumbler with a long-stemmed wine glass? I don't think that you can.

Another way to find out the quality of a glass is to flick the rim with a finger nail; the clearer the ring, the better the quality of the glass. One could devise a 'ping' scale such as 0 = dull thud, 1 = slight ring, 2 = moderate ring, 3 = quite nice ring, and 4 = rings like a bell. One might have to resort to employing an expert, which could be very costly and not very sensible if the glasses only cost £5 for a set of four in

the first place. It would be necessary to weigh up the cost-benefit ratio of determining quality as opposed to cost. Failure to do so could jeopardise the whole experiment.

If one wished to study the phenomenon of the rate of glass-breaking in detail, one would need to conduct a prospective survival study. Planning such a study is rather complicated because there are so many factors that can influence the probability of a glass being broken, for example, frequency of use. There would have to be a system of rotating the glasses, or only using the test glasses when the whole set will be used at the same time.



Figure 1



Figure 2

The presence or absence of children in the household is likely to have an influence on the longevity of drinking glasses, which suggests that the study should be conducted only in households that lack the joys of the presence of little people. However, as we all know, clumsiness is not a characteristic exclusive to children. Therefore, it might be necessary to apply an appropriate test—a Butter-Fingers scale—to exclude any households in which one or more of the inhabitants score above average in this test. This opens up a whole new area of study as there doesn't appear to be a suitable validated rating scale available in the literature, so this would have to be devised and tested.

Then, it would be necessary to examine the effect of washing the glasses by hand or putting them in a dishwasher. One can't make assumptions about which method is more likely to result in a glass being broken. Dishwashers ruin glasses by turning them cloudy but the glasses do not usually get broken. Better quality glasses are more likely to be hand washed than put in a dishwasher to preserve their appearance so we're back to the argument above about the quality of the glass, but now there is the confounding factor of the method of washing.

What about the volatility of household relationships? Some people enjoy a good argument and they throw crockery at

>>>

>>> Breaking news

each other—so I'm told. Then there's how much you like the glasses. If you buy some that will do for now but you don't particularly like them, you can be sure that the ones that you bought because they were nice will be broken much more quickly than the ones that you don't like. How on earth could you test for that?

Overall, therefore, just thinking about the glass-breaking puzzle by myself I have identified the cost, the quality of the glass, frequency of use, method of washing (and I forgot to mention the wearing, or otherwise, of rubber gloves), clumsiness of the user, temper threshold, and likeability factor as possible variables that would have to be considered in a prospective study. If one were to set up a research team to study this observation in detail, who knows how many other variables might be identified that would contribute to the joys and complications of proving the scientific point.

I am not alone in my pondering and quest for extending the gambit of the prospective study to things that might otherwise just slip by us when we are not looking. Academic researchers in Australia have tried to find out what happens to the teaspoons in their research institute [1]. They conducted a prospective study in which the eight tearooms in the institute were populated with a known number of teaspoons. The whereabouts of the teaspoons were then monitored over a period of 5 months (a total of 5668 teaspoon

days). The principal findings were that the half-life of a teaspoon in the institute was 81 days, which translates into a rate of loss of 2.58 teaspoons per person per 100 teaspoon years. However, although these researchers were able to determine the rate of loss of the teaspoons, they were unable fully to find out where they went and resorted to speculation on the existence of a planet in the cosmos that is entirely given over to teaspoon life-forms.

Having considered all of the above, none of the factors that I have considered would explain why in any set of four glasses, three of them will break in a shorter time than the fourth glass. The only thing of which I can be certain is that we have too many odd glasses and it's time that we 'recycled' some.

Wendy Kingdom

Wendy Kingdom Limited, Somerset, UK
info@wendykingdom.com

Reference:

1. Lim MSC, Hellard ME, Aitken CK. The case of the disappearing teaspoons: longitudinal cohort study of the displacement of teaspoons in an Australian research institute. *BMJ* 2005; 331: 1498-500.

Wendy Kingdom is Treasurer of EMWA and joint owner of some very odd crockery.

Full access to data on safety and effectiveness of drugs?

An editorial in the *BMJ* on direct to consumer advertising of drugs in Europe suggests a partnership between drug

companies and drug regulatory authorities in which drug companies would give full access to all clinical trial protocols and to the periodic safety update reports. It also proposes that patients' needs and not industry patents should be the focus of regulatory bodies.

Magrini N and Font M. Direct to consumer advertising of drugs in Europe. *BMJ* 2007;335:526

Getting your job title right

This is a job announcement published in *The Guardian*.

NEIGHBOURHOODS & REGENERATION
ANTI-SOCIAL BEHAVIOUR COORDINATOR
SAFER COMMUNITIES SERVICES
HACKNEY COMMUNITY SAFETY TEAM

Society Guardian, August 29, 2007, p19

Tim Albert, who for many years has written articles and books, and run courses on writing scientific papers, thought this might be an opportunity for a change in career direction and applied for the post. This is his letter of application.

Dear Response Handling Consultants

ANTI SOCIAL BEHAVIOUR CO-ORDINATOR

I was very interested to see this advertisement in yesterday's *Guardian* newspaper and feel that I am particularly qualified for this post.

I have had considerable experience in co-ordination, both at my work running a small private company, and in my leisure time, where I have been involved in a range of organisations, from scouting to amateur dramatics.

I have had less experience in anti-social behaviour, but feel I could learn quickly. Activities I would promote would include providing open air meeting places for young people, encouraging the use of amplification in dense housing areas, and running courses in graffiti spraying.

This is a very worthwhile project and I look forward to causing distress to the residents of Hackney. I assume that the funding is coming from a lottery funded arts project and I would be grateful if you could confirm this.

I also look forward to receiving full details.

Yours sincerely

Tim Albert