**Concerning Fig1 of the article "Changes in Alcohol Consumption With Age"**

by W.A. McKIM, et al.in Can J Pub health Vol. 82, July/August 1991 pp231-4 elsewhere on this www page.

*METHODS*

*The data were collected as part of a survey of lifestyle. health practices and the utilization of health services conducted in St. John's, Newfoundland, from April 1, 1985 to September 30, 1986.*

***Survey***

*The survey was conducted by telephone on all adults over 20 years of age in a probability sample of households in St. John's, Newfoundland. The sample was determined randomly from the metropolitan St. John's phone directory and was designed so that a total of 3,300 interviews would be conducted.*

*The telephone interviews were conducted by a team of trained interviewers. Protocols were verified by a supervisor who contacted a random selection of completed households by phone and confirmed that the interview had taken place and asked some of the questions a second time to check reliability. All households and individuals who refused to be interviewed were contacted a second time in conjunction with a letter. Refusers within households where a majority had already answered the questionnaire often agreed to cooperate with the second attempt, but where entire households had refused, the second attempt was less successful.*

*RESULTS*

**Survey**

A total of 3,649 possible respondents were contacted. Of these, 195 refused to participate and 154 were unable to participate because of deafness or illness, leaving a total of 3,304 interviews. This gave an overall participation rate of 85%. Table I shows the sex and age distribution of the sample and the 1986 census data for the metropolitan St. John's area. This table shows that there was close agreement between the sample and the census, although females are slightly over-represented and people older than 65 are slightly under-represented.

**Measures of consumption**

*The top panel of Figure 1 shows mean alcohol consumption in drinks per month for males, females and all respondents by age. The middle panel presents in a similar manner the frequency of drinking occasions per month, and the bottom panel shows the quantity (mean number of drinks consumed per drinking occasion).*

*These figures were derived by rank ordering all respondents by age.* ***Each data point represents the mean of successively older groups of 25 respondents****. Plotting data in this fashion provides information on the relative density of observations according to age and sex.* ***In order to reduce the scatter which could obscure trends, a 4253H, twice compound smoother with endpoint adjustment was used. This consists of a series of running median smoothers and the Hanning running weighted average smoother applied twice****.*

*The top panel shows an age-related decline in total alcohol consumption per month for all respondents. This line has a slope of -0.12. It is clear from these figures that the age-related decrease seen in the top panel is largely due to a decrease in quantity which shows a rather steady decline with age (slope = -0.26), rather than any change in frequency, which has a slope of only -.04. The correlation between frequency and dose is -0.11 which is small, but statistically significant ($p < 0.0001$).*

## Comments by J HANLEY

I question the choice of "smoothing" that the authors carried out. Although they are non-parametric, *the curves look like high order polynomials that seem to "follow" every little random twist and turn in the raw data*. To my eye, the patterns in the bottom panel are quite linear --- the "join the dots" approach (even with each dot being a running median) over-accentuates the random components -- what one wants first is the BIG PICTURE .. the clear downwards "close to linear" trend. I believe the little ups and downs along the way are random noise -- and that they are being over-emphasized. I cannot imagine that the population medians actually behave like this.