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Alcohol Dependence and Phobic Anxiety States
II. A Retrospective Study

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Summary: Twenty-four hospitalised problem drinkers who were currently suffering from a phobic anxiety state served as subjects for this study. Each was given a detailed retrospective interview concerned with the development over time of both their alcohol dependence and phobic problems. The test-retest and inter-rater reliabilities of the data collected were found to be high. In accordance with previous experimental work, periods of heavy drinking and dependence upon alcohol were associated with an exacerbation of agoraphobia and social phobias. Subsequent periods of abstinence were associated with substantial improvements in these phobic anxiety states. It is suggested that both learning and psychobiological processes underly these observed relationships and that the implications of this finding for treatment of both disorders should be explored.

Estimates as to the prevalence of severely disabling agoraphobia and/or social phobia among alcoholics receiving in-patient treatment as high as 18 per cent (Smail *et al,* 1984) and 32 per cent (Mullaney and Trippett, 1979) prompt the question: do these phobic problems require direct treatment or will abstinence alone result in their full remission? An attempt will be made in this paper to assess the extent to which such phobic anxiety states (Marks, 1969) both precede and facilitate the development of alcohol dependence, and the extent to which heavy alcohol consumption itself worsens or creates these conditions. The former possibility would argue for directly treating the phobic anxiety states, employing one of the many paradigms currently available, while the latter would suggest that such an intervention would be unnecessary.

That agoraphobia and social phobia often precede problems with drinking is indicated by both our data (Smail *et al,* 1984) and by Mullaney and Trippett's: the latter found significantly more phobic alcoholics' estimated onset of phobic problems earlier than drinking problems, and also that "severely" phobic individuals developed alcohol dependence at an earlier age than "borderline" phobics. However, it has been our clinical impression that very often abstinence alone, or a return to moderate drinking, frequently results in a substantial recovery from phobic disorders. There are also grounds for supposing that anxiety and phobic states are commonly experienced by alcohol dependent individuals transiently during, and shortly after, periods of very heavy intake. These will be briefly considered.

There is a very consistent body of experimental work indicating that prolonged alcohol consumption by alcoholics can lead to a marked deterioration in their affect, consisting principally of heightened anxiety and depression (Freed, 1978; Mendelson and Mello, 1979). The majority of these studies rely on self-report measures of affective state, though these have also been confirmed by observations of subjects' behaviour by nursing staff (Nathan *et al,* 1970). These studies can be usefully contrasted with those in which alcoholic individuals withdrawing from alcohol in hospital experience dramatic improvements in mood (Butterworth, 1971; Curlee, 1972). Alterman *et al* (1975) found that patients who took the available option of continuing to drink throughout an experimental treatment programme experienced increasing subjective discomfort; while those who did not drink at all experience a global improvement in mood. Severity of alcohol dependence (Edwards and Gross, 1976; Hodgson *et al,* 1978) may well be associated with the propensity to experience increasing dysphoria during a bout of heavy drinking. Nathan and O'Brien (1971) report that social drinkers did not respond in this way in one drinking experiment, and Stockwell *et al* (1982) found the effect to be less pronounced in moderately dependent compared with severely dependent subjects. Does this phenomenon occur outside the laboratories of behavioural scientists? While Jellinek (1946)

claimed the development of fears and phobias to be one phase in the progressive addiction to alcohol, we can only find passing references in the literature to this phenomenon as a common clinical correlate of alcohol dependence (e.g. Gross, 1977); National Council on Alcoholism, 1972; Royal College of Psychiatrists, 1979).

Since agoraphobia and social phobia are thought to be largely influenced by general levels of anxiety and depression (Marks, 1969; Marks and Mathews, 1979; Hallam, 1978; Goldstein and Chambless, 1978), increased dysphoria induced by heavy alcohol intake may well 'fuel' or even create such a phobic disorder. The purpose of the study to be presented here was to collect systematically the retrospective reports of a group of alcoholics rated as 'phobic' in Part I of this study as to the chronological development of signs of alcohol dependence on the one hand, and of phobic states on the other. Specifically, we were interested in the following questions:

i. Is it possible to collect retrospective data from alcoholic subjects which has satisfactory test-retest and inter-rater reliability?

ii. In what proportion of cases do agoraphobia and social phobia precede the development of alcohol dependence, and to what extent are phobias created or just worsened by alcohol dependence?

iii. Do periods of abstinence result in substantial remission of phobias?

iv. Are the 'dry shakes' reported by some alcoholics related to the development of phobias?

Method

The subjects and procedures were described in Part I of this study with the following additions:

(i) *Alcoholic group*

All alcoholic subjects were asked the question: "Have you ever experienced the 'dry shakes' (i.e. suddenly felt very shaky and panicky during an abstinent period and without cause)?" Those reporting any fears on the Fear Questionnaire (FQ) were also asked: "Do your fears get worse after a period of very heavy drinking?" The same subjects were also asked to estimate the age at which they first experienced certain developments in their drinking and phobic problems: when drinking was first a problem, when they were first aware of a need to drink alcohol in the morning, when they first drank to get rid of 'the shakes', when fears were first a problem and when fears were most 'troublesome'.

(ii) *Phobic alcoholic group*

Twenty four of the alcoholic subjects, whom both interviewers had rated as having at least a moderate degree of agoraphobia and/or social phobia, were selected for an in-depth retrospective interview concerning fluctuations in the severity of symptoms of both their phobia(s) and alcohol dependence. Initially, these subjects assisted the interviewer in completing a Drinking History Chart which graphed fluctuations in the extent of drinking over the subjects lifetime, to serve as a visual aid for subsequent procedures. Contrasting periods were selected representing either dependent-type drinking or virtual abstinence (where possible) for each individual. For each period (between two and six, depending on complexity of the history) subject's memories were 'primed' by having them recall details of place of residence, occupation, marital status, family events and any other significant facts. 'Retrospective' versions of the FQ and Severity of Alcohol Dependence Questionnaire (SADQ) were then completed for these periods of heavy drinking and abstinence. The retrospective FQ (retro-FQ) excluded the five items concerned with 'blood and injury' and also the five items concerning general affective disturbance. The retrospective SADQ (retro-SADQ) was only used for heavy drinking periods; it differed from the original only in that the last four items referring to rapidity of reinstatement of dependence were excluded. These are less straightforward and least well-correlated with the total SADQ score.

Phobic alcoholic subjects then helped the interviewer complete the 'Short Term Focus'; this consisted of visual scales to record variations in alcohol intake, morning shakes and fears during a two week binge following an abstinent period, and also morning shakes and fears during a two week abstinent period following very heavy drinking. Both two week periods were recent in the subject's experience and it was stipulated the abstinent period was not one in which the subject was hospitalised or in another institution.

In order that subjects might be independently retested two weeks later, a 'Retest Form' was completed covering details used for priming memory for the retrospective questionnaires. The month and year of reference for the full SADQ were also recorded. The Retest Form then permitted the second interviewer to identify the same periods for consideration, rapidly remind subjects of the most salient aspects of their lives at these points and then once more have them fill out the questionnaires described above. The amount of information provided by subjects in the initial two hour interview rendered recall of their

TABLE
Median ages given by subjects in answer to questions about the history of their drinking and phobic problems

Question	Median
When fears first a problem	28
When drink first a problem	30
When first aware of a need to drink alcohol in a.m.	31
When first began drinking to get rid of the shakes	32
When fears most "troublesome"	38

questionnaire responses improbable two weeks later. Such feats of recall are notoriously difficult for alcoholic patients during the first month of an abstinent period (Acker, 1982).

(iii) *Phobic subjects (non-alcoholic)*

Sixteen of these were retested two weeks later to provide extra information on the reliability of the retrospective version of the FQ. Three periods were selected for retrospective application of the FQ, representing diverse stages in the development of the phobic disorder in each case. Memory-primary procedures were carried out before completion of retro-FQ's.

Results

Parametric tests of significance were employed provided the distribution of frequencies did not significantly depart from normality on a chi-square test (See Guildford, 1965 p.243).

(i) To the question "Do your fears get worse after a period of very heavy drinking?, 29 of the 42 (69 per cent) alcoholic subjects who reported having any fears on the FQ replied in the affirmative (χ^2 = 7.05, P <0.01). SADQ scores of subjects replying "Yes" (mean 39.9) were significantly higher (t = 2.78, P <0.005) than those replying "No" (mean 29.6).

(ii) *Order of development of drinking and phobic experiences*

Of the alcoholic subjects who reported any fears at all, only 21 reported drinking in the morning and drinking to get rid of the shakes. The median values of their estimated ages of 'onset' of these experiences and also of phobic problems are shown in the Table in order of magnitude.

Employing Friedman's two-way analysis of variance, the significance of this ordering of experiences was P <0.001 (Xr^2 = 35.5). It should be noted that Spearman rank correlations from 0.76 to 0.96 for test-retest reliability coefficients were obtained on these data (P <0.001 in each case).

(iii) *'Dry Shakes'*

Twenty-two alcoholics claimed to have experienced the 'dry shakes', 32 thought they had not and 6 were unsure. Those replying in the affirmative had significantly higher SADQ scores (t = 2.71, P <.01), agoraphobia (P <0.05), t = 1.81) and social phobia (t = 2.79, P <.01) scores on the FQ than those replying negatively.

(iv) *Reliability of retrospective data*

Spearman rank reliability coefficients were calculated for the test-retest scores on the two retrospective questionaires (retro-SADQ and retro-FQ). These were uniformly significant and high where periods *less* than ten years past were focused on by the retrospective procedure. Correlation coefficients ranged from 0.77 to 0.97 for the retro-SADQ within this time limit and from 0.77 to 0.92 for the retro-FQ (pooled alcoholic and phobic subjects). Corresponding significance levels ranged P <0.01 to P <0.001. This procedure demonstrates the consistency of subjects' recall, if not its validity.

(v) *Concordance of changes in severity of alcohol dependence and phobias*

Sixteen of the 24 phobic alcoholics given the in-depth retrospective interview reported a substantial period of virtual abstinence (six months or more) following a period of heavy alcohol intake and alcohol dependence. Their mean Fear Questionnaire scores for periods before and during the development of significant alcohol dependence as well as for the subsequent period of abstinence are displayed in Fig 1. This figure illustrates concordant changes in degree of fearfulness and alcohol dependence which are the subject of the following analyses.

(a) *Increases in alcohol dependence*

A significant increase in alcohol dependence was arbitrarily designated as an increase of 15 or more on the Retro-SADQ from one period in time to a later one. Eighteen of the 24 subjects reported such increases and the corresponding mean changes in Retro-FQ variables are displayed in Fig 2.

Highly significant increases in the Agoraphobia and Social Phobia scores were obtained (P <.01 in each case, Wilcoxon Matched Pairs Test).

(b) *Reductions in alcohol dependence*

These were similarly defined as being a change of 15 or more on the Retro-SADQ from one period considered retrospectively to a later one. Only nine

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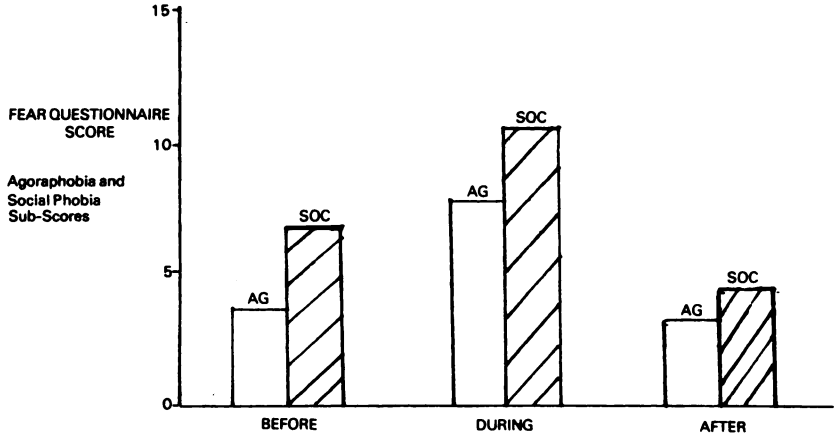

FIG 1

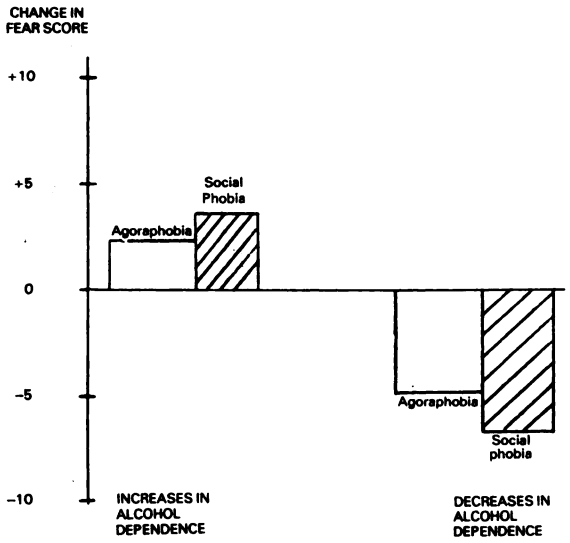

FIG 2

subjects fulfilled these criteria. Very large decreases in agoraphobia and social phobia sub-scores were found in concordance with the large reductions in the Retro-SADQ score at high levels of significance ($P < .01$, Wilcoxon Matched Pairs) despite the small number of subjects (see Fig 2).

(vi) *Short-term focus*

Subjects tended to rate their 'fears and phobias' as worse later than at the start of a two week binge (Wilcoxon Matched Pairs, $P < .001$). Ratings of fears and phobias were significantly lower *late* in the two week abstinent period compared with the beginning of this (Wilcoxon Matched Pairs $P < .01$), although more than half the subjects reported no change at all.

Discussion

This study represents an attempt to systematise the historical case material provided by a carefully selected group of alcoholics to answer some specific questions concerning the mode of development of their problems over time. Encouragingly for this unusual research method, the data collected were found to be highly consistent both over time (test-retest) and between independent interviewers (inter-rater). Overall, the findings suggest that phobic anxiety states may be closely related to the development of alcohol dependence for some drinkers. However, the relationship between these disorders is not at all straightforward and has quite different emphases in different individuals.

The 'phobic alcoholics' in this study were well aware of an association between their drinking and their phobic symptoms. While they mostly considered their fears, particularly those of social situations, to pre-date their drinking problems, most subjects estimated fears to be at their *worst* significantly later than at the onset of their drinking problem. When asked directly, a significant majority of the sample who confessed to experiencing fears believed that a heavy drinking bout worsened their fears. Those who denied experiencing this heightening of fearfulness were significantly less alcohol dependent, according to their SADQ scores. More detailed and careful retrospective assessments revealed concordant increments in severity of alcohol dependence and of severity of phobias. It cannot be argued that this simply reflects both disorders becoming more severe with increasing age, and independently of each other, since large reductions in alcohol

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dependence (15 or more points on the SADQ) from one point in time to a later one were also associated with large reductions in phobia severity. An interesting confirmation of this close relationship is that subjects claiming to have experienced the 'dry shakes' were not only more severely alcohol dependent than those who had not but also had higher scores on the agoraphobia and social phobia scales of the Fear Questionnaire (Marks and Mathews, 1979). Thus it is possible that the terms 'panic attack' and 'dry shakes' do not really denote very different experiences but are merely alternative terms for the same experiences.

The demonstration of concordant changes over time in the severity of two disorders in the same individuals is quite neutral as to the direction of operation, or even the existence, of causation. However, there were several striking examples of subjects' histories, implying a phobic disorder which not only preceded but also facilitated heavy drinking and subsequent alcoholism. There were five cases of agoraphobia whose onset clearly followed a bereavement and in which alcohol was used deliberately to help cope with panics in crowds and travelling on public transport. All these subjects also felt alcohol either worsened or prolonged their phobic problems, and some reported even a two week spell of heavy drinking worsened or created fears and phobias which, in some instances, substantially improved after two weeks abstinence. This is in accordance with the experimental drinking studies discussed earlier in which it has been universally found that alcoholics experience a progressive dysphoria during a bout of drinking (Freed, 1978).

Further study of this area may aid our understanding of the genesis of both alcohol dependence and phobic anxiety states. We would speculate that a complex interaction of learning and psychobiological processes underly the relationship observed in this investigation. Increased fearfulness with increasing dependence upon alcohol may be a function of both repeated avoidance of the experience of fear (through drinking, though also of avoidance of situations eliciting fear) and of compensatory adaptive processes (Solomon, 1977) developing to the depressant action of alcohol. Paradoxically, our findings and experimental work (Hodgson *et al*, 1979) also indicate that fearfulness also has a role, both in initiating and maintaining a dependent style of drinking.

While these findings require confirmation from prospective studies utilising objective measures, they do have some clear implictions for treatment strategies. The most definite of these is that it is likely to be futile to help individuals overcome agoraphobic or severe social anxieties while these are being 'fuelled' by heavy drinking. It is quite possible that the same is true if the affected individual is taking large quantities of *any* anxiolytic medication (Peturrson and Lader, 1981). It would also seem that time consuming behavioural interventions for alcoholics such as assertiveness and social skills training (Hedberg and Campbell, 1974) should only be instigated following a careful assessment of the historical relationship between the extent of an individuals drinking and his or her disposition to experience anxiety and fear. However, a question to which future research might be addressed is this: even if agoraphobia and social phobias frequently recover substantially with abstinence from alcohol, can this recovery be accelerated by available anxiety-reduction methods (e.g. Meichenbaum, 1976) and, if so, might this lessen the likelihood of relapse into dependent drinking?

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