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HEIGHT PHOBIA AND BIASES IN THE INTERPRETATION OF BODILY SENSATIONS: SOME LINKS BETWEEN ACROPHOBIA AND AGORAPHOBIA

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Summary—The present study was designed to investigate some of the factors that might underlie the commonly found association between agoraphobia and fear of heights (acrophobia). The results showed that measures of acrophobia are highly associated with the tendency to interpret ambiguous bodily sensations as threatening, and with an increased tendency to report bodily sensations of anxiety. These features of acrophobia did not appear to be characteristics found in phobic states in general, nor did measures of acrophobia show any significant relationship to the tendency to interpret external and social stimuli as threatening. These findings suggest that the frequently found co-morbidity between agoraphobia and acrophobia may be linked to cognitive biases in the discrimination and interpretation of bodily sensations that agoraphobia and acrophobia share in common. In addition, the present findings also generate testable hypotheses about the aetiology of acrophobia. © 1997 Elsevier Science Ltd

For some time it has been known that fear of heights is very common among people with agoraphobia. For example, Marks & Herst (1970) found that 40% of a large sample of diagnosed agoraphobics reported severe height fears. Fear of heights is a particularly interesting feature of agoraphobia because it is difficult to explain as either an expression of a primary diagnostic criterion for agoraphobia, such as anxiety in situations where escape might be difficult, or as a secondary consequence of the disabling nature of agoraphobia. The former explanation may account for the prevalence of fear of trains and aeroplanes, where escape is impossible (DSM-IV, American Psychiatric Association, 1994), and the latter may account for agoraphobic correlates such as depression (Chambless, 1985) and substance abuse (Bibb & Chambless, 1986). Neither escape fears nor secondary responses seem to readily explain agoraphobic difficulties with an array of typical indices of height fear. For example, the following items from Cohen's (1977) Acrophobia Questionnaire are difficult to interpret as simply measures of escape fear since they do not encompass restricted egress (cf. looking down a circular stairway, walking over a footbridge, seeing window wipers ten flights up a scaffold, walking over a sidewalk grating, standing on a chair to get something off a shelf, standing next to an open window).

This co-occurrence between agoraphobia and height fear is intriguing, suggesting a possible relationship between the two conditions. While the characteristic features of both acrophobia and agoraphobia have been well documented, and acrophobic signs have been documented in agoraphobia, no study has looked at the likelihood of agoraphobic signs co-occurring with height fear. The current study addresses this issue, examining the relationship between fear of heights and some features characteristic of agoraphobia. Such investigations are crucial for elucidating the relationship between these two conditions. Anecdotal clinical reports of cases treated by the second author have further suggested that acrophobia may be linked to agoraphobia, the disorders perhaps sharing underlying causal features. Three female clients successfully treated for acrophobia later developed clinical agoraphobic conditions, and two clients treated for agoraphobia later requested treatment for residual acrophobic symptomatology.

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One factor that may link agoraphobia and height phobia is the presence of panic-like symptoms. For example, panic disorder with agoraphobia is a distinctive diagnostic category (DSM-IV, American Psychiatric Association, 1994), and many have suggested that agoraphobia may even develop as a complication of panic disorder (e.g. Klein, 1981; Barlow, 1988). Even when the diagnosis is of agoraphobia without a history of panic attacks, there is a diagnostic requirement for the "presence of agoraphobia related to fear of developing panic-like symptoms (e.g. dizziness or diarrhoea)" (Salkovskis & Hackmann, 1997). Acrophobia also displays a number of panic-like symptoms, particularly attacks of dizziness which are unusual in other specific phobias (Menzies, 1991).

There are a number of cognitive factors associated with panic that have already been well elucidated. These include the tendency of those suffering panic disorder to attend more closely to bodily sensations (Ehlers & Breuer, 1992), and to rate ambiguous bodily sensations as having threatening or catastrophic consequences (e.g. Ehlers, 1991). The present study is designed to investigate whether these cognitive biases characteristic of panic and agoraphobia are also characteristic of acrophobia in an analogue population. Specifically, the study will investigate whether acrophobia is associated with an increased tendency to discriminate and report bodily sensations representative of anxiety, and whether acrophobia is also associated with a bias towards interpreting bodily sensations as threatening. The study also compares these measures with a measure of spider phobia in order to ascertain whether any effects are specific to acrophobia, or are common to phobic states in general.

METHOD

Subjects

*S*s were 100 undergraduate students from the University of Sussex. Their ages ranged from 18 to 51 y, with a mean age of 24.3 y. There were 45 females and 55 males.

Procedure

As part of a larger study, all *S*s received a booklet containing a number of different questionnaires. The questionnaires in the booklet relevant to the present study were (1) the Bodily Sensation Questionnaire (Chambless, Caputo, Bright & Gallagher, 1984), (2) the anxiety and avoidance sub-scales of the Acrophobia Questionnaire (Cohen, 1977), (3) the Spider Phobia Questionnaire (Watts & Sharrock, 1984), (4) the Interpretation Bias Questionnaire (Butler & Mathews, 1983), (5) the STAI Y-2 measure of trait anxiety (Spielberger, 1983), and (6) the Beck Depression Inventory (Beck, Brown, Steer, Eidelson & Riskind, 1987).

The bodily sensations questionnaire (BSQ). This is a 17-item scale which lists body sensations that may occur when a person is nervous or anxious. Example items include heart palpitations, dizziness, and feelings of short breath. In the version used in the present study, *S*s were asked to report how frequently they experienced these symptoms on a five-point scale. A total score was achieved by summing the scores on the individual items.

The anxiety and avoidance sub-scales of the acrophobia questionnaire (AQ). The AQ lists 20 situations frequently mentioned by acrophobics as anxiety provoking (e.g. standing next to an open window on the third floor). Subjects filled out this scale twice, indicating first how anxious or uncomfortable they would feel in each situation (the anxiety sub-scale), and second, how strongly they would attempt to avoid the situation (the avoidance sub-scale).

The spider phobia questionnaire (SPQ). This consists of 43 items which can be divided into 5 sub-scales measuring different aspects of spider phobia. The 3 sub-scales used in this study measured dimension of vigilance, preoccupation and avoidance.

The interpretation bias questionnaire (IBQ). This provides *S*s with a series of brief hypothetical ambiguous scenarios and asks *S*s to choose which of three possible interpretations of the scenario they think is most applicable. One of the three interpretations is a potentially threatening one. This allows a measure of the tendency of the *S*s to interpret ambiguous situations as threatening. The version of the IBQ used in the present study allowed responses to be measured on three sub-scales: (1) tendency to interpret external events as threats, (2) tendency to interpret in-