

NEW THEORETICAL CONCEPTIONS OF SOCIAL ANXIETY AND SOCIAL PHOBIA

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ABSTRACT. *In this theoretical paper, it is argued that social anxiety arises from the activation of an evolved mechanism for dealing with intra-species (conspecific) threat, a mechanism which has played a vital role in the evolution of social groups. A model is developed showing how this "agonic" mode of defense, working through the psychological systems of appraisal and coping, leads the socially anxious to perceive others as hostile dominants, to fear negative evaluation from them and to respond, at one level of the disorder, by appeasement and submissive behavior, and at a more severe level of the disorder, by more primitive actions such as escape or avoidance. A further theme put forward is that the socially anxious person appears unable to recruit another evolved mechanism for social relating called the "hedonic" mode, in which social groups are structured in terms of cooperation, equality, and mutual support. Some therapeutic implications of these concepts are explored.*

INTRODUCTION

In this paper we attempt to provide a theoretical understanding of social anxiety and social phobia, drawing upon recent cognitive and social-psychological models of the disorder, and focusing particularly on the processes of appraisal of threat to the social self and defensive coping responses to such threat.

However, to understand the significance of these approaches — why it is thought that social anxiety should take the particular form claimed — we also argue for the need for a broader framework which explains the biologically *prepared* nature of human behavior in general. We therefore develop a psychobiological theory to show that social anxiety arises from the activation of evolved mechanisms for dealing with intra-species (conspecific) threat, which served a vital role in the evolution of social groups. It will be shown that these inappropriately triggered mechanisms underlie the appraisal-coping processes in the socially anxious individual.

We shall therefore first explore evolutionary and ethological approaches in

order to establish a basic framework for understanding social anxiety. We will then outline an information-processing model within that framework to help explain how socially anxious individuals process external and internal information, how they draw inferences of personal threat, and how they may attempt to cope with such threat.

A PSYCHOBIOLOGICAL/ETHOLOGICAL APPROACH TO SOCIAL ANXIETY

There is increasing recognition that much of what we regard as psychopathology arises from the activation of innately available, primitive appraisal-response systems (Bailey, 1987; Beck, Emery, & Greenberg, 1985; Chance, 1980, 1988; Gilbert, 1984, 1989; Öhman, 1986; Price, 1988; Price & Sloman, 1987). Humans are at the end of a long phylogenetic history, stretching from reptiles to primates, and this heritage is revealed in brain morphology. A current classification system describes the "human triune brain" as containing: (a) the reptilian brain, (b) the paleomammalian brain (limbic system), and (c) the neomammalian brain (neocortex) (Bailey, 1987; MacLean, 1985). These different brain areas are involved in different roles: (a) the reptilian brain plays a central role in competitive behavior (e.g., the acquisition, marking and guarding of territory and threat display), (b) the limbic system evolved with the transition of cold bloodedness to warm bloodedness and also the advent of infant nursing and attachment. Subsequently, evolution gave rise to (c) cortical structures which allow for symbolic representation of external contingencies, thereby allowing for foresight, expectancies and fantasy. Cortical structures are also capable of inhibiting lower structures or amplifying appraisals from more primitive (structurally lower) appraisals.

The Defense System

Social anxiety is by definition anxiety relating to social, i.e., conspecific (member of the same species) interaction. Therefore the propensities to experience anxiety in these contexts relates to the nature of potential threats that exist in conspecific relating, as opposed to those that arise from threats from predators.

In evolutionary terms, the first form of conspecific relating and dealing with associated threats arose in the reptiles, which tend to be highly territorial, with the acquisition and defense of a home base. Conspecific fighting or threats are evoked by entry into the territory "owned" by another. Crude dominance hierarchies become established on the basis of territory won and held by the display of competency to seize and defend it, that is, strength or fighting ability—the technical term used by ethologists being "resource holding potential" (RHP) (Price & Sloman, 1987).

The second form of conspecific relating and dealing with threat arose in the mammals. Unlike the reptiles, most mammals are not territorial. It is true that some primitive mammals become territorial at certain times, for example during breeding, but there is generally little in the way of rigid territorial or home base areas. These animals are group-living, that is, social, and therefore share the territory with conspecifics. Nevertheless dominance hierarchies remain important for the structure and cohesion of social groups. These are basically power hierarchies organized around "the potential for injury" and hence the control over access to resources (food, mates, etc.). The structure of the group revolves around attention directed at the most dominant. This mode of interaction has been called

"agonic" (Chance, 1980, 1984, 1988). If subordinates in the group were not able to recognize and anticipate threat-invoking actions, the group would be in a constant state of agonism. To a large degree, it is the subordinate's anxiety in relation to the dominant that ensures pointless fighting does not continually break out. Furthermore this subordinate anxiety goes with a special readiness to inhibit creative initiation and exploration. In an agonic group, it is very much an issue of "follow the leader."

In most primates, the cohesiveness of the group is maintained by individuals enacting various roles which signal recognition and acceptance of their position in a hierarchy. Roles vary according to the nature of an interaction (Gardner, 1988). However, with regard to dominance roles, two very important behavioral components, acting in tandem with aversive arousal, are noted. First, the capacity to reduce and inhibit ritual agonistic behavior (RAB) when in close proximity comes from a subordinate's willingness to signal submission and appeasement. This usually has the effect of terminating any serious hostile response from a dominant. It seems to us and others (e.g., Öhman, 1986) that social anxiety (and the associated pattern of behavior) flows directly out of this evolved system of group living. Furthermore it suggests that social anxiety arises from a particular form of social comparison (in technical terms, matching RHP). The socially anxious are in effect monitoring their outputs (social signals) and checking out the potential for injury or put-down in the interaction. Hence appraisal is focused on the possibility that others can add to or subtract from one's status or prestige (Beck et al., 1985).

After being threatened or even hurt, a subordinate cannot simply flee the field (although this tendency might be highly aroused in socially avoidant personalities). Rather he/she needs to renegotiate his/her relationship with the dominant to be allowed back and remain within proximity. Submissive gestures allow this. This tendency to move back to the source of threat (the dominant) is called reverted escape. Hence the animal is actually motivated to return to the dominant with submissive gestures (Chance, 1988). In this sense, submissive gestures become a coping response to inhibit the dominant's potential aggression and allow the subordinate to return and continue to live within proximity of the dominant. Autocratic personalities intuit this factor and may threaten others in the knowledge that though the other may withdraw for a time, they must then return in a more submissive and appeasing mood. Apparently many dominant primates do this in order to bind the group more closely to them. Again this is well known in human behavior where threats are used to induce return to and compliance with a dominant (e.g., religion). Failure to return exposes the subordinate to abandonment or being driven away — a major concern of humans (Gilbert, 1984).

Another factor pertinent to social anxiety is what is referred to as braced readiness (Chance, 1980, 1984). The subordinate must remain constantly alert and at the ready to withdraw or send submissive, no-threat signals to those that have greater RHP. This is a state of high stress, and it is well known that subordinates, especially those of very low rank, show higher levels of stress hormones and general fearfulness than other members of the group (Henry & Stephens, 1977). Hence raised background levels of social anxiety may arise in those who are concerned with keeping their submissive appeasement repertoires at the ready. Not only will this ensure that they can enact the necessary response at a moment's notice, but also in so doing they can remain in proximity to others viewed as more

dominant. A full account of the ethological and evolutionary dimensions of these complex processes is available elsewhere (Bailey, 1987; Chance, 1988; Crook, 1980; Gilbert, 1989; Trower, Gilbert, & Sherling, *in press*). What we are saying here is that evolution has given rise to special-purpose appraisal-response/coping systems which make group living possible. For much of group-based evolution, the organization of social behavior is controlled by power relationships, of which social anxiety is a very important, not to say, vital, component.

The Safety System

There are, however, some major differences in human social life from those outlined above. These often serve to confuse our understanding of social anxiety. The first point is that, for many primate groups, social anxiety is necessary and common, especially in subordinates. However, while it is true that much of our social life is organized into hierarchical social patterns, where those at the top have more power and control (by threats and the withholding of reinforcement) over those lower in the hierarchy, this is not the whole story. First, social others can be a source of safety and have important abilities to reduce arousal. Indeed in the face of threat, especially in children, the coping response is to approach loved or trusted others. Further, however, Chance (1980, 1984) has suggested that in some primates (especially chimpanzees and humans) there exists a completely different mode of social organization called the "hedonic mode." Here ritual agonistic behavior is not inhibited by submissive gestures but by the dominant sending reassurance signals which increase conspecific approach behavior. When these signals operate, defensive arousal remains low in participants. This is secured by smiles, hugs, strokes, lip-smacking, etc., and various interactions and signals, such as greetings, that are positively reinforcing. This facilitates mutual cooperation. Furthermore, by deactivating the defense system, each member is free to act creatively in the interaction. Gilbert (1989) has suggested that the hedonic mode, along with the attachment system, forms part of a safety system. When the safety system operates, this not only encourages development (of skills and competencies and exploration) in participating members, but inhibits more primitive hostile-dominance (agonic) forms of social interaction. Individuals seek appreciation rather than dominance or submission, and in this way RHP is transformed into a more positive social attention holding potential (SAHP). Individuals seek to bind themselves into a group or relationship by sending signals of what they have to offer others rather than by how much they can threaten others. Crucially, the hedonic mode depends on this positive reinforcement system in contrast to the agonic mode, which utilizes punishment.

Summary

To summarize this section, it follows that social anxiety reflects a comparative failure to recruit the phylogenetically later developed appraisal-response competencies of the safety system, hence losing the potentially positive reinforcing and enjoyable attributes of social interaction. This permits phylogenetically older competencies to be activated in the evaluation of social encounters. In this situation the arousal (defensive) systems are primed and activated, and attentional and symbolic thought processes are focused on potential harm. To put this another way, without a robust hedonic mode, social relations, especially with unfamiliar

others, become what they are for many animal species. They become marked by various encounters where threats and anxiety are common. Despite conscious intent, socially anxious people (perhaps because of deep-seated beliefs of personal inferiority or of the hostility of others) are prone to recruit the more primitive social-evaluative appraisal-response/coping options. In this situation, the symbolic world of fantasy and anticipation is fueled by the innate themes of fear of humiliation, loss of face (loss of RHP and SAHP) and even injury. The more that hostile intent is imputed to others, the greater the degree of paranoid ideation and in extreme cases, the more the options of escape, avoidance or aggression are primed.

We stress that the above is a simplified and abbreviated account. Other points of interest include genetic factors, the common relationship between depression and social anxiety (both are related to subordinate routines and loss of social control) and the nature of "cure" of these conditions. Furthermore, the safety and defense systems are not mutually exclusive. Even the most prosocial of people can react with hostility or social anxiety in certain contexts.

In the next section we will explore in more detail the complex psychological factors that influence and coordinate the various appraisal response/coping systems of the socially anxious.

A PSYCHOLOGICAL CONCEPTUALIZATION OF SOCIAL ANXIETY

Social and clinical psychologists have recently developed models of social anxiety which have advanced our understanding of the psychological processes involved (Heimberg, Dodge, & Becker, 1987). However these theoreticians have, for the most part, made assumptions about the biologically prepared nature of human behavior which are not made explicit, and we suggest it is of value to reappraise these models within the explicit psychobiological theory outlined above, particularly the distinction between the defensive (agonic) system and the safety (hedonic) system discussed earlier. The *implicit* framework within which these models have been developed is, we suggest, the defense system, and therefore presupposes a view of competitive, hierarchical social organization. This is appropriate insofar as this is likely to represent the socially anxious person's construct system and is essential to an understanding of the development and function of social anxiety.

These models for the most part neglect the cooperative (hedonic) system and therefore fail to bring out a point that social anxiety is at least partially *biologically* appropriate to competitive/defensive environments and relationships insofar as it helps the individual survive (though hardly flourish), but biologically *inappropriate* in cooperative/safety environments and relationships.

Our task in the second half of this paper will be to reevaluate and develop one model of social anxiety, first put forward by Trower and Turland (1984), in the light of the psychobiological theory outlined in the first half of the paper. We shall show how the activation of the biological defense mechanism for dealing with conspecific threat influences psychological processes of appraisal and coping. In our development of the model we explicitly assume an innate capacity for the recognition of threat. For example we assume that a socially anxious state is closely linked with a biologically prepared "mentality" (Gilbert, 1989) which involves the tendency to perceive social groups as structured in terms of domi-

nance–submission hierarchies; to selectively perceive and interpret cues within such a structure; to focus on the self under threat (perceived as if through the eyes of others) and to take action to defend the self in the struggle to avoid a potentially catastrophic loss of status in the hierarchy. We shall at various junctures point out that the socially anxious significantly fail to recruit the alternative, biologically prepared “hedonic mentality” to recognize social groups being differently organized — along cooperative lines — and the problems that this failure creates.

Description of the Model

Following Trower and Turland (1984), we postulate that there are two major interconnected processes in human social functioning—an appraisal system for perceiving, inferring, and evaluating the desirability or otherwise of various states of affairs (both internal and external) and a coping system for responding to those states of affairs if necessary in order to bring about a change to a desired state. The desired state is represented by cognitive schemata which contain standards against which comparisons are made. The overall process operates as a continuous, sequential, feedback loop in a manner first described by Miller, Galanter, and Pribram (1960) in the TOTE (test-operate-test-exit) model and later developed by Carver (1979) and others.

We can now develop the model in the following way. We can postulate that there are many potential forms that appraisal-coping systems can take, each characterized by a particular emotion and an associated network of cognitive schemata which prime an individual to make a particular type of interpretation of the social environment and a particular pattern of responding.

Social anxiety is typified by one type of schema, which as we have seen derives from the competitive or agonistic mode, which primes the individual to appraise social “reality” as structured in terms of dominance hierarchies. We refer to this schema as the superordinate dominance schema—superordinate because it dictates the nature of the perceptual/conceptual background (social reality) within which all other perceptions and activities take their meaning. The most important subset of schemata within the dominance schema are the self-schemata, since the self plays a central role in social anxiety. Indeed in social anxiety the appraisal-coping process is recruited by the self, both to appraise threats to the self and to cope with those threats.

Structure of the Model

Within the general system, individuals as agents are deemed to actively anticipate and act rather than passively register and respond to environmental events as they occur. In other words individuals make predictions (conscious and unconscious) of probable desirable or undesirable outcomes on the basis of certain specific behavioral, or other cues, and then choose their actions (or nonactions) on the basis of those predictions. This faculty probably depends upon what MacLean (1985) describes as the neomammalian brain. Mischel (1973) has developed the concept of expectancy–outcome relationships to exemplify this predictive function.

We postulate three kinds of *expectancies* (Figure 1). Within the appraisal system we have *stimulus–outcome* expectancies (e.g., predictions from social cues of various

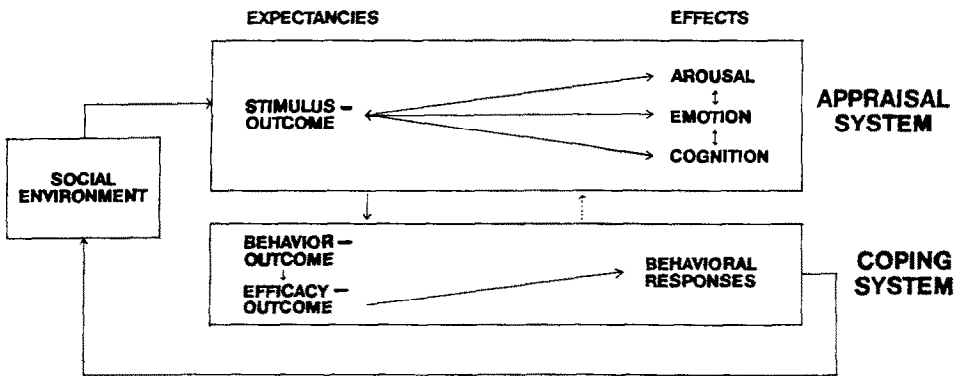


FIGURE 1. Based on the Model by Trower and Turland (1984), Showing the Role of the Appraisal and Coping Systems (and Other Components) in Social Anxiety.

consequences) and within the coping system we have *behavior-outcome* expectancies (predictions that certain actions will produce certain consequences) and *efficacy-outcome* expectancies (Bandura, 1977) (predictions about whether one can successfully execute certain actions). We shall describe the kinds of appraisal and coping which flow from the anxious person's dominance schema in the relevant sections below.

As a result of such expectancies, two kinds of *effects* are produced in the individual. Firstly, within the appraisal system of a socially anxious individual, negative stimulus expectancies elicit anxiety experiences (effects), defined in terms of *physiological arousal*, *emotional experience*, and *cognitive self schemata*. For example an anxious individual may have a negative stimulus-outcome expectancy ("X is dangerous and about to happen") which provokes anxiety experiences ("I am under threat!"). Secondly, on the basis of the appraisal, the individual selects *behavioral responses* as a consequence of his efficacy-outcome expectancies (though this is obviously influenced by his behavior-outcome expectancies). For example, he settles on a coping response by deciding what he should and could do ("action Y should reduce the danger and I can implement Y") and then implements the response (or nonresponse) chosen.

Function of the Model

The appraisal and coping systems operate integrally as parts of an overall self-regulating, or cybernetic, system (Carver, 1979; Carver & Scheier, 1984). At a general level, they form a discrepancy-reducing loop, the main function of which is to negate or minimize any sensed difference between two given values. A given state of affairs is perceived and compared with a reference value or standard, to see if there is a discrepancy between them. In our terms this is the function of the appraisal system. If there is no discrepancy, no further action is taken. If there is a discrepancy, action is taken to try to reduce it—the function of the coping system. This self-regulating process does not continue indefinitely but can be interrupted

by a variety of conditions. Once interrupted, an assessment is made of how likely it is that discrepancy reduction can be brought about, based on the present situation and the person's resources. If the outcome of this assessment is favourable, discrepancy reduction continues, but if it is unfavourable, the person disengages from further discrepancy reduction attempts.

One influential account of social anxiety which draws upon this model is that of Schlenker and Leary (1982). They argue that in social anxiety the focus of discrepancy is between a desired self-identity – the standard – and a low expectation that the desired self-identity will be constructed and/or maintained. The greater the expected discrepancy, the greater the level of social anxiety, and presumably the more likely it is that the individual will disengage from further discrepancy reduction.

This account, as stated, is rather too general for the theory we have developed (though is much more fine-tuned in Schlenker, 1987), but we adapt the account in the following section.

Integration of the Theories

It may at this point be useful to integrate the biological and psychological theories in terms of a framework of levels of defense system goals/standards. Each level has an associated interpersonal strategy or set of rules to achieve the goal, which will be discussed later. We would stress that these levels only apply to the defense system, and that part of the problem with the socially anxious is that they do not utilize components of the hedonic system. In the description of the levels we use the terms goal and standard interchangeably.

First Level Goal. (a) This goal or standard is to achieve the dominant position or increase relative resource holding potential (RHP) in a new or existing relationship, (i.e., to be identified as the dominant individual in a relationship). The strategy used is some form of ritual agonistic behaviour (RAB). (b) This goal or standard is also to be dominant but in this case the goal is to maintain an existing relationship position. The strategy used is RAB whenever the other is perceived to be behaving in an insufficiently subordinate manner.

Second Level Goal. This goal or standard is both to avoid harm and rejection/expulsion by a dominant and to maintain a position next to the dominant (e.g., to be dutifully subordinate). The strategy used is reverted escape, that is, submissive appeasement and the adoption of a subordinate position.

Third Level Goal. This goal is to avoid a perceived threat from a dominant, when the strategy of submission is not working. The strategy used in this case is escape, fight, freeze, faint, or camouflage or a combination of these, or avoidance of the other(s).

There is a fourth state which is not a goal but a state of resignation or “despair” in which depression is the predominant mood, and helplessness the “strategy.”

We would speculate that the primary desired self-identity for socially anxious people (given the influence of their dominance schemata from the agonic mode) is to be more dominant and have higher status (more RHP) than the other or others

(the first level goal), but they have low expectations of being able to construct and/or maintain this identity, and therefore would have high anxiety about attempting a dominance strategy. The greater the discrepancy between the desired outcome and the expected outcome, the greater the anxiety, and the greater the likelihood of disengagement from this goal/standard. In other words, if they attempt a dominance strategy (first level goal) they expect to come off worst, so in order to limit their potential loss of status, they disengage from the dominance goal, settle for the subordinate position (second level goal), and appease the other as dominant. If that fails (e.g., they fail to appease the dominant), they may opt for defensive alternatives which serve a more primitive and basic survival need (third level goal) such as escape (by fight, flight, freeze, faint, or camouflage) or avoidance, or give up altogether in a state of defeat and depression, and thereby give up the survival struggle.

The three levels can also be used to characterize different agonistic (or earlier) dispositional tendencies, or types, following Gardner (1988). For example the dominant type (e.g., narcissistic personality) would characteristically have First Level Goals and be highly skilled socially in first level dominance strategies. The subordinate follower type, or medium to low ranker (which might include the socially anxious/shy and dependent personality) would characteristically pursue Second Level goals and be highly socially skilled in second level (submissive) interpersonal strategies. The lonely introvert type (social isolates, avoidant, and schizoid personality disorders) would characteristically pursue Third Level survival goals, and would use high-arousal anti-predator routines like escape and avoidance. Since these are not *social* skills, this type would probably be lacking in most social skills.

The three level framework can be used to generate a variety of further hypotheses, and may throw light, for example on the issue of generalized versus specific social phobia distinguished in DSM-III-R. For example, dominant ("confident") types might be vulnerable to specific social phobias, where specific weaknesses in their dominance repertoires may be exposed or anticipated in specific situations. However they may lack second level appeasement skills and therefore tend to respond with third level, high-arousal reactions, which will further disrupt their dominance repertoires. Subordinate/follower types might be vulnerable to more generalized social anxiety, as a function of their role, since subordinates are exposed to status-attack, but being skilled in appeasement skills, would generally cope within the group. However we might expect subordinates to also experience specific, high-arousal social phobias, under at least two conditions: (a) when they undertake First Level dominance goals (like public speaking), since they will be undertaking tasks with low expectancies of success and high expectancies of risk (threat response); and (b) when their appeasement strategies appear to be failing and they come under attack from a dominant. Under such circumstances, they would be strongly inclined to recruit third level defense tactics.

We now turn to the various components of the model, dealing firstly with the appraisal system and secondly with the coping system. The order of the appraisal and coping systems is arbitrary, since they do not function linearly but in a continuous feedback cycle, and discussion of the one has to assume a particular state in the other.

The Appraisal System

The appraisal system is concerned with the interpretation and evaluation of events which may have significance for the individual, given his goals and needs at the time. In the socially anxious, this appraisal is mainly concerned with the status of the self in a hierarchically organized social group. In this section we look at the components of the appraisal system in more detail.

Expectancies. People in general make interpretations and draw inferences from external and internal stimuli, and anxious people are particularly concerned with inferences about the future. These inferences have been termed stimulus-outcome expectancies, by means of which they come to forecast what will happen, given certain stimuli (Mischel, 1973).

One set of expectancies any individual will have is an estimate of other people's evaluations of his appearance, behavior and other self-identifying characteristics. For most people, such expectancies only come into prominence periodically such as when dominance schemata are triggered—when attention is drawn to the self, for example in self-enhancing or self-threatening situations—but in normal, routine, everyday situations they will remain latent. However, for the socially anxious, such dominance schemata and the consequent expectancies may be everpresent. Given this salience of dominance schemata, combined with low efficacy expectations (Bandura, 1977) the main concern of the socially anxious is the construction and maintenance of a social self-identity which is perceived as highly vulnerable. This leads to the hypervigilant monitoring of situations, potential audiences, and the individual's own self-presentation behavior for extensive periods of time. The socially anxious person is locked into a constant search for social cues, such as certain facial expressions (Öhman & Dimberg, 1984), which indicate hostile appraisal of his self-presentation behavior. Research shows such individuals are prone to monitor such cues more than average, and are more likely to predict, perceive and recall negative appraisal from others (e.g., Fenigstein, 1979; Carver & Scheier, 1981; Halford & Foddy, 1982; Lucock & Salkovskis, in press; Smith, Ingram, & Brehm, 1983; Mathews & MacLeod, 1987). For example Smith et al. had high and low socially anxious subjects participate in either a high-stress socially evaluative interaction or one that was low in stress and socially innocuous. High socially anxious subjects in the evaluative situation differed from the other three groups in demonstrating enhanced processing of information concerning potential evaluations of them by others also present in the stressful situation. Recently Asendorpf (1987) showed specifically that dispositionally shy subjects were significantly more fearful of being socially evaluated than were non-shy subjects.

Effects and Expectancy-Effect Cycles. We turn now to the way the individual subjectively experiences the world as perceived, and the interaction between expectancies and effects.

Following Trower and Turland (1984) we define subjective experience in the present context as consisting of (a) characteristic physical sensations which arise from physiological arousal contributing to (b) an emotional state in turn linked to (c) a perceived threat to the desired self-schema (Schlenker, 1987).

Research (e.g., Öhman, Dimberg, & Öst, 1985) shows that generalized social

anxiety is marked by continuous rather than episodic physiological arousal, and heightened but markedly lower levels of physiological arousal than that found in animal phobias. This would seem to tally with the feelings of wariness and uncomfortable tension (as opposed to panic) that accompany shyness-related emotions, and exemplifies the state of braced readiness in the agonistic mode. Like Öhman et al. we would therefore expect these particular physiological and emotional effects to facilitate submissive, concealment and conformity behavior in face-to-face interaction between the anxious subordinate and the dominant, as opposed to panic which would disrupt them.

However Heimberg, Hope, Dodge, and Becker (1988) have found evidence to distinguish the arousal levels of *generalized* versus *specific* social phobics. In this study generalized social phobics had heart rate reactivity which confirmed the pattern reported above, but public speaking phobics had extreme cardiovascular arousal, perhaps more akin to a panic state.

In our model we would predict panic-level arousal in two circumstances: Firstly, a person pursuing first level (dominance) goals but who predicts a severely disrupted performance due to panic-level arousal (e.g., freezing). Secondly, a person pursuing a second level, defensive goal with a submissive self-presentation strategy, but who predicts the strategy will fail to inhibit attack. Moderated arousal levels are what we would expect so long as the individual believes these coping behaviors will be successful. But the socially anxious person becomes periodically anxious about *failing* to behave submissively or revealing his fear or failing to conform to social rules—perhaps inadvertently or due to force of circumstance—and thus increasing the probability of a status-attack from the other. In both cases, as the perceived probability of failure increases, we might expect physiological arousal to become so high as to trigger the mobilization of more primitive, panic-like responses including fight, flight, freeze and faint. These subjective effects of prior expectancies may in turn become anticipatory cues for serious, even catastrophic failure in any kind of self-presentation behavior. In other words, fear-produced autonomic and behavioral reactions become fear-producing cues in a fear-of-fear cycle (Beck et al., 1985).

Candidates for this fear-of-fear cycle include those reactions that are publicly obvious—shaking and other muscular reactions provoke fear of situations that involve writing, lifting cups, speaking in public and other tasks for which dexterity is required; gastrointestinal reactions produce fear of vomiting, eating difficulties, urinating, and defecating; cardiovascular reactions produce fear of blushing and fainting.

Turning now to appraisal effects on the self-schema, Schlenker and Leary (1985) are among a number of authors who have pointed out that the socially anxious have unrealistically high self standards, which inevitably increases doubt that the individual will be able to perform successful self-presentations. However, it is the existence of the dominance schema which turns such doubts into social anxiety. For example it contains a representation of a critical and competitive social world. The perception of a world implies that only the most powerful dominance displays will succeed, and the consequences of failing are potentially (in the perceiver's eyes) catastrophic.

Another factor that exacerbates anxiety is that discrepancies between self-presentation performances and self standards causes the individual's focus of attention to be turned on the self (Carver & Scheier, 1984). High self consciousness is a

central characteristic of the socially anxious (Buss, 1986). Such self focus is classically triggered by an audience and amounts to an awareness that the self is the object of evaluative scrutiny. Self-focus makes the individual aware of the discrepancy and leads him to believe the discrepancy is transparent to the audience (Trower & Kiely, 1983). Buss (1986) and others have pointed out that the socially anxious are in a chronic state of self-awareness—known as dispositional self-consciousness—leading to excessive self-monitoring, and constant awareness of discrepancies between appearances and standard. The perceived discrepancy is characteristically large in the socially anxious, since standards tend to be perfectionistic or idealized, while perceived performance attainment is low (Trower & Turland, 1984). Another effect of this self-focus is the tendency to self-attribute more responsibility for failure than for success, which is a reversal of the normal self-serving attributional bias (Arkin, Appelman, & Burger, 1980).

The Coping System

We have argued that in a socially anxious state, a person's appraisal system is fine tuned to selectively perceive, monitor and evaluate threats to self, while the coping system is set to generate responses designed to defend the self, and it is in this area that we would expect to find appeasement/submissive behavior and various adaptations of such behavior which may serve the function of reverted escape. In this section we will try to show theoretically how the anxious individual comes to select such defensive behaviors, and review some of the forms that such defensive behavior may take.

Anxious individuals make a comparison between their actual and desired self-presentations—an appraisal—and in the case of a discrepancy, either make a further attempt or disengage a coping response. We suggested earlier that the desired self-presentation for the evaluatively anxious is "perfectionistic" in that (a) they aspire to be dominant and high status (first level goal) but believe this requires flawless performances to be successful in the fiercely competitive world they perceive. However, the evaluatively anxious have (b) low expectations of their own efficacy and believe their flawed performances will expose them to a hostile-dominant counter-attack, humiliation and further, possibly catastrophic, loss of status. In other words there is perceived to be a vast and unbridgeable gap between what Bandura (1977) terms outcome expectancies (what they think is required) and efficacy expectancies (what they think they are capable of), such that any status-enhancing behavior is far too risky, resulting in (c) disengagement from the matching-to-standard (in this case a first level, dominant standard) process.

Translating point (c) into the terms of our psychobiological theory, we argued that disengagement from a first level goal would probably lead to engagement of a second, subordinate level goal, which in the agonistic mode would be some form of reverted escape. Reverted escape behavior provides a form of self-defense from threats from above in the hierarchy, without having to flee from or avoid dominant others—which in extreme cases can lead to complete isolation. It provides a defense from threats from above in that it reassures higher-status others that no threat to their status is intended. Here the emphasis will be strongly on submissive self-presentations. It represents disengagement from a first level (dominant) goal in that the individual is giving up his preferred, status-enhancing presenta-

tion for one that indicates an acceptance of a lower position in the hierarchy. Needless to say, such capitulation will usually be experienced as unpleasant and acutely shameful.

Socially anxious people experience threat not only from dominant others but also from subordinates and peers, especially those that may be upwardly mobile and perceived as potential challengers for dominance. Indeed a highly anxious individual may catastrophize about descending to the lowest position in the hierarchy. The state of braced readiness in the agonic mode allows maximum defense against these threats, because it can be used to reduce to a minimum the danger of faulty self-presentations which leave the individual exposed to status challenges. Here we suggest the emphasis will be more on neutral self-presentations and "correct" and rule-conforming social behavior, or camouflage or concealment of felt anxiety, or any other strategies that will prevent the exposure of weakness or vulnerability which will give a peer or subordinate the opportunity to make a successful challenge.

There is no direct evidence for our thesis that the evaluatively anxious behave in ways that exemplify the agonic mode in the way we are claiming, since no research has yet addressed the issue. However there is considerable indirect evidence, including the following lines of enquiry.

There is a evidence from many studies that socially anxious people behave more submissively than other groups even though they know how to be assertive (e.g., Alden & Cappe, 1981; Alden & Safran, 1978; Arkowitz, Lichtenstein, McGovern, & Hines, 1975; Glasgow & Arkowitz, 1975; Goldfried & Sobocinski, 1975; Schwartz & Gottman, 1976; Sutton-Simon & Goldfried, 1979; Vitkus & Horowitz, 1987). This suggests that submissive behavior is not the manifestation of a skills deficit since they know how to be assertive, but is an intentional (second level) strategy which may exemplify the agonic mode. Indeed we shall show later that submissive/appeasement behavior requires good social skills. The evaluatively anxious rather *choose* to behave submissively for fear of the negative consequences that they believe would follow from behaving assertively (Fiedler & Beach, 1978).

A number of other authors have put forward theories with experimental evidence that we would construe exemplifies the agonic mode. Arkin (1981) coined the term protective self-presentation to describe a "safe" style where the individual is motivated to avoid social disapproval but remain engaged in (rather than avoid) social interaction, in contrast to acquisitive self-presentation where the individual is motivated to achieve social approval (and, we would add, improved status). Schlenker and Leary (1985) reviewed a number of studies that showed the protective self-presentational style.

Despite the thoroughness of the defensive precautions which evaluatively anxious people use, they nonetheless have to contend with faulty performances—social transgressions, faux pas or accidents or even unintended assertiveness. Evaluatively anxious people with good social skills have further resources to tap to deal with such eventualities. These further skills involve face saving explanations for conduct, described and researched by a number of authors, such as various types of justifications to "reframe" spoiled identities, such as accounts, apologies and excuses (Edelmann, 1987; Harre, 1977; Schlenker, 1987; Snyder, 1985; Snyder, Higgins, & Stucky, 1983; Tedeschi & Norman, 1985). Such skills undoubtedly enable the socially anxious to remain within the social group, thus ex-

emplifying reverted escape. Lack of such skills, however, would, we predict, rapidly lead to escape and avoidance, and the problems that that would bring in terms of isolation.

THERAPEUTIC IMPLICATIONS

What are the implications of our combined psychobiological theory for therapy for the socially anxious? Our main recommendation follows from our assertion that the socially anxious person is psychologically locked into the defense system, such that his appraisal and coping systems are geared to perceiving various threats and loss of status (value) in a hostile and competitive world, and defending the self against such threat. It follows that the anxious individual might be helped if he could switch out of his defensive mentality into the hedonic mentality, in which status is derived through friendship networks. The appraisal and coping systems would then be released from their defensive role to be deployed in exploration and cooperation activities. Others would become sources of positive reward and anticipation (e.g., looking forward to the party) rather than dread and potential sources of punishment.

Therapeutic interventions within the hedonic framework can be aimed at both the appraisal and coping systems. The framework may be productive in selecting relevant approaches, for example from the cognitive-behavioral therapies—particularly those that help clients change their underlying philosophy to one of self-acceptance (e.g., Ellis, 1962); from humanist psychotherapies that emphasize unconditional positive regard, and from dynamic psychotherapies, particularly those that focus on the psychological development of the individual from less to more mature stages. Indeed one of the common features of all therapies is that they give people a (sometimes prolonged) exposure to an hedonic relationship, that is, a relationship in which the therapist always respects the client and never attacks, puts down or ridicules the client. The hedonic framework may also be helpful in generating new approaches, drawing upon, for example, the literatures on friendship formation and relationships (Argyle & Henderson, 1984; Duck, 1986), on prosocial behavior (Tedeschi, Lindskold & Rosenfeld, 1985), and on happiness (Argyle, 1987).

These suggestions need testing empirically. However there are some recent studies (reviewed by Heimberg in this issue) that provide some suggestive evidence, in that the weight of findings now indicate that exposure alone treatments are less effective than exposure plus anxiety management training (Butler, Cullington, Munby, Amies, & Gelder, 1984), or cognitive therapy based treatment (Heimberg et al., 1988; Lucock & Salkovskis, *in press*; Mattick & Peters, 1988). Lucock and Salkovskis (*in press*) found that patients rated the probability of negative outcomes as less likely following cognitive therapy. To what extent these more cognitively-based treatments can be described as exemplifying the hedonic framework is of course an open question. However our theory would predict that exposure alone would not be effective if the client was operating within an agonic "mentality," since this would direct the client to construe relationships as dominance ranked, to fear negative evaluation from hostile dominants, to tend to perceive others as hostile dominants, and to tend to respond self-defensively with submissive behavior. What Mattick and Peters (1988) have found is that fear of negative evaluation is the best predictor of long term absolute level of functioning

in social phobics, and we would argue that this precisely exemplifies the defense mode of thinking, and it is this mode of thinking that needs to be changed. A combination of exposure, social skills training in friendship skills and a form of cognitive therapy emphasizing the alternative philosophy would seem one promising approach.

REFERENCES

- Alden, L., & Cappe, R. (1981). Nonassertiveness: Skill deficit or selective self-evaluation? *Behavior Therapy*, *12*, 107-114.
- Alden, L., & Safran, J. (1978). Irrational beliefs and nonassertive behavior. *Cognitive Therapy and Research*, *2*, 357-364.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (third ed.). Washington, DC: APA.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (third ed. rev.). Washington, DC: APA.
- Argyle, M. (1987). *The psychology of happiness*. London: Methuen.
- Argyle, M., & Henderson, M. (1984). The rules of friendship. *Journal of Social and Personal Relationships*, *1*, 211-237.
- Arkin, R. M. (1981). Self-presentation styles. In J. T. Tedeschi (Ed.), *Impression management theory and social psychological research* (pp. 311-333). New York: Academic Press.
- Arkin, R. M., Appelman, A. J., & Burger, J. M. (1980). Social anxiety, self-presentation, and the self-serving bias in causal attribution. *Journal of Personality and Social Psychology*, *38*, 23-25.
- Arkowitz, H., Lichtenstein, E., McGovern, K., & Hines, P. (1975). The behavioral assessment of social competence in males. *Behavior Therapy*, *6*, 3-13.
- Asendorpf, J. B. (1987). Videotape reconstruction of emotions and cognitions related to shyness. *Journal of Personality and Social Psychology*, *53*, 542-549.
- Bailey, K. (1987). *Human paleopsychology: Applications to aggression and pathological processes*. New York: Lawrence Erlbaum Associates.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Beck, A. T., Emery, G., & Greenberg, R. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York: Basic Books.
- Buss, A. (1986). *Social behavior and personality*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Butler, G., Cullington, A., Munby, M., Amies, P., & Gelder, M. (1984). Exposure and anxiety management in the treatment of social phobia. *Journal of Consulting and Clinical Psychology*, *52*, 642-650.
- Carver, C. S. (1979). A cybernetic model of self-attention processes. *Journal of Personality and Social Psychology*, *37*, 1251-1281.
- Carver, C. S., & Scheier, M. F. (1981). Self-consciousness and reactance. *Journal of Research in Personality*, *15*, 16-29.
- Carver, C. S., & Scheier, M. F. (1984). A control theory approach to behavior and some implications for social skills training. In P. Trower (Ed.), *Radical approaches to social skills training* (pp. 144-179). London: Croom Helm.
- Chance, M. R. A. (1980). An ethological assessment of emotion. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research and experience* (Vol. 1, pp. 81-109). New York: Academic Press.
- Chance, M. R. A. (1984). Biological systems synthesis of mentality and the nature of the two modes of mental operation: Hedonic and agonic. *Man-Environment Systems*, *14*, 143-157.
- Chance, M. R. A. (1986). The social formation of personality systems: The two mental modes and the identity of recursive mental processes. *American Journal of Social Psychiatry*, *6*, 199-203.
- Chance, M. R. A. (1988) (Ed.). *Social fabrics of the mind*. Hove, Sussex, and Hillsdale, NJ: Lawrence Erlbaum Associates.
- Crook, J. H. (1980). *The evolution of human consciousness*. Oxford: Oxford University Press.
- Duck, S. (1986). *Human relationships*. London: Sage.
- Edelmann, R. J. (1987). *The psychology of embarrassment*. Chichester: Wiley.
- Ellis, A. (1962). *Reason and emotion in psychotherapy*. New York: Lyle Stuart.
- Fenigstein, A. (1979). Self consciousness, self-attention, and social interaction. *Journal of Personality and Social Psychology*, *37*, 75-86.

- Fiedler, E., & Beach, L. R. (1978). On the decision to be assertive. *Journal of Consulting and Clinical Psychology*, **46**, 537-546.
- Gardner, R. (1988). Psychiatric syndromes of infrastructures for intraspecific communication. In M. R. A. Chance (Ed.), *Social fabrics of the mind*. Hove, Sussex: Lawrence Erlbaum Associates.
- Gilbert, P. (1984). *Depression: From psychology to brain state*. London: Lawrence Erlbaum Associates.
- Gilbert, P. (1989). *Human nature and suffering*. Hove, Sussex: Lawrence Erlbaum Associates.
- Glasgow, R., & Arkowitz, H. (1975). The behavioral assessment of male and female social competence in dyadic heterosexual interactions. *Behavior Therapy*, **6**, 488-498.
- Goldfried, M. R., & Sobocinski, D. (1975). Effect of irrational beliefs on emotional arousal. *Journal of Consulting and Clinical Psychology*, **43**, 504-510.
- Halford, K., & Foddy, M. (1982). Cognitive and social skills correlates of social anxiety. *British Journal of Clinical Psychology*, **21**, 17-28.
- Harre, R. (1979). *Social being: A theory for social psychology*. Oxford: Blackwell.
- Heimberg, R. G., Dodge, C. S., & Becker, R. E. (1987). Social phobia. In L. Michelson and M. Ascher (Eds.), *Anxiety and stress disorders: Cognitive-behavioral assessment and treatment* (pp. 280-309). New York: Guilford Press.
- Heimberg, R. G., Dodge, C. S., Hope, D. A., Kennedy, C. R., Zollo, L., & Becker, R. E. (1988). *Cognitive-behavioral group treatment of social phobia: Comparison to a credible placebo control*. Manuscript submitted for publication.
- Heimberg, R. G., Hope, D. A., Dodge, C. S., & Becker, R. E. (1988). *DSM-III-R subtypes of social phobia: Comparison of generalized social phobias and public speaking phobias*. Manuscript submitted for publication.
- Henry, J. P., & Stephens, P. M. (1977). *Stress, health and the social environment*. New York: Springer-Verlag.
- Jones, W. H., Cheek, J. M., & Briggs, S. R. (1986). *Shyness: Perspectives on research and treatment*. New York: Plenum.
- Liebowitz, M. R., Gorman, J. M., Fyer, A. J., & Klein, D. F. (1985). Social phobia: Review of a neglected anxiety disorder. *Archives of General Psychiatry*, **42**, 729-736.
- Lucock, M. P., & Salkovskis, P. M. (in press). Cognitive factors in social anxiety and its treatment. *Behaviour Research and Therapy*.
- Mattick, R. P., & Peters, L. (1988). Treatment of severe social phobia: Effects of guided exposure with and without cognitive restructuring. *Journal of Consulting and Clinical Psychology*, **56**, 251-260.
- MacLean, P. D. (1985). Brain evolution relating to family, play and the separation call. *Archives of General Psychiatry*, **42**, 405-417.
- Mathews, A., & MacLeod, C. (1987). An information-processing approach to anxiety. *Journal of Cognitive Psychotherapy: An International Quarterly*, **1**, 105-116.
- Miller, G. A., Galanter, E., & Pribram, K. (1960). *Plans and the structure of behavior*. New York: Holt.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, **80**, 252-283.
- Öhman, A. (1986). Face the best and fear the face: Animal and social fears as prototypes for evolutionary analyses of emotion. *Psychophysiology*, **23**, 123-145.
- Öhman, A., & Dimberg, U. (1984). An evolutionary perspective on human social behavior. In W. M. Waid (Ed.), *Sociophysiology* (pp. 47-86). New York: Springer-Verlag.
- Öhman, A., Dimberg, U., & Öst, L.-G. (1985). Animal and social phobias: Biological constraints on learned fear responses. In S. Reiss & R. R. Bootzin (Eds.), *Theoretical issues in behavior therapy*. Orlando: Academic Press.
- Price, J. (1988). Alternative channels for negotiating asymmetry in social relationships. In M. R. A. Chance (Ed.), *Social fabrics of the mind*. Hove, Sussex: Lawrence Erlbaum Associates.
- Price, J., & Sloman, L. (1987). Depression as yielding behaviour: An animal model based on Schjelderup-Ebbe's pecking order. *Ethology and Sociobiology*, **8**, 85-98.
- Rachman, S., & Hodgson, R. I. (1980). Synchrony and desynchrony in fear and avoidance. *Behaviour Research and Therapy*, **12**, 311-318.
- Schlenker, B. R. (1987). Threats to identity: Self-identification and social stress. In C. R. Snyder & C. Ford (Eds.), *Coping with negative life events: Clinical and social psychology perspectives* (pp. 273-321). New York: Plenum Press.
- Schlenker, B. R., & Leary, M. R. (1982). Social anxiety and self-presentation: A conceptualization and model. *Psychological Bulletin*, **92**, 641-669.
- Schlenker, B. R., & Leary, M. R. (1985). Social anxiety and communication about the self. *Journal of Language and Social Psychology*, **4**, 171-192.

- Schwartz, R. M., & Gottman, J. M. (1976). Toward a task analysis of assertive behavior. *Journal of Consulting and Clinical Psychology*, **48**, 478-490.
- Smith, T. W., Ingram, R. E., & Brehm, S. S. (1983). Social anxiety, anxious preoccupation and recall of self relevant information. *Journal of Personality and Social Psychology*, **44**, 1276-1283.
- Snyder, C. R. (1985). The excuse: An amazing grace. In B. R. Schlenker (Ed.), *Self and identity: Presentations of self in social life* (pp. 235-260). New York: McGraw-Hill.
- Snyder, C. R., Higgins, R. L., & Stucky, R. J. (1983). *Excuses: Masquerades in search of grace*. New York: Wiley.
- Sutton-Simon, K., & Goldfried, M. R. (1979). Faulty thinking patterns in two types of anxiety. *Cognitive Therapy and Research*, **3**, 193-203.
- Tedeschi, J. T., Lindskold, S., & Rosenfeld, P. (1985). *Introduction to social psychology*. St. Paul, MN: West Publishing Company.
- Tedeschi, J. T., & Norman, N. (1985). Social power, self-presentation, and the self. In B. R. Schlenker (Ed.), *The self and social life* (pp. 293-322). New York: McGraw-Hill.
- Trower, P., Gilbert, P., & Sherling, G. (in press). Social anxiety, evolution, and self-presentation: An inter-disciplinary perspective. In H. Leitenberg (Ed.), *Handbook of social anxiety*. New York: Plenum Press.
- Trower, P., & Kiely, B. (1983). Video feedback: Help or hindrance? A review and analysis. In P. W. Dowrick & S. J. Biggs (Eds.), *Using video: Psychological and social applications*. Chichester: Wiley.
- Trower, P., & Turland, D. (1984). Social phobia. In S. M. Turner (Ed.), *Behavioral theories and treatment of anxiety* (pp. 321-365). New York: Plenum.
- Turner, S. M., Beidel, D. C., Dancu, C. V., & Keys, D. J. (1986). Psychopathology of social phobia and comparison to avoidant personality disorder. *Journal of Abnormal Psychology*, **95**, 389-394.
- Tyrer, P. (1986). The classification of anxiety disorder: A critique of DSM-III. *Journal of Affective Disorders*, **11**, 99-104.
- Vitkus, J., & Horowitz, L. M. (1987). Poor social performance of lonely people: Lacking a skill or adopting a role? *Journal of Personality and Social Psychology*, **52**, 1266-1273.
- Weiner, H. (1985). The psychobiology and pathophysiology of anxiety and fear. In H. A. Tuma & J. D. Maser (Eds.), *Anxiety and anxiety disorders*. Hillsdale, NJ: Lawrence Erlbaum Associates.