Social Fitness Theory and the Treatment of Chronic Shyness and Social Phobia

Personality Theory, Biological Research, and Clinical Observation

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Introduction

The work of biological researchers in conjunction with research in personality theory, has begun to resolve a long standing puzzle for me. I have been perplexed by my own research findings in relation to those of Arnold Buss, who did so much early theorizing related to childhood shyness. I attempted to test his theory in my dissertation work ten years ago. Arnold Buss, based on his extensive research, suggested that fearful shyness emerged early in life due to the fear of strangers and novel stimulation (Buss, 1980). Self-conscious shyness began around five or six with a child’s development of the concept of self and the ability to take others’ perspectives. I had seen when working with shy individuals, a great deal of the emotion of shame, more in some than in others. This emotion seemed more debilitating to me than fear. Fear often was much reduced as clients began to enter feared situations and practice new behaviors. Shame tended to persist and sabotage progress. As an example, clients diagnosed with avoidant personality disorder
were both more shame prone and more likely to internalize negative interpersonal interactions.

Based on Buss’s theory, I reasoned that self-conscious shys, because they could take the perspective of others, were probably more likely than fear shys to see themselves negatively through the eyes of others. That is, they believe they are not measuring up in social situations and that others do not think highly of their social behavior. Shy individuals overestimate the degree to which others are critical of their performance. They also score higher in public self-consciousness, an awareness of themselves as a social object. I hypothesized that self-conscious shys would be more self-blaming and shame

What I actually found was that fearful shys – those who are both generally fearful prone in social situations with negative outcomes. and shy -- in fact score higher in self-blame and shame, than do the self-conscious shys, and that the self-blame was exacerbated by private, not public self-consciousness (Henderson, 1992). Private self-consciousness is a tendency to be aware of internal thoughts and emotional states.

Social Fitness Theory

The theory that I developed in relation to these findings and have been elaborating in the last ten years, which I call Social Fitness Theory, is that any negative emotional state, in combination with private self-consciousness (a tendency to focus on internal thoughts and feelings) becomes part of a reciprocal process in which negative emotional states and negative thoughts escalate in a pattern of increasing discomfort which ends in withdrawal
and continuing rumination, which promotes further withdrawal, etc. Social Fitness theory posits that negative emotional states and negative thoughts escalate to construct a highly elaborated neural network that serves as a powerful heuristic to organize incoming information, thereby elaborating entrenched negative beliefs about the self and others.

These emotions in shyness are fear and catastrophizing thoughts about social situations, shame and self-blaming thoughts, and anger, and blaming others. When anger is added to the mix it leads to a sense of alienation from others as well as the self. These emotions have been demonstrated in our studies of shyness treatment samples. For example, shame is also a significant predictor of self-defeating behavior and passive aggression (MCMI), and correlated with resentment, the externalization of blame, and antisocial attitudes (MMPI) (Henderson & Zimbardo, 1998, August).

**Biological Research and its Relationship to Social Fitness Theory**

The results from the biological labs has suggested that negative emotion and its dysregulation is the key to increasing difficulty, which is highly consistent with Social Fitness theory, and integrates the findings from Buss’s research (Schmidt et al., 1997). Perhaps self-conscious shyness can be fearful shyness that has become increasingly problematic. This could still allow for another self-conscious shy group whose shyness develops from negative events or conditioning experiences.

Schmidt found high morning salivary cortisol in wary four-year olds, and speculated that it could induce changes in the amygdala, exacerbating fear (Schmidt et al., 1997).
However, socially phobic adults have not differed from controls in cortisol levels in much of the previous research (Potts, Davidson, Krishnan, & Doraiswamy, 1991; Uhde, Tancer, Gelernter, & Vittone, 1994). Furthermore, Schmidt did not find elevated levels in shy college women. However, Schmidt and Fox have been able to distinguish what they call an avoidant group from a conflicted group of children with corresponding levels of excessive activation in the right hemisphere only vs. excessive activation in both hemispheres (Schmidt & Fox, 1999, August).

Furthermore, a recent finding from the fMRI literature, a study done by Neils Birbaumer and his colleagues at Stanford, demonstrated that social phobics show amygdala activation in response to neutral faces while controls do not, but give equivalent subjective ratings. This finding is consistent with research that suggests independent systems for affective and cognitive processing of stimuli (Birbaumer et al., 1998; LeDoux, 1995). Bob Zajonc’s early research suggested that the affective and cognitive systems are at least only partially overlapping. Another possibility is simply that many reactions, both affective and cognitive, are automatic and do not occur at the level of conscious awareness.

**Treatment Implications of Biological Findings and the Social Fitness Model**

This finding leads me to the next question with which I have been struggling. Research with social phobia, and panic disorder, although it is mixed, shows that clients do better immediately after treatment with medication, but less well at follow-up than clients who have received cognitive behavioral therapy.
My question is, while they get chemical changes in the brain that promote well-being and even social outreach, when brain chemistry is changed, do clients revert to old patterns? Do they do this particularly when there has insufficient attention to deliberate changes in behavior? Is this also the case when clients do not see social fitness as they do physical fitness, as a state of being that is more or less achievable to the point of pleasurable activity in at least some situations? Are they more likely to relapse when they do not assume that daily work-outs are a necessary aspect of social as well as physical well-being and adaptation? The controlled processing that cognitive-behavioral therapy and social fitness training engender appears to continue to operate after treatment. This may be partially due to the fact that cognitive and behavioral skills have been learned and practiced during negative emotional states that promote negative thoughts and social withdrawal.

Does the processing actually become automatic in adults, in a way that is demonstrable in brain structural or chemical changes? Given recent studies of brain plasticity by neuroscientists, perhaps that can happen. If not, the override of the cognitive system in situations where negative emotions occur may still help the shy person to change behavior and the self-concept gradually in incremental steps over time. This would support the notion of independent systems for affective and cognitive processing, as suggested by Le Doult and recent studies by Niels Birbaumer and others. Perhaps the cognitive activity would also shift activation from right hemisphere to left hemisphere in challenging social situations (Henderson, 1997). The process would strengthen the belief that emotions can be regulated with sufficient awareness of their presence and with practice.
Social Anxiety, Social Cognition, and Emotional Dysregulation in Children

A final point of overlap is illustrated in our recent findings in a study of social cognition conducted with Robin Banerjee from the University of Sussex, in which we found impaired social cognition in socially anxious elementary school children in the US and Britain. The finding only reached significance in children who also scored above the median on our Shyness Negative Affect Scale (SNAS), however (Henderson, Banerjee, & Smith, 1999). This is correlational data and Robin and I have different hypotheses related to possible causality. His hypothesis is that impaired social cognition leads to social anxiety. Mine is that the experience of negative emotion and dysregulation in these youngsters leads to impaired social cognition in the form of impaired accurate perspective taking. We hope to clarify these questions in future experimental research.

Shyness Clinic Sample: Comorbidity

At the Shyness Clinic, 97% of our patients meet criteria for generalized social phobia and, depending on the diagnostic instrument used, 40% to 56% meet criteria for at least one additional Axis I disorder. The most frequent Axis I disorders are dysthymia (29%) and generalized anxiety disorder (27%). According to the MCMI, a striking 94% meet criteria for at least one additional Axis II disorder, most frequently avoidant personality disorder (67%), schizoid (35%) and dependent (23%) (St. Lorant et al., 1999). Those with avoidant personality disorder struggle with shame-based emotion and a reluctance to risk without guarantees of acceptance (Henderson & Zimbardo,
Those with dependent personality disorder tend to be submissive, but socially skilled and liked by other group members. The schizoid individuals usually struggle with fears of intimacy and intrusion, and have trouble persisting while relationships deepen.

Schmidt and Fox describe an avoidant group and a conflicted group that they view as related to different temperaments. Perhaps this is our schizoid group at the clinic, who are higher on avoidance, and less motivated to be social. They desire a few relationships, but have trouble persisting due to a fear of intrusion. They are also less interested in interacting with others, which will sometimes push potential partners away from them, or trigger insecurity in the partners. Once comfortable, and assured of adequate respect when they desire personal space, they often do relatively well in treatment.
Shyness Clinic Sample and Samples of Social Phobics

Samples of social phobics show a greater incidence of panic disorder, simple phobia, major depression, and substance abuse than is found in our shyness clinic sample (St. Lorant, Henderson, & Zimbardo, 1999). A high incidence of avoidant personality disorder appears common to both, with an overall incidence of personality disorders slightly less common (56% to 77%) in social phobic samples (St. Lorant et al., 1999). We appear to have a higher incidence of schizoid personality disorder than most social phobic samples. The MMPI further suggests compulsive (21%) and passive aggressive personality disorders (15%) (Greene, 1991).

The Shyness Attribution Questionnaire (SAQ)

The SAQ elicits clients' responses to structured questions about attribution style and shame in the most challenging three situations from the client’s hierarchy. Clients who are both fearful and shy score significantly higher at pre-test than those who are shy only, on internal, global, stable, and self-blaming attributions on this scale. Our studies with high school and college students have revealed that the trait of private self-consciousness (the tendency to focus on inner thoughts and feelings) significantly exacerbates the self-blaming tendency (Henderson & Zimbardo, 1996, March).
However, shy and socially phobic college students in eight-week treatment groups significantly reduced negative attributions and shame, (Henderson, Martinez, & Zimbardo, 1997, July), which suggests the viability of focusing specifically on changing negative attributions in clinical populations.

Data collected at the Shyness Clinic shows significant reductions during treatment for global, stable, and self-blaming attributions and significant reductions in accompanying shame.

We think these results are highly important. When clients are fearful and physiologically aroused they can learn to use the energy, just like athletes and actors do, to give a good performance. After the situation, however, when they are blaming themselves, seeing themselves as inadequate and experiencing shame, they want to withdraw and hide. They feel more vulnerable and less likely to want to initiate any social contact. Shame is more self-destructive than anticipatory physiological arousal in chronic shyness and social phobia.

Blaming Others: Impact on Empathy, particularly when avoidant personality disorder is present.

One way to reduce the debilitating pain of shame is to blame others, but blaming others leaves the client feeling alienated not only from the self, but from others as well (Henderson & Zimbardo, 1998, August). There is no safe place and no one with whom to experience emotional comfort and social support. Furthermore, blaming others was the only significant negative
predictor of perspective taking ("the tendency to spontaneously adopt the psychological point of view of others..." p. 113) $t(2, 137) = 2.79$, $p < .01$) and empathic concern ("other-oriented' feelings of sympathy and concern for unfortunate others..." p. 114) $t(2, 137) = 4.29$, $p < .000$ in a high school sample ($N= 144$) (Davis, 1983; Henderson & Zimbardo, 1998).

Empathy is associated with adaptive interpersonal functioning, and may be one of the most important social skills that develops in middle childhood and adolescence (Davis, 1983). It is negatively related to aggressive/antisocial and externalizing behavior in both males and females (Miller & Eisenberg, 1988). Given that shyness in adolescents is positively correlated with empathic concern it may be only the tendency to blame the self or others that begins to present greater problems interpersonally, either through inhibition or inappropriate responding.

**Estimations of Others Scale (EOS)**

Henderson and Horowitz developed the Estimations of Others Scale (EOS) using statements made by shyness clinic clients during treatment to measure the tendency to blame others (Henderson & Horowitz, 1998). The scale shows good internal consistency based on a college sample, with Chronbach’s Alpha at .91 ($N=136$). Convergent validity is suggested by correlations with suppressed anger items from the STAXI ($r = .38; p < .01$) and
with the social avoidance subscale of the Inventory of Interpersonal Problems (IIP) \( r = .48; \ p < .01 \) (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988; Spielberger, 1996 #2718). Shy college students scored significantly higher than non-shy college students on this scale, and shyness clinic clients scored significantly higher than the college sample (Henderson, 1998) (see table 1.).

We use this scale to help clients become aware of the tendency toward negative automatic thoughts about others. As they notice the pattern they work toward a non-blaming problem-solving approach to social situations.

When a person complains that the SUDS level is low, they may have many subtle habits of avoidance. Sometimes the instruction to make more eye contact, or to be more "present" helps. Intensifying the challenges during cognitive-restructuring may undermine defense mechanisms and reveal the underlying insecurity. This tactic may threaten the therapeutic alliance if excessive shame is experienced. Shame can promote withdrawal and reduced risk taking both during the session and in homework activities between sessions.

Secondary Gains

There are many secondary gains in chronic shyness. Others protect you, do things for you, pamper you, and are reluctant to exert pressure. Diagnostic labels may be used to avoid appropriate interpersonal and societal challenges. On the other hand, people who do not participate in their own lives become depressed and self-contemptuous. If clients are doing little to fulfill their
potential and little to contribute to the lives of others, there may be a realistic
sense of existential despair. It is interesting that shame and guilt in small
quantities stimulate growth. Only when the chronically shy become
overwhelmed by these emotions and view progress as an impossible task do they
become demoralized.

A kind of "tough love" usually develops in the group culture. Problems
of shyness and social phobia are not illnesses to be cured, nor excuses to be
given, but simply human problems in living that can be overcome by appropriate
strategies and group support. When labels are dropped and human beings
confront themselves and each other, many clients form lasting friendships which
become the basis of social support, particularly in the early months after

**Our Most Recent Innovation: The Public Education Program**

Sponsored by the non-profit Shyness Institute, Stanford graduate
students provide Social Fitness public education classes to the community.
Lynne Henderson supervises the students. These classes are offered at much
lower fees than are required to provide treatment by licensed clinicians. These
classes also provide an arena for students to apply what they are learning in the
research laboratories of social psychology, personality theory, cognitive
psychology, and neuroscience to real human beings with real problems in living.
It fulfills a dream of both authors, that of bringing psychology out of the lab and
the classroom into the lives of ordinary people dealing with daily human
struggles.

The decision to form the public education program was driven initially
by the difficulty in providing low cost treatment to a population which has
historically tended to be under-employed. Without the help of insurance, denied
to providers who refuse to shorten treatment for the economic needs of
insurance companies, many people were unable to afford treatment. After
conducting the classes throughout the first year, many other benefits have
become apparent. Graduate students had a laboratory in which to test theories
developed in the lab on real people. Students in the public education classes had
a learning opportunity that provided them with an experiential lab and a way to
choose for themselves, which theories (and the techniques arising from these
theories) worked well for them. Supervisor and students had a forum to build
theory based on both lab experiments and studies of real people in ecologically
valid settings.

We hope that the innovations developed in these classes will transfer to
the clinic groups as they are tested for their usefulness. Among the techniques
that have been used are: theatre improvisation techniques, lectures on self-help
techniques provided by students in the classes, group projects, the preparation of
meals together, field trips, building with architectural blocks as a way to
understand needs for personal space and joint use of common areas, the use of
flash cards with attributional and self-concept restructuring to facilitate memory
and practice, the use of humor and drawing to articulate experiences, lectures on
the research of social psychologists and personality theorists that bear on the
problem of shyness, and others.


Figure 1.

**Shyness Clinic**

**Components of Shyness**

- Behavior - inhibited, avoidant, overactive
- Physiology - symptoms of fight or flight reaction triggered in sympathetic nervous system - heart races, tremble, sweat; adaptive in evolution, now considered an overestimate of danger.
- Cognitions - maladaptive thoughts (AT's), attributions (ATT's) self-beliefs (SB's)
- Negative emotions - embarrassment, shame

**Vicious cycle #1, Anxiety and Escape**

- Subjective anxiety (SUDS, Subjective Units of Distress from 0 to 100) leads to negative automatic thoughts, which lead to increased SUDS, which leads to behavioral avoidance, which leads to increased anxiety in next situation.

**Attribution Style**

- How people assign responsibility for interpersonal interactions
  - positive outcomes
  - negative outcomes

**Self-enhancement bias**

- The ordinary person takes credit for success, externalizes failure or attributes it to specific, temporary, and controllable factors.
- Shy individuals reverse the self-enhancement bias in social situations. They take credit for failure and attribute success to specific, temporary and uncontrollable factors.

  - Failure is seen as "characterological".

  Negative social outcomes are attributed to internal, global, stable, uncontrollable, characteristics of the self. The self is blamed.

**Role of Private Self-consciousness**
• Private self-consciousness leads to seeing the self as others do, in general.
• However, during negative emotional states like fear or shame, private self-consciousness may contribute to perceptual distortions about one's behavior and about others' reactions.
• Perceptual distortions are due to increased awareness of internal emotions and negative thoughts.

Vicious Cycle #2, Self-blame and Shame
• Self-blame for social failure produces shame, shame in turn produces more self-blame.
• Vicious cycle may lead to increased feelings of vulnerability when enter the next social situation

Self-concept Distortions
• Self-blaming attributions may lead to negative beliefs about the self. These beliefs organize information. Increased articulation of biases in the self-concept occurs.
• Negative beliefs operate outside awareness, so successful goal completion is discounted, as is progress toward long-term goals.

Vicious Cycle #3, Other-blame and Anger
• Shame is a painful affective state which may be reduced by blaming others who are seen as more powerful and untrustworthy (some may have been).
• Other-blaming attributions may lead to negative beliefs about others which interfere with open-minded hypothesis-testing and with forming and sustaining relationships.
Table 1.

Shy vs. Non-shy College Students; College Students vs. Clinic Clients:

Estimations of Others Scale (EOS)

<table>
<thead>
<tr>
<th>EOS Scores</th>
<th>M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shy</td>
<td>2.7</td>
<td>1.4</td>
<td>44</td>
</tr>
<tr>
<td>Non-shy</td>
<td>2.1*</td>
<td>1.0</td>
<td>64</td>
</tr>
<tr>
<td>All Students</td>
<td>2.3</td>
<td>1.3</td>
<td>136</td>
</tr>
<tr>
<td>Clinic Clients</td>
<td>4.4***</td>
<td>1.4</td>
<td>8</td>
</tr>
</tbody>
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*note. *p < .05, **p < .01, ***p < .001.

Internal consistency for student sample (Chronbach’s Alpha) .91 (N=136).