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

prone in social situations with negative outcomes.

What I actually found was that fearful shys – those who are both generally fearful

and shy -- in fact score higher in self-blame and shame, than do the self-conscious shys, and

that the self-blame was exercerbated 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 amydala, 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 amydala

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 at, 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

        If not, the override of the cognitive system in situations where negative emotions

brain structural or chemical changes? Given recent studies of brain plasticity by

occur may still help the shy person to change behavior and the self-concept gradually in

neuroscientists, perhaps that can happen.

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: Cormorbidity

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,

1998, August). 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

Secondary Gains
risk taking both during the session and in homework activities between sessions.

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

treatment.

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.

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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)

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EOS Scores	M	SD	n
Shy	2.7	1.4	44
Non-shy	2.1*	1.0	64
All Students	2.3	1.3	136
Clinic Clients	4.4***	1.4	8

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note. *p* < .05, **p* < .01, ***p* < .001.

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

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