

# Cognitive Therapy for Social Phobia: The Human Face of Cognitive Science

**David Edwards,  
Jennifer Henwood and  
Swetha Kannan**

Both the terms 'science' and 'cognitive' can have a hard face. They are not terms which immediately make one think compassionately and in depth about the existential struggles of human beings. Keller (1985) accuses science of being a particularly masculine enterprise and shows how masculine metaphors played a dominant role in the shaping of the principles of science in seventeenth century Britain:

Henry Oldenberg, Secretary of the Royal Society, announced ... that the intention of that society was 'to raise a Masculine Philosophy ... whereby the Mind of Man may be ennobled with Solid Truths' (Keller 1985: 52).

These values are often represented by the image of conquering and exerting mastery over the natural world. This is achieved by cultivating distance and objectivity, avoidance of emotional involvement with what one is studying, and the search for an understanding which will provide prediction and control.

Related to this is an interest in explanations in terms of mechanism. Psychologists, for example, are interested in the physiology of nerve cells, because it is assumed that the action of 10 billion of them working together is the foundation of human experience. At its inception, science often drew on mechanical metaphors like clockwork. At the turn of twentieth century, the metaphor of a telephone exchange appealed to psychologists as it

provided a mechanism through which behaviour could be understood in terms of how stimuli became associated with other stimuli or with responses. More recently, we have learned to think of the brain as an amazing kind of computer, and to expect that we can explain the complexities of human experience in terms of the processing of information encoded as digital strings running round neural circuits. This metaphor has led to cognitive science becoming such an important field.

'Cognitive' is another term which may be experienced as masculine and alien to the feminine spirit. It is often equated with 'rational' and taken as the opposite of 'emotional' or of 'intuitive', so that investigation of the cognitive side of human experience may overlook these important aspects, which do not, of course, feature in information processing in computers. It also forecloses any psychological discourse in terms of words like spirit or soul. Furthermore, most research in cognitive science takes the form of specialized and strictly controlled laboratory experiments on thinking, memory and perception, and some of it involves searching for neurophysiological mechanisms that underlie these processes. What is often called the 'cognitive revolution' is a shift from one mechanistic metaphor to another.

So we must be alert for the hidden ideological connotations of a term like 'cognitive science'. Both words may draw us away from doing full justice to our humanity. It may be a hard trip to lay on women in particular, to ask them to embrace, in the name of progress, an approach which, ideologically, is profoundly masculine and against which, over the last decades, women's consciousness has often protested (Keller & Longino 1996).

However, for some scientists, the cognitive revolution signifies a deeper shift. Sperry (1995:506), famous for his split brain experiments of some forty years ago, remarks that the former stark, strictly physical, value-empty, and mindless cosmos previously upheld by science becomes infused now with cognitive and subjective qualities, values and rich emergent macrophenomena of all kinds.

This perspective seems more feminine in that it is holistic and systemic rather than mechanistic, the aim is to co-operate with rather than dominate the natural world, and human experience is given a central place in our understanding and not dismissed as a mere by-product of brain processes.

Cognitive therapy is an approach to relieving human distress which is founded on this kind of holistic approach. This is because it was

developed not in the laboratory but in the clinical setting. Its practitioners had a general familiarity with the principles of learning and cognitive theory, but largely drew on their own pragmatism and common sense in developing interventions (Gelder 1997). Cognitive therapy and cognitive science have evolved separately but in parallel:

Cognitive science has firm roots in the laboratory and relatively little basis in the clinic. Although cognitive-behavioral therapy has drawn on the constructs of cognitive science, it remains a relatively independent endeavour. For the clinician, ... the clinical relevance of the cognitivist approach may seem unclear (Stein 1997:2f) .

This came about because the aim of cognitive scientists has been to understand cognitive processes as they appeared in the controlled and circumscribed setting of the laboratory. They never set out with the aim of solving clinical problems, and were largely not equipped to do so.

The advantage of laboratory experiments is that variables can be strictly controlled and hypotheses rigorously tested. This allows researchers to establish internal validity, which simply means that they can confirm a hypothesis by ruling out alternative explanations for the findings. However such carefully controlled research, while safeguarding internal validity, can result in external validity being sacrificed. Experiments become removed from everyday life, so that findings have limited meaning in real life situations. The masculine emphasis on detachment and control can create an artificially rarefied approach which loses touch with life as it is lived. Cognitive science can easily look as if it is taking place in the mythical 'ivory tower'.

However, for at least two decades, there has been fruitful cross-fertilization between theories of psychotherapy and concepts from cognitive science. John Bowlby's (1979) influential conceptualization of attachment in terms of 'self-other working models' was directly taken from cognitive information processing theories. In cognitive therapy in particular, there has been concern that clinical theory should develop in synchrony with laboratory research findings. Theorists with a background in both have developed important integrative theories (Power 1997; Power & Brewin 1991; Teasdale 1996; 1997) and clinical theory increasingly incorporates concepts from cognitive science (Stein & Young 1993). Cognitive therapy,

while drawing on technical knowledge, offers a sensitive and detailed understanding of human beings struggling with everyday difficulties. It is science with a human face.

Cognitive therapy is founded on the view that what people think or believe is the foundation of what they experience. Hamlet (Act 2, Scene 2) tells Rosencrantz that he is experiencing Denmark as a prison. However, he remarks, 'there is nothing either good or bad but thinking makes it so'. He recognizes that it is not that Denmark really is a prison. Rather, it is his own thinking patterns that are at the root of his experience. A cognitive therapist would not try to change Hamlet's belief that Denmark is a prison by simply arguing with him, or reminding him of the spacious countryside that he can travel through. A fuller understanding is needed, and a little questioning would reveal that the source of Hamlet's distress is his 'bad dreams'. Rosencrantz and Guildenstern mistakenly conclude that the 'dreams' are Hamlet's ambitious hopes for the future. In fact, of course, Hamlet is referring to the ghostly appearances of his dead father. Actually, this is the kind of problem which is more likely to be taken to an African healer than to a Western therapist, and African healers might be better equipped to deal with it. Later in the play, when the ghost appears again, Hamlet makes the famous comment, 'There are more things on earth, Horatio, than are dreamt of in your philosophy'. Many cognitive scientists might be in the same boat as Horatio here. However, holistic their models, they do not handle appearances of dead ancestors all that well.

So let us turn to an experience which cognitive therapists have a great deal of experience with: social anxiety. Over the past two decades, researchers have developed a thorough understanding of the cognitive processes that give rise to this kind of emotional distress. Beck and Clark (1997) present the contemporary cognitive science approach to anxiety. They point out that a great deal of cognitive processing happens rapidly and automatically and so is outside of our awareness. In situations in which they anticipate danger, individuals are oriented towards scanning for potential threats. However, there are marked individual differences. For example, most people are not oriented towards threat if they drive across a bridge. However, for some people, bridges are a threat cue, and the knowledge that they are approaching one automatically orients them to threat. Once alerted to danger, individuals automatically go into a primal threat mode, a

specialized response which prepares them to deal with the threat. There is (1) arousal of the autonomic nervous system which results in symptoms such as increased heart rate, sweating and muscular tension; (2) preparation for behaviour to deal with the threat by escaping from the situation or avoiding it altogether (stop the car, close the eyes); (3) primal thinking, characterized by automatic thoughts and images related to the threat ('the bridge will collapse' ... 'I will fall over the edge'); (4) a feeling of fear; (5) vigilance for further threat cues ('the bridge is shaking' ... 'The car is going too close to the edge'). Selective attention to threat can result in the actual danger being seriously overestimated. Next, individuals rapidly assess whether they have the resources to cope with the threat. If they believe that they do not, the situation appears more threatening and anxiety increases. If they believe they can cope, the situation seems less threatening and anxiety decreases. The term self-efficacy refers to the sense that one can handle whatever threats one faces (Bandura 1997).

Social phobia refers to anxiety in social situations arising from fear of being humiliated or embarrassed, criticized or mocked. Detailed cognitive models of this kind of anxiety (Clark 1997a & b; Clark & Wells 1995; Rapee & Heimberg 1997; Wells 1997) emphasize the manner in which negative beliefs give rise to dysfunctional behaviours which, in turn, reinforce the negative beliefs and create a self-fulfilling prophecy. Picture Ndongiseni, a shy first year student, arriving at a student social gathering. The invitation activates her primal threat mode and evokes threat-related images and thoughts. She imagines other people at the party ('the perceived audience') as confident, critical, mocking or ignoring her; she pictures herself ('negative self image') as small, dull, uninteresting—she may even think that she has a funny nose or poor taste in clothes. She thinks, 'How will these confident, mocking people behave towards this dull uninteresting girl with the funny nose?' She imagines them talking among themselves critically, ignoring her or even laughing at or about her. As these thoughts and images are activated, her anxiety increases. She begins to feel shaky, sweaty, finds it hard to breathe, feels her heart pounding. New thoughts arise which contribute to her negative self image: 'people will see me shaking, they'll wonder what's wrong with me'—she may even picture herself shaking visibly. Other thoughts lower her self efficacy: 'I won't be able to think clearly, I will freeze, maybe I'll faint'.

Someone walks up to her and asks her a question. She is so focussed on these thoughts and images, so aware of her racing heart, her sweaty palms, her shaking hands that she cannot take in the person who has addressed her, and she stumbles over her words. To help her cope she engages in 'safety behaviours': she accepts a drink and grips it tightly to stop her hand shaking; she avoids eye-contact and stands back a little in the hope that the other person will not see how anxious she is; she talks quickly, in the hope that the other person will not notice how boring her conversation is. Although these safety behaviours make her feel less anxious, they are self-defeating. To other people she seems distant, aloof, disinterested. They mistake her anxiety for arrogance and withdraw from her. When people do not stay to continue the conversation, she concludes that it is because she is unattractive and dull. After a while, lonely and humiliated, she quietly leaves. Back in her room she replays the scene in her mind (a '*post mortem*'). She focusses on her negative self image, her lack of competence in social situations, her shaking hands and stumbling words, the thought that others find her dull and uninteresting, the observation that people seemed to withdraw from her. All her negative beliefs are reinforced by this process. She concludes, 'I'm anti-social, a social misfit, there's something terribly wrong with me, I simply can't function in these situations'.

Around 20% of people have experienced anxiety like this at some time or other in some social situations, especially if they have to speak in public. Around 3% are sufficiently distressed and disabled by it to be given a diagnosis of social phobia (American Psychiatric Association, 2000). Sadly, although many people develop social phobia while they are teenagers or even children, very few actually seek treatment until much later. Fortunately, for those who do, the cognitive information processing models described above provide the basis for an effective treatment (Heimberg, Liebowitz, Hope & Schneier 1995; Rapee & Sanderson 1998). Heimberg and Juster (1995) reviewed several outcome studies, many of which used a treatment programme developed by Heimberg and his colleagues. These show that a large number of people can gain significant help and many can overcome their social anxiety altogether.

### **The Programme and the Participants**

In this paper we describe a treatment developed by Clark and Wells (1995)

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which has been shown to be effective (Bates & Clark 1998; McManus, Clark & Hackmann 2000) and which Clark (personal communication) believes is even more effective than the Heimberg treatment. Previous studies used the programme in individual therapy. We adapted it into a group therapy format. It was highly structured and closely followed Clark's (1997b) guidelines. Sessions were led by the first author, assisted by the other two authors, and ran once or twice weekly for 1-2½ hours. After each session participants were given homework tasks to complete before the next meeting. Each session began with participants discussing their experiences of the homework assignments. This gave them a confidential space to express and share their feelings and concerns, allowed members to learn from each other, and gave the facilitators a detailed understanding of participants' problems. Next, new concepts and interventions were introduced through a psychoeducational presentation. After this, participants would discuss the new concepts, and engage in practical exercises as a group or in pairs. The sixth session prepared them for a two-hour individual role play session which was conducted outside the group. This will be described more fully later. A further five group sessions followed. The entire programme consisted of 13 group sessions and an individual role-play session for each participant.

Participants were students who responded to posters placed around campus. They attended two initial interviews in which we established whether they met the criteria for social phobia, checked that they did not have any other serious disorder (such as an eating disorder, severe depression or a substance-related problem) that might interfere with the treatment, and obtained a case history and information about how they spent a typical day. Seven students began the programme (age range: 19-21; ethnicity: 1 = white; 6 = black; gender: 3 = female, 4 = male). Two dropped out after session 5.

The research methodology was a multiple case study design (Barker Pistrang & Elliott 1994; Edwards 1996). We constructed graphical records of each participant's progress using scores on several self-report scales administered at every session: the Beck Depression Inventory (BDI-II: Beck Steer & Brown 1996), the Beck Anxiety Inventory (BAI: Beck & Steer 1990) and three measures of social anxiety (Clark 1997b). Against these records, we juxtaposed case narratives of each participant constructed from

extensive qualitative data which was derived from a range of sources: a brief case history; video-recordings of every session; copies of all records made by participants of their in-session and homework exercises; a debriefing interview conducted a few weeks after the formal programme was over; a follow-up interview conducted six weeks after that.

This methodology allowed us to investigate the experience of participants in some depth and to examine objectively their response to the programme. We wanted to see whether the process of the therapy would unfold in the way that Clark and others had claimed that it would and how much participants were able to overcome their anxieties and phobic behaviour. In this paper we present one of the case studies. It serves to illustrate how the cognitive model of social phobia works in practice when applied to one person's life situation. Case studies of the other participants are in the process of being written.

### **Tabelo: A Case Study**

Tabelo, a 19-year-old second year student, born in Mpumalanga, spends much of his time working on the computer. He also plays basketball and watches a lot of television. He prays when he wakes in the morning and always 'looks forward to a brighter day'. However, he also complains about his life a lot and he dislikes doing that. Before going to sleep at night, he reviews and analyses the events that happened during the day. Although he tries hard to get along with people, he does not have deep friendships, and sees himself as a 'very anti-social person' and as a 'one-man person'. He watches others in interpersonal relationships and wishes that he could be more like them. He has wanted a girlfriend for a long time and has recently become attracted to a girl. However, he has been afraid to approach her in case he says the wrong thing. He has read several books about self-confidence in the hope that they would help him to change but he now realises that he needs some practical help.

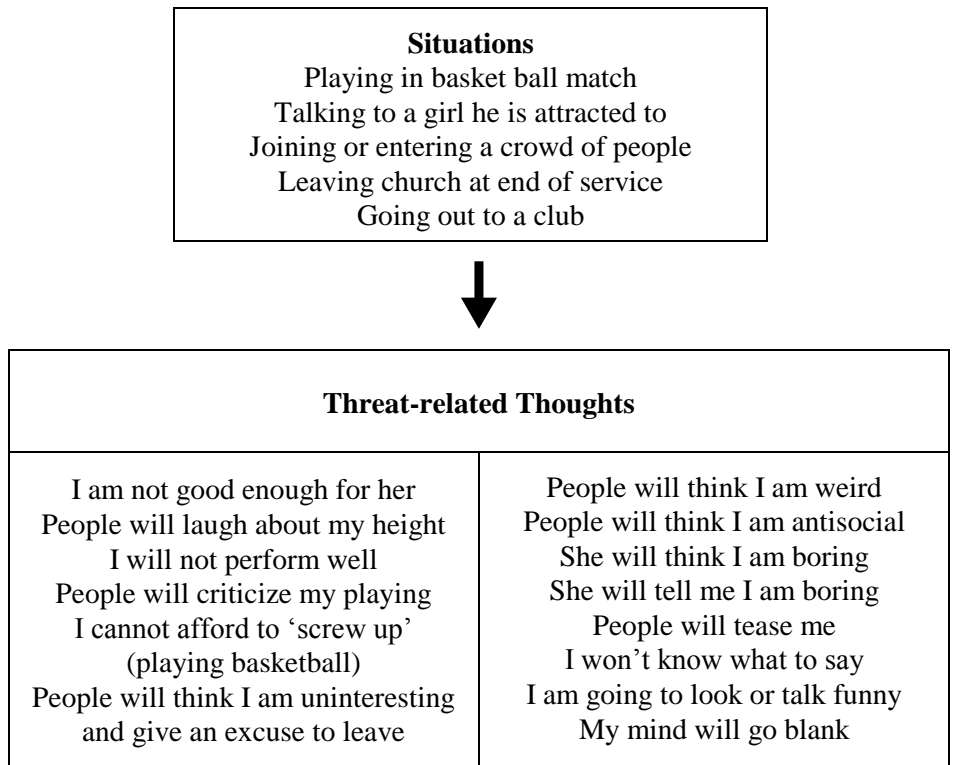
### **Sessions 1-5: Building a Model**

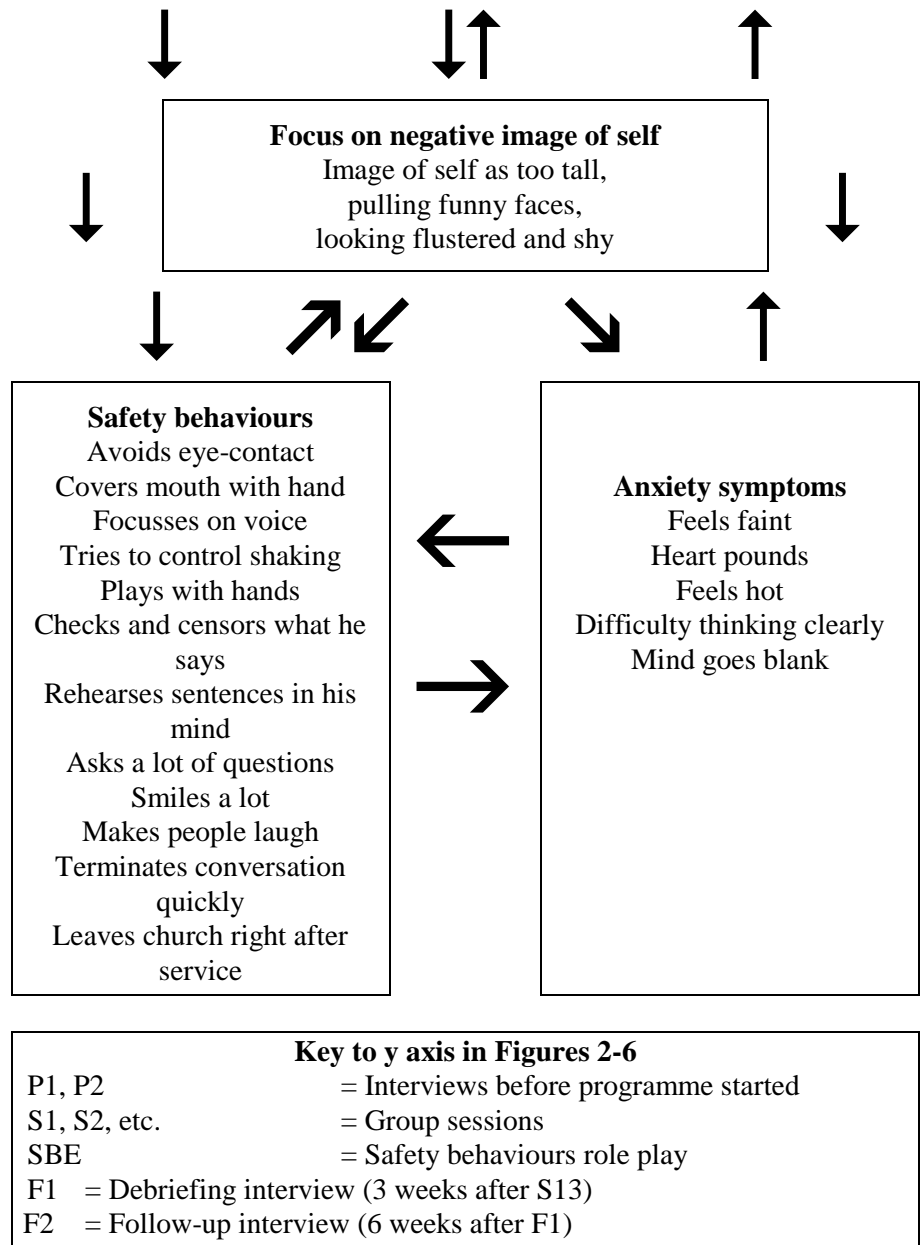
The first five sessions focussed on self-monitoring and self-assessment. Participants learned to identify the ways in which their thoughts, feelings and behaviours in feared situations interacted and reinforced one another. They learned to organize the material in terms of the Clark & Wells model,



the main features of which are set out in figure 1. In each session, one or more aspects of the model was explained. They then split up into pairs and, using structured questions provided by the facilitators, helped each other identify these aspects in their own everyday situations. For homework they were asked to enter situations in which they felt anxious and to collect further information. Much of the information that Tabelo collected is summarized in Figure 1. You can see that he identified several *situations* in which he became extremely anxious. In addition to his anxiety about meeting an attractive girl, he also became anxious about people watching him playing at a basketball match, when he went out to a club, or when he left church after attending a service.

**Figure 1**  
**Cognitive Behavioural Analysis of Tabelo’s Social Anxiety**





His *threat related thoughts* concerned fears that: (1) people would find him dull and uninteresting and might therefore laugh at him, criticize him, tell him how boring he was, or simply terminate the conversation; (2) people would think he looked funny either because he was so tall, or because his face looked funny when he talked; (3) people would laugh or be critical if he made any playing errors during basketball games; (4) he would become so anxious that his mind would go blank or he would fail to speak clearly, and this would lead to people thinking he was weird or antisocial. He would *focus on a negative self image*, picturing himself as taller than anybody else, imagining his face screwed up and looking funny and imagining himself looking flustered and shy.

All this activated his autonomic nervous system, and he would notice *anxiety symptoms* such as his heart pounding, feeling hot, and feeling dizzy and faint. He would also find it hard to concentrate and at times his mind would go blank. These symptoms contributed to the threat related thoughts, since he was worried that people would notice how hot and flustered he was feeling, or that he would make a fool of himself because he could not think clearly.

Tabelo was able to identify several *safety behaviours* through which he tried to reduce the threat that he felt. These included avoiding eye-contact, covering his mouth with his hand and smiling a lot. He would check everything he said before he uttered it, in case he said something embarrassing, would rehearse in his mind things to say, and ask a lot of questions so that there would be no awkward silences and so the other person could not ask him something he could not answer. In order to reassure himself that people were still interested and feeling positive about him, he would say things to make people laugh and observe how they responded. He would sometimes avoid people altogether or end a conversation prematurely. For example after church he would hurry away rather than speak to other members of the congregation.

The cognitive therapy model assumes that all this is self-defeating because it interferes with a person's capacity to engage in a spontaneous and relaxed conversation. This was true of Tabelo. At one session he described how he had unexpectedly met the girl he was interested in. He felt as though he was going to faint and his heart was pounding. He rated the degree of anxiety as 90/100. His automatic thought was 'I am not good enough for her'

and then he said to himself 'Just greet her and go'. So he was able to get as far as greeting her, but he terminated the encounter before it could develop further. He was so preoccupied with his threat-related thoughts and negative self-image that he had not much attention left for looking at other people to see how they were feeling or responding or for attending to what they were saying. Indeed, by avoiding eye-contact he was cutting out this useful source of feedback altogether. In addition, his rehearsal of things to say next and his belief that it was safest to keep asking questions made it impossible for him to be spontaneous and allow the conversation to flow in a natural way. The whole process thus became a self-sustaining system.

Despite all this, before entering a situation, Tabela was often able to focus on positive and optimistic thoughts and did not always experience a great deal of anticipatory anxiety. However it did not take long before his beliefs about the threatening nature of the situation began to set the anxiety cycle in motion. As he began to experience anxiety and his self-defeating safety behaviours automatically kicked in, he would be unable to sustain a spontaneous and natural conversation. The result was that, each time he did get involved in a conversation, his threat related-beliefs would be reinforced. He was caught in a trap and felt guilty because he saw himself as lacking the courage to deal with the situation.

After the first five sessions, Tabela realized that the exercises were giving him insight into the nature of his problem, and was feeling optimistic about being able to make meaningful changes to his behaviour. Once we started again at the beginning of the next term, exercises would be introduced which would involve actively working to change his dysfunctional behaviour. Some of the members found this a frightening prospect. But Tabela was looking forward to it. He felt that he was being empowered to work towards goals that were very important to him.

### **The Safety Behaviours Role-play and Video Feedback Session**

At the first group meeting after the vacation, participants reported back on their homework activities over the past few weeks. Then, the facilitators explained and made arrangements for the individual sessions in which group members would do the safety behaviours role play. Group members were asked to select a social situation which could be simulated in role play.

Tabelo elected to role play meeting and conversing with an attractive young lady. This was organized by the facilitators who recruited another student to take part who was not known to Tabelo. By the time Tabelo's role play was conducted, another group meeting had taken place in which other group members had described how valuable they had found the experience. Tabelo was excited, but also anxious at the prospect of having to converse with a strange young woman, especially as the role play was to be videotaped. It was agreed that he would approach the volunteer, as if on the way to a lecture, and begin a conversation with her.

When interviewed beforehand, he predicted that he would not know what to say to the volunteer and that she would notice how shy he was and would think that he was uninteresting. When asked to identify all the safety behaviours he would normally use in this situation, he listed the following: avoid eye-contact, hide mouth, ask lots of questions (try to dominate conversation), play with hands, try to control shaking, rehearse sentences in his mind. It was explained that in the first role play he should adopt all of these safety behaviours. This would be followed by a second role play in which he would, as far as possible, attempt to interact without them. Each role-play was to last approximately 7 minutes, and for the first three minutes he was instructed not to leave the situation, but after that he could if he wanted to. The volunteer was briefed about the situation to be role played and told it was part of a social psychological study. She did not know anything about Tabelo's social phobia or the group programme.

In the role play, Tabelo engaged in all of his safety behaviours, as instructed. Afterwards, he was interviewed and said that his behaviour had been 'the usual' and that he had felt very aware of the time. He had been afraid of 'screwing up', and, although he had tried to flow with the conversation, he didn't really listen to what she was saying and kept asking her the same thing because he was so focussed on coming across well and keeping the conversation interesting. He was sure she had noticed he was very shy and anxious and she seemed to have tried to get him to make eye-contact and to have repeatedly looked at his hands fidgeting. The volunteer did indeed think he looked anxious and self-conscious (8½ out of 10) but she rated his social interaction skills at a reasonable level (6 out of 10).

In the second role-play, Tabelo managed to drop most of his safety behaviours. He maintained eye-contact for most of the time and, when

interviewed after this role play, he said that he had not been aware of the time because the conversation was flowing more easily. He felt he had managed to drop most of his safety behaviours, and had not rehearsed what he was going to say, although he had been very conscious of making an effort to listen and to make eye-contact. He was sure that the volunteer had noticed his nervousness. The volunteer did indeed perceive him as having rather low self-confidence, however she noticed that he was more relaxed, spoke more openly and maintained eye-contact. She did not think that his anxiety was unusual for someone meeting another person for the first time. She rated him as markedly less self-consciousness than before (5 out of 10), and rather more skilled at social interaction (7½ out of 10).

Next, Tabela viewed the videotape of both role-plays with the facilitators. First, he was asked what he was expecting to see. He felt anxious about watching it as he expected to see evidence for his existing beliefs about how he appeared in social situations and did not expect to enjoy this. He expected that his voice would 'sound funny', his speech would be too slow, he would see himself making ridiculous faces, and he would look shy. As they watched the video, the facilitators stopped it at various places so that specific parts could be discussed. Tabela was shocked as he watched himself. He looked even more shy than he had expected. He kept saying to himself, 'Look it's true, I do look ridiculous and my voice is slow and comical'. He noticed what he called his 'funny facial expression' and 'funny smile' and said, 'of course people will laugh at me with that look'. Watching the video confirmed many of his negative predictions and he felt embarrassed and humiliated. The facilitators then presented him with the volunteer's feedback about him. He was surprised to hear that she had thought his social skills were a bit above average and that although he did look shy and self-conscious, she had not said anything about his voice or facial expression. He began to realize that his perception of the interaction as he watched it on the video was much more unfavourable than it appeared to others.

While watching the second role-play, he noticed the effect of dropping his safety behaviours. He did not look unusually shy, and actually liked what he saw. He looked more at ease in the conversation and made more eye-contact. Although he looked out for them, he could not see any funny expressions on his face. He realized that when he made eye-contact he

looked more natural and did not make any strange facial expressions. He also realized that he looked better for not slouching in the chair or trying to hide his face. Another observation that surprised him was that a pause in the conversation which had seemed abnormally long at the time seemed no different from those he had observed in other people's conversations and looked quite natural. He realized that the conversation was flowing easily and this was because he was attending to the conversation rather than thinking of questions to ask. He could now see that, in the first role-play, by looking away and continually asking questions, he had made it difficult for the volunteer to have a natural conversation with him. His old conclusion, that there was something wrong with him, was clearly mistaken. The problem was his safety behaviours which interrupted the flow of the interaction. Another belief that he had was that he was unable to make girls laugh. This was disconfirmed as the volunteer was clearly spontaneously amused by several of the things he said.

Thus Tabela found no evidence to support his negative predictions. He was able to accept that the feedback given by the volunteer was accurate, and gained insight into how his negative beliefs had been self-fulfilling. At the end he said, 'Most of the beliefs I had do not hold true in watching this video. I have had these thoughts for so long that I had believed them and from them created images regarding how I appeared to others and therefore, in many ways, my beliefs caused me to behave in ways which made my beliefs come true'. Looking back later, Tabela described this session as a turning point as it had vividly confronted him with just how inaccurate many of his strongly held beliefs were.

### **Final Sessions: Behavioural Experiments and Further Consolidation**

During the final sessions, participants were encouraged to put to work the insights gained from the safety behaviours role play by conducting a series of behavioural experiments. In these, they were to select situations which they found anxiety provoking and plan to enter them and interact spontaneously without their safety behaviours. Before entering them they were to write down their negative predictions on a record sheet. After doing the experiment they were to examine whether their negative predictions had been accurate.

Over the next few weeks, Tabela described engaging in many new behaviours and discovering he could behave naturally and spontaneously. In session 8 he told how he had gone to the residence of the girl he was attracted to and invited her out to a movie. At the residence he had chatted to and laughed with a group of girls. Previously he never would have believed that he could have an enjoyable conversation with a group of girls like this. In the session, the facilitator commented that he was seeming more at ease in the group and making much more eye-contact. At the next session he reported that he had worn a suit to go to a beauty pageant. Previously he would have avoided such situations because he predicted he would look ridiculous in a suit and people would make fun of him. However, he observed that several people complimented him on his appearance and no one laughed at him. In another experiment, he predicted that a group of girls that some friends introduced him to would find him boring. He obtained evidence to the contrary. The girls clearly enjoyed his company and he was complimented for his charming personality. He was finding people to be friendlier and more accepting than he could have believed possible before.

One of the most important experiments was to ask the girl he liked out to dinner. He felt some anxiety, especially as she did not arrive on time. Once she did arrive, the conversation began in a rather awkward way, but soon it was flowing so easily and naturally that 2½ hours sped by. He told the group members that this was a completely new experience. They then went back to her house and talked for two hours more. In the last few sessions, Tabela was very encouraging to other group members. He had experienced that the programme worked for him. He could see how his previous beliefs had led to his becoming anxious and that his ways of dealing with the anxiety had made the situation worse. More important, he had discovered that he had the capacity to interact naturally and spontaneously and had found this to be a rewarding experience. He often gave words of encouragement to other group members who were still struggling with negative beliefs and predictions.

### **Tabela's Self-report Scales**

The graphs of the five self-report scales are shown in Figures 2-6. His depression (Figure 1) rapidly shifted from a clinical to a normal level even before the first group meeting had taken place. This could be because, at the



first interview, he was uncharacteristically depressed and he spontaneously returned to his normal state of not being depressed. Unfortunately we do not have any records of how depressed he was before he first came for interview, so we do not know whether this was an unusually high score for him. However, Tabela's own explanation for these scores is that after the first interview, he began to have hope that he could solve his problems and have a better life. As the programme proceeded, this hope became a reality. We do know that there is a strong link between pessimism, hopelessness and becoming depressed. He wanted to help himself and he saw the programme as giving him the tools to do it. That is to say, from the start, the treatment approach had credibility and this credibility was sustained as the details of the programme unfolded. If this was the case, we might have expected that if he had not found the programme helpful, his depression would have returned.

Figure 2: Beck Depression Inventory-II

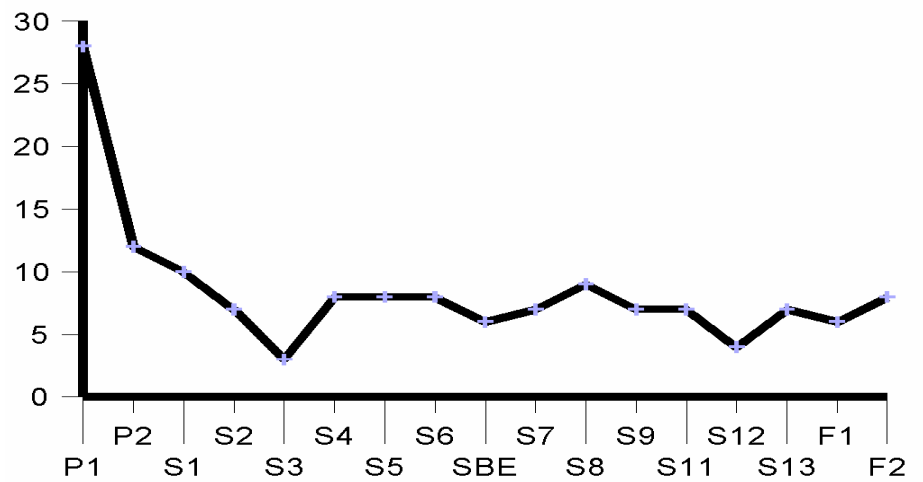


Figure 3: Beck Anxiety Inventory

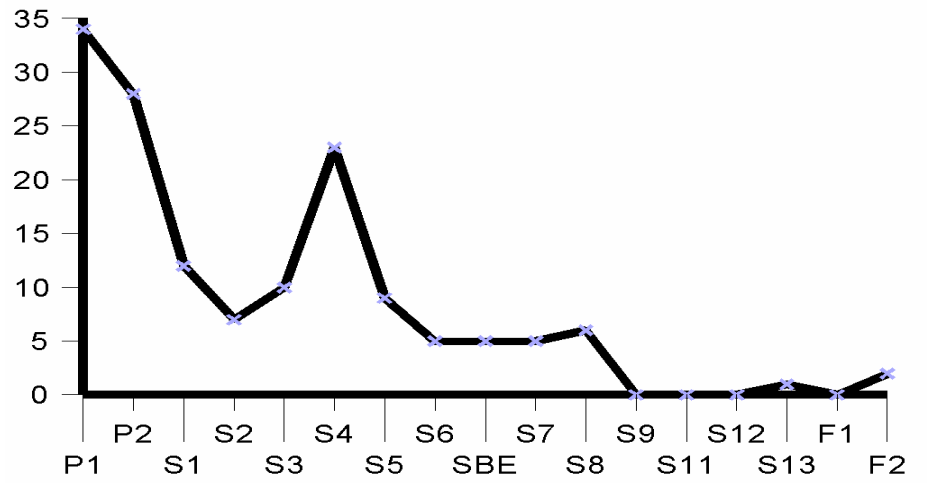


Figure 4: Social Cognitions Questionnaire

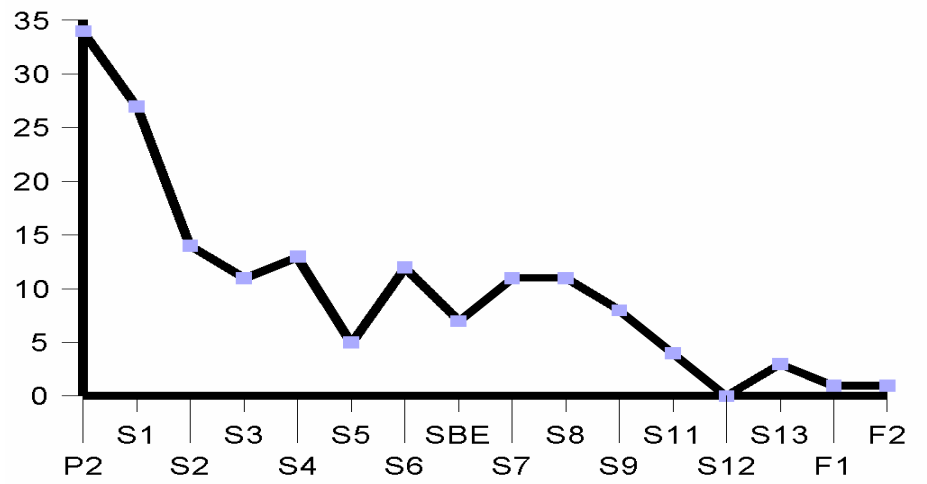


Figure 5: Social Summary Rating

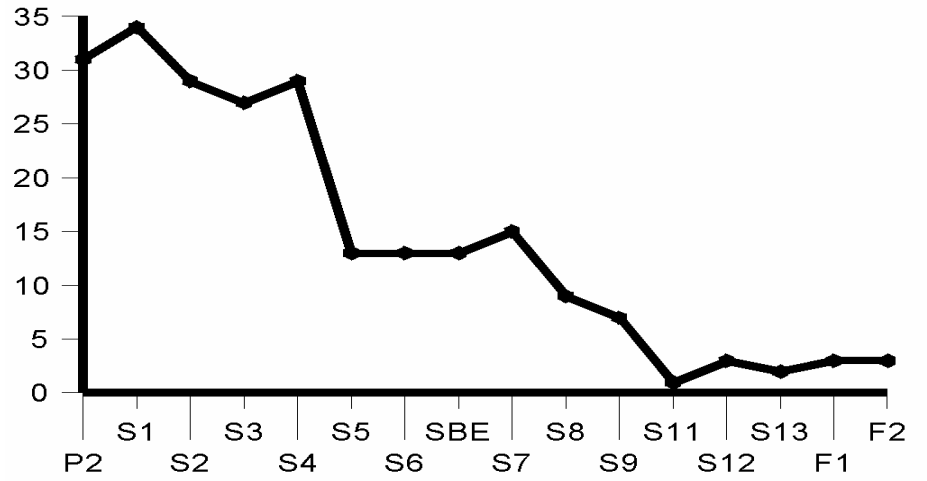
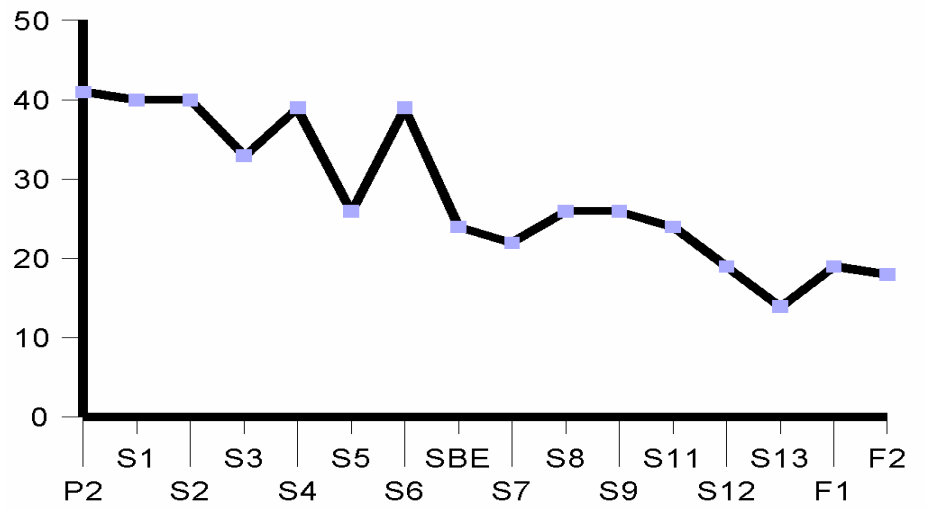


Figure 6: Safety Behaviours Rating



Beck Anxiety Inventory scores (Figure 3) reflect the intensity of anxiety symptoms. These also dropped markedly even before the programme began. Anxiety scores can fall when individuals successfully avoid threatening situations. This does not apply to Tabela who regularly undertook homework activities which involved entering anxiety provoking situations. Anxiety also falls as individuals master their fears and develop self-efficacy. This seems to be the most likely explanation in Tabela's case. Even though he had a lot to discover, the rationale for the programme and its credibility for him led him to believe that his difficulties were surmountable, so that, even at the beginning, he experienced less intense anxiety than before. The higher anxiety he reported at session 4 was precipitated by homework exercises in which he exposed himself to several anxiety provoking situations. Interestingly, although throughout the programme he continued to expose himself to more and more challenging situations, he never reported such high anxiety again. It seems likely that learning to observe his own thoughts, emotions and behaviour had enabled him to get some distance from them and this already helped to break aspects of the anxiety cycle. By the end of the programme he had discovered that he was able to interact spontaneously and that people liked him and found him attractive, and his anxiety disappeared almost completely even though he was now engaging in social activities that, at the start, he did not believe he would ever have the courage to take part in, let alone enjoy.

The Social Cognitions Questionnaire (Figure 4) lists twenty-two negative beliefs that social phobics commonly hold. Respondents indicate how often each one occurs when they feel nervous. Already by the second session, these thoughts were troubling him less often, and they had diminished considerably by the vacation break. Towards the end of the programme, as he continued to enter more and more challenging situations and discover he could not only function in them but could enjoy them, these negative thoughts disappeared almost entirely. The Social Summary Rating (Figure 5) has five subscales each rated from 0-8, tapping avoidance, anticipatory anxiety, self-focussed attention, and *post mortem* negative thinking. Again there is a steady decline, although the first marked drop came later than for the other measures, just before the vacation break. The next marked drop began after session 7. This was the period during which he engaged in more and more challenging situations and discovered his ability

to cope with and enjoy them. By the end of the programme, scores were very low. There was only a slight drop during the period up to the vacation on the Safety Behaviours Questionnaire (Figure 6) although there was a bigger shift at session 5. It seems likely that he had responded to the psychoeducational material and exercises which examined the role of safety behaviours in maintaining anxiety. Over the vacation his score increased to baseline levels again. However, it soon recovered, perhaps because of the continued emphasis placed on the role of safety behaviours in maintaining anxiety, specially in the safety behaviours role play. There was a further decline at the end. By now, of course, he was engaging in much more challenging situations and it seems likely that the continued exposure to more and more threatening situations resulted in his using these behaviours at times, even though he was also discovering that it was more rewarding to interact without them.

An important feature of all these scales is that the gains were maintained at follow-up, ten weeks after the final group meeting. Qualitative data obtained at the debriefing and follow-up interviews showed that the programme had enabled him to break out of the anxiety cycle he was in and replace it by a completely new mode of social interaction. This mode was enjoyable and satisfying and provided evidence for a positive view of himself as an interesting, likeable person capable of meaningful relationships.

## **Conclusions**

In Tabela's case, we see the same kinds of psychological processes that Clark and Wells have described. Not all participants made as rapid progress as this, although all those who remained in the programme showed the same kind of response, even some who started off with less clear motivation and less optimism than Tabela. Together with the other case studies, not described here, this study provides confirmation of the treatment model and shows that it can be successfully adapted into a group therapy format.

Our discussion will focus on the important question of the relationship between cognitive science and this kind of practical therapy programme. Teasdale (1996; 1997) has argued that findings in cognitive science can throw light on difficulties encountered by cognitive therapists.

He comments that a great deal of the theory that underlies cognitive therapy is expressed in essentially lay, or everyday terms, rather than within the terms of any of the conceptual frameworks developed within cognitive psychology and cognitive science (Teasdale; 1996:26).

His Interacting Cognitive Subsystems (ICS) theory describes how different cognitive systems interact with each other to make up the complexity of human life and experience. It addresses the realities of the clinical situation, but is founded in cognitive science.

Two features of the model are of interest here. The first is that it postulates that there are two higher order systems for representing meaning, which Teasdale calls implicational and propositional. Propositional knowledge is encoded in a system which is logically coherent and where words refer to things in a manner that can be defined and the truth value of propositions can be determined by clear criteria. This is the kind of thinking that can be programmed on to a computer. However, implicational cognition is encoded quite differently and cannot be simulated by digitized information strings or logical circuits. It encodes more holistic understandings, many of which cannot easily be conveyed in words at all, or if words are used, they must draw on metaphor or poetry. Teasdale points out that one can change a person's propositional beliefs by reason and argument, but implicational meanings are not so easily shifted. That is why a person with a phobia may often say, 'I can see rationally that there is nothing to be afraid of, but I still feel anxious if I think about it or enter the actual situation'.

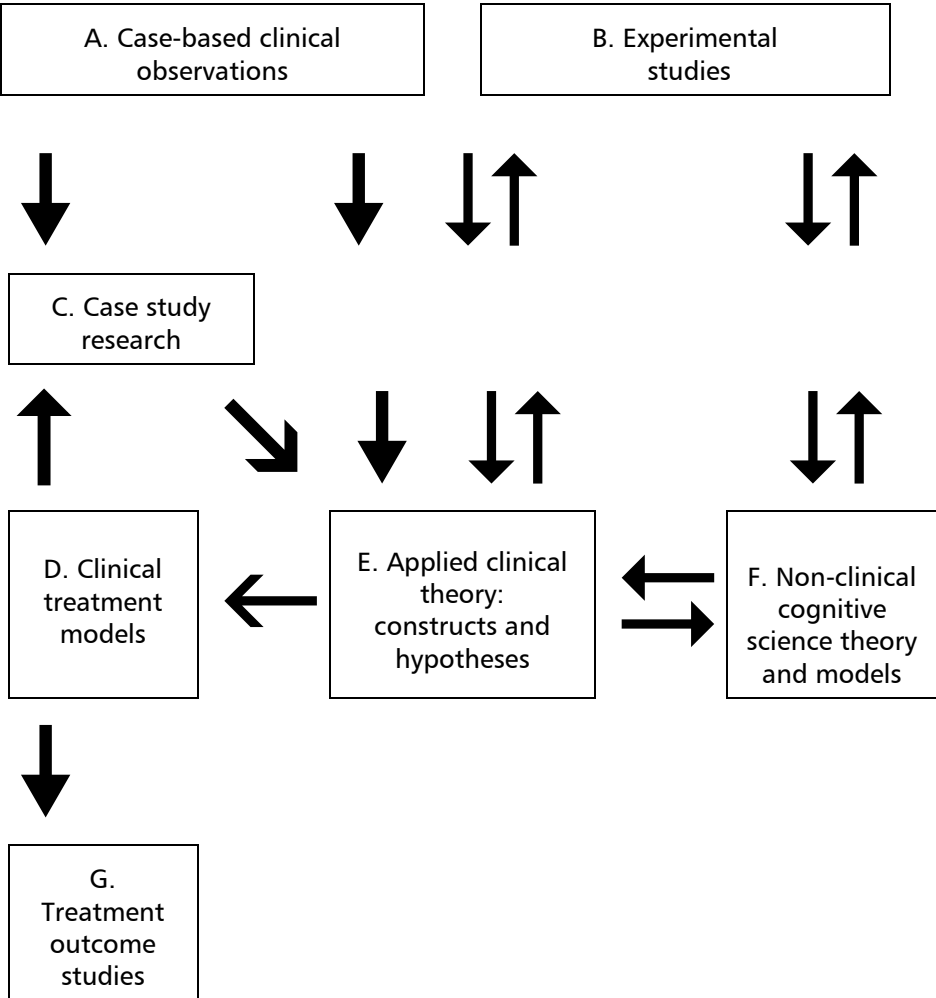
This relates to the second important feature of the ICS model which is that emotions are linked to the implicational system, not to the propositional system. This means that we will not bring about important change by cool, rational discussion, we have to change meanings in the implicational system if we are to bring about change in distressing emotional states. During rational discussion, a person's implicational meaning system may not be activated and it will not be listening, as it were. Cognitive therapists have long understood this. They use the term 'hot cognitions' to refer to thoughts and beliefs which are associated with intense emotion and recognize that these are the cognitions that must be the target of therapy.

So how do we change emotionally charged implicational meanings, if not by rational argument and discussion? Another concept that helps us here is that of 'situated cognition' (Stein & Young 1997). One of the

negative features of the masculine approach to science is that it breaks things up into small parts and easily forgets that they are part of a larger system. Cognitions cannot be understood in isolation. They are activated in real life situations. The having of an automatic thought, or the mobilization of a negative assumption is part of a complex systemic process in which the individual is in interaction with the environment, usually with other people. The Clark and Wells model of social phobic behaviour is a systemic one which recognizes the situatedness of cognition. First, the concept of self-fulfilling prophecy or self-defeating behaviour, which is central to cognitive conceptualisation, refers to the way beliefs are activated and reinforced within a complex interpersonal process. Second, cognitive therapists are never interested in how people feel or behave in general. They want to know what a person feels right now, or what they felt yesterday at 14h30 when they had to give a presentation to their tutorial group. Finally, although the treatment includes extensive psychoeducational presentations and training in rationally evaluating dysfunctional thoughts and attitudes, the crucial change processes depend on experiments in role played and real life situations. This helps us understand why such a central role is played by the safety behaviours role play and the subsequent video feedback, and by the behavioural experiments. Participants in the programme investigate their cognitions by entering the situations which activate their anxiety and are confronted, moment to moment, with the way in which these cognitions interact with their own behaviour and the behaviour of others. In this way the implicational meaning system is activated and the meanings within it are reconfigured.

Figure 7 presents a research model, based on the work of Salkovskis (in press), for developing clinical theory which overcomes some of the problems discussed above and which ensures that research will be both scientifically grounded and clinically relevant. At the centre of the model is clinical theory (E.). This is the kind of theory described above regarding the processes that initiate and maintain social phobic behaviour. It is this theory which provides the basis for clinical treatment models (D.) like the one used in this study. The source of this clinical theory is clinicians' reflections on their case work (A.). This can be made more systematic by conducting clinical case studies (C.) like the one described in this paper. These studies may confirm the validity of the theory in E. (as happened in the case study

**Figure 7**  
**Research model for the development of clinical theory**  
**and treatment models in cognitive therapy**  
(Modified from Salkovskis 2000)





described here) or it may call for it to be revised somewhat, which in turn will result in a revision of the treatment models (Edwards 1996; 1998).

The research model allows for the fruitful interchange between clinical theory and cognitive theory developed in non-clinical settings (F.), an interchange which is very much a feature of the contemporary literature. It also shows that the role of experimental studies (B.) is to provide a means of more formally testing hypotheses within clinical or non-clinical theory. As such they serve as a useful check on the development of clinical theory. Finally, the model shows the place of clinical outcome studies (G.) in which one or more treatments are compared with each other or with a control group (e.g. Heimberg, Salzman, Holt & Blendell 1995). These are important in determining whether a treatment works and whether it is an improvement on existing treatments. However, they make no contribution to theory development. Very often students are misled by their research method courses into thinking that the outcome study is the pinnacle of scientific research. This is simply not the case. When it comes to developing and refining clinical theory, case study research plays the most important role, but it is valuable to support it by specially designed experimental studies.

The first aim of this paper was to show that the current clinical models on which cognitive therapy treatments are based are, on the one hand complex and detailed, but on the other they are situated and human, in that they address the individual's problems pragmatically within real everyday contexts. The case study illustrated the application of one of these models in action and showed how case based research provides a basis for testing and refining both the underlying theory and the treatment model. The second aim of this paper has been to sound some warnings about the contemporary enthusiasm for cognitive science. Understood within the framework offered in this paper, it provides a basis for the development of useful practical knowledge. However, if not fully understood, unexamined assumptions can easily drive the researcher into *cul de sacs* which lead to dissatisfaction and disappointment. Within the context of present day South Africa, with its plethora of human problems, and of South African psychology, where the majority of practitioners are women, it is important not to be seduced by the overly masculine and hard face which cognitive

science can present at times. Tabela's story and the case study methodology which allowed it to be told, provide an example of how these dangers can be avoided.

Department of Psychology  
Rhodes University

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