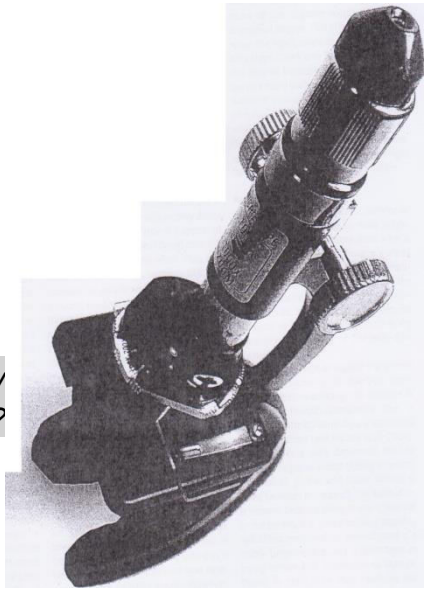
Under the Microscope

Cognitive Behaviour Therapy



Cognitive therapy is fast becoming the therapy of the decade, so why are cognitive therapists interested in behaviour?

When treating someone with a psychological disorder, cognitive therapists are not just interested in the client's cognitions (thoughts, beliefs and appraisals), they are also interested in the client's behaviour. Indeed, this is why cognitive therapy (CT) is often referred to as cognitive behaviour therapy (03T). However, this does *not* mean that cognitive therapists have simply added together cognitive and behavioural models of psychological disorders.

Cognitive therapists are interested in behaviour because behaviour is important in maintaining maladaptive thoughts (cognitions) at the heart of the disorder. In this article I explain why cognitive therapists look at clients' behaviour with reference to a range of different psychological disorders.

Why thoughts are central in cognitive models

Cognitive therapy is widely recognised as being an effective form of psychotherapy for psychological disorders, including anxiety disorders (post-traumatic stress disorder, panic disorder), bulimia nervosa and depression. More recently it has also been used to help alleviate the distress and disability associated with psychosis (Morrison 2004, Tarrier et al. 1998). A key assumption underlying cognitive models of psychological disorders is that maladaptive thoughts lead to distressing emotions, physical symptoms and dysfunctional behaviour. (I refer to maladaptive thinking as opposed to irrational or faulty thinking, as the term irrational is value-laden and often unhelpful in therapy.)

• For example, someone with panic disorder might misinterpret a normal bodily sensation — such as their heart beating faster — as meaning that they are having a heart attack (Clark 1986). The catastrophic thought that they were dying might run through their mind. This thought leads to intense emotion (fear, terror), physical symptoms (heart pounding, sweating, shortness of breath)

and dysfunctional behavioural responses (running out of the building or going to Accident and Emergency). Table 1 provides further examples of the consequences of maladaptive thoughts for several different psychological disorders.

As you may be aware, cognitive therapists tend to focus on the here and now, looking at the person's current maladaptive thoughts and the factors that keep these thoughts going. Cognitive therapists place less emphasis on trying to discover where the maladaptive thoughts come from in the first place. This does *not* mean that cognitive therapists never ask clients about their previous experiences. Maladaptive thoughts frequently originate in childhood experiences, such as physical or sexual abuse, bullying or constant criticism. In these instances, the therapist may work with the client to look at these past experiences in order to change the maladaptive thoughts currently affecting them. However, the cognitive approach differs from the psychodynamic approach, as it does not see addressing childhood issues as essential to producing a successful outcome.

What maintains maladaptive thinking?

Although cognitive therapists often do not focus on where maladaptive thoughts come from, they do need to know what is maintaining the thoughts (keeping them going). Indeed, what maintains maladaptive thinking has been a puzzle to psychologists and clients alike. For example, a person with panic disorder may continue to believe that she is having a heart attack even though she has had hundreds of panic attacks previously and has never suffered an actual heart attack. Equally, a person who believes they are a failure may have several examples of successes at work or at home and yet continues to believe they have failed. Why do such maladaptive thoughts persist?

Cognitive models of psychological disorders argue that maladaptive thoughts are maintained in two ways:

through biases in information processing, such as biases in attention, memory and reasoning through behavioural responses

Biases in information processing

People with psychological disorders have been found to process information in a way that contributes to their maladaptive thoughts. Here I outline briefly two processing biases, one in attention and one in memory, and explain thinking errors.

Attentional biases

Findings show that people with anxiety disorders automatically attend to information related to the things they are anxious about. For example, MacLeod et al. (1986) used a **dot probe task** in which participants were shown two words very briefly (500 milliseconds) and a dot then appeared in place of one of the words. People with and without anxiety disorders were tested. The experimenter recorded how long it took for the participant to detect the dot. It was found that people with anxiety disorders detected the dot faster if it appeared after a 'threatening' word (dying) than if it appeared after a neutral word. This, and other similar findings, suggests that the attention of people with anxiety disorders is biased towards detecting threat. When threat is detected, it triggers the person's maladaptive thoughts. For instance, in panic disorder, people who believe that changes in their heart rate are a sign of a heart attack often attend selectively to their heart. They are, therefore, much more likely than other people to detect normal heart rate fluctuations (Ehlers and Breuer, 1992). When panic patients detect a heart-rate change, their catastrophic thoughts about dying are triggered, leading to another panic attack.

Memory biases

Considerable research suggests that people suffering from depression show a bias towards recalling negative information from their lives. It is possible that this is because people with depression have experienced more negative events. However, experiments in which depressed and non-depressed participants are shown lists of positive and negative words have found that depressed people recall significantly more of the negative words than non-depressed people. This effect is strongest when the words relate to negative personality traits (Clark and Teasdale 1985) and this may be because people with depression are more likely to relate these negative words to their own personality. The effect of mood on memory would mean that, when in a depressed mood, the person finds it easier to access negative memories, adding to beliefs such as 'nothing goes right for me', 'life is too hard or 'I am a failure'.

Reasoning biases

When we are thinking about current or past situations, we have to make judgements and draw conclusions about what is happening/has happened. Imagine a friend unexpectedly paying you a great compliment. You may ask yourself 'Why did she do that?'. You might draw different conclusions such as, 'She is just lying to make me feel good' or 'She is buttering me up as she wants to copy my essay' or 'She really does like me'.

There is evidence to suggest that people suffering psychological disorders show biases in their reasoning. For instance, it has been found consistently that a pessimistic attributional style is associated with depression (see Harvey et al. 2004-). That is, people with depression tend to attribute negative events (failing an exam) to internal, global and stable factors (I failed because I am stupid). This attribution is internal because being stupid is internal to the person, it is global because stupidity will affect performance generally and it is stable because stupidity is often seen as being innate and impossible to change. Biases in reasoning may result in the thinking errors associated with psychological disorders. Thinking errors include things like **catastrophisation** ('I will fail all

Table 1 Examples of the relationships between maladaptive thoughts and emotional, physical and behavioural consequences

Disorder	Maladaptive thought	Consequences of the thought
Post-traumatic stress disorder (PTSD)	An assault victim may think that they are weak because they froze and did not fight back	• Anxiety/guilt • Going over and over what happened to try think of how one could have reacted differently • Avoiding telling other people what happened
Depression	A person with depression may hold the belief that they are a complete failure	• Intense feelings of worthlessness and despondency • Being tired and lethargic • Not bothering to get out of bed or go out
Psychosis	A person who is hearing voices may interpret this as meaning they are evil	• Intense feelings of fear and guilt • Physical tension • Avoiding contact with other people

of my exams and I will end up a sad loser in a dead end job' and **selective abstraction** (ignoring the positive and focusing on the negative: ignoring the nice things your tutor says about you and focusing on the one criticism).

Behavioural responses

Of most relevance to this article is the second way that maladaptive thoughts are maintained: through a person's behavioural responses. For example, clients frequently attempt to manage their disorder by avoiding situations that trigger their anxiety, depression, or, in the case of psychosis, their hallucinations/delusions. Doing so may make people feel better in the short term, but in the longterm it keeps their maladaptive thoughts going. For instance, the person suffering from depression who believes that they are a failure may avoid undertaking challenging tasks at work 'cause they know they will fail. As a result, they do not get promotion and this adds to their sense of failure. A person with post-traumatic stress disorder (PTSD) who believes that they are weak because they froze during an assault may avoid telling other people about the assault. This means the person never finds out that many other people would have reacted in the same way. A person with panic disorder may run out of the supermarket the moment they feel their heart starting to race so they never discover that they would not have a heart attack if they stayed. A person with obsessive compulsive disorder may wash their hands repeatedly after touching a door handle and so never realise that they would not become ill if they did not wash their hands.

Another behavioural way in which clients manage their disorder is to engage in **Safety-seeking behaviours.** These behaviours help to make people feel safe when they cannot avoid difficult situations (see Salkovskis 1996). For instance, imagine that a woman with panic disorder has to go to the supermarket in which she previously had a panic attack and imagine that this person's catastrophic belief is that she will have a heart attack if she gets too anxious. To feel safer, the woman takes an aspirin when she starts to feel anxious (aspirin is used in the treatment of heart disease). The woman may then end up thinking that if she had not taken the aspirin, she would have had a heart attack in the supermarket. As a result, the woman continues to believe that she is in danger of having a heart attack in the future. This person may also believe that she can stop her heart beating too fast by breathing more

A person suffering from panic disorder may imagine they are having a heart attack

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deeply, so when she goes into the supermarket, she starts to take bigdeep breaths in order to feel safer. What she does not realise is that breathing deeply for a period of time leads to hyper-ventilation, resulting in increased heart rate, dizziness and tingling. So the woman brings on the very sensations of which she is afraid. Therefore it is suggested that such safety behaviours stop clients from gaining information that could contradict maladaptive thoughts and that safety behaviours may even add to the symptoms of the disorder.

Changing thoughts by changing behaviour

If behavioural responses contribute to maintaining maladaptive thoughts, then itfollows that behavioural responses must be changed in order to bring about changes in thinking. To do this, cognitive therapists often set up behavioural experiments. The following examples explain behavioural experiments.

First, think about the depressed person who avoids challenges because they believe they are a failure. This person may engage

in a behavioural experiment in which they Undertake a challenging task to see what happens. The therapist will ensure that the task is not excessively difficult at first. For instance, the client may offer to take the minutes in a meeting at work. The therapist then asks the client what they predict will happen if they really are a failure. The client may expect their boss to look angry when they see the minutes and to rewrite them totally. The experiment is then

carried out and the client records what happens. In this example, the client may discover that the boss thanks them for their work and makes only minor corrections. This is then used as evidence against the belief that they are an utter failure.

Second, let us consider the person with panic disorder who believes that breathing more deeply stops her having a heart attack because it slows down her heart rate and makes her calmer. She may be asked to measure her heart rate and her anxiety level and then to breathe more deeply for several minutes in the therapy session. This client predicts that her heart rate will fall and she will feel calmer. What she discovers is that she begins to feel dizzy, her heart rate increases and she starts to feel more anxious because she is starting to hyperventilate. This demonstration will help to change the person's thoughts from 'My heart is racing because I am having a heart attack' to 'My heart is racing because I am anxious and breathing too deeply'.

This person may then be set another behavioural experiment in which she has to remain in a supermarket without using any safety behaviours. She may predict that her anxiety will keep on increasing and that she will eventually have a heart attack. However, she discovers that her anxiety starts to level off and that she does not have a heart attack.

Clients are usually only willing to try this type of experiment after a few sessions of therapy, in which the therapist has chipped away at their belief that they will have a heart attack.

So behavioural experiments involve identifying maladaptive thoughts and designing a method for changing behaviour in a way that will test out these thoughts. See Bennett-Levy et al. (2004) for more information about behavioural experiments.

Behavioural experiments versus behaviour therapy

You may think that these behavioural experiments sound a bit like the behavioural strategies used by behaviour therapists. It is true that cognitive therapists and behaviour therapists often use similar strategies, but they use these strategies for different reasons.

Remember that the behavioural approach argues that the emotions and behaviours linked to psychological disorders are learned through processes of classical and operant conditioning. The aim of therapy is to unlearn associations (between a conditioned stimulus and a conditioned response), to change the environment so that the person is rewarded for functional rather than dysfunctional behaviour, or to teach the person new behaviours (social skills training). The strict behaviour therapist is *not* interested in thoughts.

A **behaviour therapist** treating someone with panic disorder who is particularly afraid of supermarkets may use **graded exposure.** The therapist and the client make a list of the situations that the person is afraid of and the client then gradually approaches these situations. The person may begin by entering the supermarket car park, then they may go into the entrance of the supermarket, then go to the middle aisle and so on. The aim of this is to break the classically conditioned association between the supermarket and the physical symptoms of panic. A **cognitive therapist** may also encourage the person to enter the supermarket (probably as a behavioral experiment) but the cognitive therapist does this primarily to *challenge the person's belief* that they will have a heart attack if they panic in the supermarket.

Equally, a behaviour therapist may encourage someone with depression gradually to take on more and more challenging tasks at work. The therapist will reward the client with praise if they succeed in this. Here the behaviour therapist is aiming to increase the client's work level through positive reinforcement. A cognitive therapist would also encourage the client gradually to take on challenging tasks, but the cognitive therapist would do this in order to *challenge the person's belief* that they are a failure.

The importance of cognitive and behaviour therapists' techniques

If cognitive and behaviour therapists are using the same techniques, does it matter if they do so for different reasons? Yes, it does matter, because if we know the reason why a therapeutic strategy helps a client, then we can work on improving this strategy. Cognitive therapists believe that behavioural strategies work because they bring about cognitive change (change in maladaptive thinking). By maximising cognitive change, you can maximise the effect.